

Opening Address

by

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When I was quite small, around the age of seven, I had the idea of writing a book. I wanted to put in it everything I knew about the world and commit it to eternity. I set to work diligently and started to describe particular objects that I could find in and around the house. It was going to be a 'Book of Everything'.

You'll be sure to recognise this. You may well recognise it in your children, your grandchildren or your younger self. In your mind's eye you can probably see a notebook, an old shoe box or a scrapbook containing a strange collection of facts and interests. It's that child-like curiosity where it all starts. The urge to describe, to want to understand what the weird world around us has to offer. What do we see around us, where does it come from and just what is it all? I believe it is this motivation that brings us all here and connects us.

In a certain sense, the university *is* a Book of Everything. A collection that is lovingly managed, always being expanded, updated and rearranged. And I am not so much talking about library collections, experiments or publications. No, I have in mind a living library. A safe house filled with all those many people within our walls who keep knowledge alive, constantly asking new questions and daring to hold a mirror up to others. They keep that knowledge alive for when we need it.

Because you never know when you might suddenly need to call on knowledge. In these turbulent times, it sometimes seems that every new day brings a new crisis. As a rector, I therefore spend many of my working hours dealing with current affairs. It takes up an incredible amount of time responding to new developments, which often affect not only us but also society. So after a long day, I honestly sometimes wonder whether this is my job, or our job. Then, later that evening, when I see one of our scientists speaking on a current affairs programme or hear an interview on the radio, I know the answer to my question: 'Yes, this is our work'. This is what makes us of value.

As an academic community, we also have each other to fall back on at such times. When students and staff rightly question us about our links to the fossil industry, we know straight away who are the best experts to advise us. When the discord over the war between Israel and Hamas raises feelings of insecurity, colleagues are immediately at hand, and we put together a task force to give us guidance on how to deal with the situation responsibly. In doing so, we make space for everyone's opinion but also take responsibility for treating each other and our social role with respect.

At such times, the value of conserving such a human library is abundantly clear. Our role is to preserve knowledge and keep it alive. We do this driven by our hunger for knowledge but above all by being and remaining curious: curious about the perspective of the other person.

I want to explore the concept of curiosity a little further with you today. For many of us it is probably very similar to ‘unfettered’ or ‘independent’ research¹. That is research based on pure scientific interest: the autonomous choice of science or the scientist. This is often contrasted with ‘society-driven’ or ‘applied’ research, where ‘external’ interests and concerns play a role.

I would like to invite you to reflect briefly with me on the implications of such a term as curiosity-driven. How logical do we really think it is to contrast curiosity with 'society-driven' or 'applied'? Is it not possible that a research question prompted by a practical problem or a question from society might at times also be an expression of curiosity?

Such a contradiction therefore seems to me difficult to defend. Indeed, I would refute it vigorously. I see no reason to label one as curious and the other as not curious, let alone indifferent. I recognise this curiosity everywhere in the broad palette that makes up our university. We are guided by that curiosity, both in highly applied issues and in quests for fundamental principles, and I don't see why we need a hierarchy in it.

But we all know that there are hierarchies in academia. As someone with a science background, I know all too well that fundamental and exact are often equated with one another. And that words like ‘factual’ and ‘objective’ are more readily associated with numbers than with a smart statement or a fundamental insight. Yet I want to hold up a mirror to you on that point too. Aren't there just as many fundamental questions in the humanities as in the social and behavioural sciences? Do they not stem just as much from curiosity?

Conversely, I think it is a fallacy that non-applied knowledge would not be of interest to anyone other than science itself. Newspapers enjoy writing about galaxies and bonobos as much as the emerging technology of sodium batteries. There are podcasts galore, and books filled with the most fundamental principles of physics, history and linguistics are eagerly devoured.

The thing is... curiosity make no distinction.

So, does this curiosity actually have any limits? Folk wisdom warns us of the dangers of curiosity. It can go too far, drifting on, uncovering things you might not have wanted to know, which, once removed from obscurity, can have disruptive, revolutionary and even destructive implications.

Last year saw the publication of the second book by Chilean Benjamin Labatut. In his works he describes in what I would say is a rather lyrical and associative way the search by a number of eminent and less celebrated scientists from the twentieth century. Mathematicians,

¹ The adoption of this term in recent research by the Rathenau Institute is also interesting: https://www.rathenau.nl/sites/default/files/2023-12/Rapport_NWO-programma%27s_voor_vrij_onderzoek_Rathenau_Instituut.pdf

physicists, and chemists in this case who were at the heart of wonderful but in some cases also lethal discoveries: discoveries that have shaped both life and death.

The key question he poses in his work is whether we are responsible for what we create as scientists. Whether we must be held accountable to society, to any innocent victims, to ourselves. At first sight this may be a question for the last century but with the incredibly rapid developments of AI, the first brain chip implanted in a human and far-reaching ideas for geo-engineering, the question may be more topical than ever.

New insights, new categories, new technologies – all have implications for the whole of society, not only for science. We like to portray science as a neutral force or even a ‘force for good’ but if we are honest, we know that history teaches us that the impact of science is not always purely positive. What we teach matters; think of social evolution or graphology that were once also subjects that could be studied at university. What we research and advise has a real impact.

Am I trying to say that as scientists we are responsible for all the possible disruptive and unpleasant consequences of our work? That we have to suppress our curiosity, that, like mathematician Alexander Grotendieck, we have to withdraw from science, from society even, if our discoveries appear too risky? No, I wouldn’t go that far, but we do have a responsibility. We need to maintain a sense of what we produce as science, and curiosity is called for here too.

We can make our research and teaching more open for others around us. Transparent and involved, Academia in Motion. This is our rightful role in this society, and if we take it seriously, we will also recognise that it is integral to our work. And then I’m not talking only about ‘communicating’ what we discover, but having an honest and equal conversation about it, about our values, about the shortcomings, the uncertainties and sometimes also the risks of our work.

Risks – yes, risks. I recently read about a study where our own Leiden scientists had looked at how scientists communicate² about technology at the leading edge of science: quantum. They found that, in the more than 500 online Ted Talks about quantum that people can view, the positive implications were talked about six times more often than the negative aspects. Only in five percent of the talks were the risks mentioned at all.

Involving others - and I don’t mean the general public but rather specific audiences for whom our work is of direct or indirect interest – is something we can do at all stages of the scientific process. A fresh pair of eyes can force us to take another look at the results and implications of our work but, equally, other voices can refine our research question, identify the gaps in our design or how we gather data.

² <https://physicsworld.com/a/physicists-must-improve-how-they-communicate-the-impact-of-quantum-technologies-before-its-too-late/>

Listening is not the same as ‘your wish is our command’. It is about having a sincere interest in the perspectives of others, and being respectful of a different kind of knowledge, confident that this will raise the quality of education and research. This only works when you are on an equal footing, where you hold up a mirror to the other person but are able yourself to handle a critical question.

We, too, as academics must have the courage to take an honest look in the mirror. Anyone who stops and thinks for a moment will realise that it is obvious that our own interests are also laced with personal concerns and often collective assumptions. Whether it is in the interest of our career, prestige within our field or a deeply held conviction, we all have motives that drive our curiosity.

So, I am in favour of a broad definition of scientific practice, where ever new combinations of disciplines and both the inside and outside world come together. Where we have respect for one another’s values and interests, where we are curious about one another and can draw courage and strength from that curiosity.

To do that, we need to continue to guarantee autonomous choices on the one hand, and practise listening on the other. It means being open to criticism and daring to accept that there are multiple forms of knowledge, both outside and inside academia.

It is time to relinquish that one-size-fits-all model or even the ideal image of ‘the scientist’. Time to start valuing multiple talents and encouraging and celebrating diversity within teams - and to dare to make choices. Choices based on our own and society's values in which we take the academic freedom to make strategic choices as a university, for now and for the future.

This is a role, a mindset that is proper for a university in the modern day. A time when authority – and thus also science – is questioned, where we are quite rightly asked what science contributes to society. A time when we are made aware of the realities that we create with what we teach and what we research. We must be accountable for these too. Not only as a measure of our responsibility but from the viewpoint of sincere curiosity about the effect that scientific research and education have on our society.