

Many professors have difficulty finding time to teach, besides their research and management tasks.

“Let me tell you, I usually have two post-docs and two or three PhD students. I meet with them every week. Then, when I do those lectures in the autumn, they know Walter will be working 80 hours a week and that they won’t see much of him. By then the group is so well-oiled that all runs smoothly. But I cannot do that again in the spring, as I have to write research proposals. That’s hard business in America. I can send a proposal to NASA, but if someone else writes a better proposal, they get the money and I don’t. The university pays me absolutely nothing for my research. Nothing! In other words: every telephone call has to come out of external funding. I need roughly half a million dollars a year. I use that to pay my postdocs, the MIT overhead, my PhD students, my travels and conferences – I have to keep the money coming in. We professors - and that’s the principal difference with the Dutch system - we keep the university going. The university

couldn’t exist without our overhead, so, consequently, it’s vitally important to them that we write good proposals. This is why we have such tremendous freedom. They are very aware that if we can bring in half a million a year – and some of my colleagues bring in ten million a year – that MIT will get 65 percent of that, which generates enormous incomes. In return they offer us an incredible amount of freedom.”

Is that the US system?

“That’s the situation at top universities. There are around 10,000 colleges that offer Bachelor’s degree programmes, ranging from stuffy to stupendous. The stuffy universities do not do any research and they receive no income at all from their professors. Conversely, such a professor may receive 10,000 dollars a year, but can’t do anything with it, of course. In other words: in the Netherlands, the standard of the universities is fairly consistent. There’s little difference between Groningen, Utrecht and Amsterdam, for example. In the US the difference is so

enormous that comparing a university in the hinterland with say MIT, Caltech, Columbia or Princeton, would be like comparing apples with coconuts.”

And at the top universities, the professors have every freedom to set up their own research?

“Yes, because the people they recruit must be among the very best in the world. At some point you’re offered a professorship for a period of five years, after which the university will decide whether you should be allowed to stay, whether to give you what we call tenure, which is for life. They will write to the top 15 people in the world in your field, and if two of those 15 say, ‘Walter has done good work, but so has Piet’, then Walter will not get tenure. You’re out. You will not be allowed to stay.”

You speak of the tremendous freedom, but doesn’t that also place tremendous pressure on you?

“You bet it does, because if I don’t win enough proposals every year, I’ll have to dismiss postdocs, dismiss PhD students, because I have to provide for them. Naturally, I have sleepless nights about this. Absolutely. You bet your life. It places tremendous pressure on us.”

TU Delft likes to emulate MIT. If the Executive Board were to ask for your advice on how TU Delft could become more like MIT, what would you say?

“It’s impossible. Your politics determines that. You do not allow the creation of ‘centres of excellence’. That’s a dirty word in the Netherlands. You don’t have a university that you could turn into an Oxford, Cambridge or MIT, because you can only achieve that if you resign yourself to the fact that other universities would then become second- or third-rate. That is an entirely different approach. Asking what TU Delft could do to become more like that is asking the impossible.”

The Netherlands is more of an equality model?

“If you grow too tall you get cut down, and if you’re too short they pump money into you to help you grow. I can’t stand that. We do things differently at MIT. A whole new world opened up for me in America.”
As he reaches the door, the professor pauses, turns around, and adds one final comment: his grandfather could neither read nor write. The Netherlands made it possible to develop from illiteracy to a professor at MIT within two generations. Professor Lewin considers that a great credit to Dutch education. But he is nevertheless glad he left at the right time.



Who is Walter Lewin

Scruffy hair, bright yellow jacket and large plastic rings on his little fingers, Walter Lewin (The Hague, 1936) is not exactly your average professor. After a frightening childhood as a Jewish lad in The Hague during the Second World War, Lewin studied Physics at Delft Technical High School, while working as a physics teacher at a grammar school in Rotterdam, and obtained his PhD in 1965. He went on to join Bruno Rossi’s research group at Massachusetts Institute of Technology. The freedom and lack of bureaucracy there were like a breath of fresh air to him – he’s still there today. From the outset, Professor Lewin has been involved in the development of X-ray astronomy, publishing some 450 scientific articles in 43 years. He also made a name for himself with his theatrical lectures that students will not readily forget. His lectures have been available online as OpenCourseWare since 2003, which enabled him to reach a whole new audience: two million viewers per year. His biography, *For the Love of Physics*, was published this year by Free Press in New York.

‘Ir.’ Title

“Where can I find out whether anyone rightly uses the title ‘ir’?” This question was asked on the LinkedIn forum for TU Delft alumni last year, but for some reason it keeps crossing my mind.

I once lived in the same student house as P, an eccentric character who had fooled everyone into believing that he had just graduated and was looking for a home of his own. That shouldn’t have been a problem, as he was newly employed by TNO and earning a good salary working on wind tunnel research. He left for work every morning, in a smart suit and carrying his laptop bag. Nobody suspected a thing until a

Photo: Sam Rentmeester/FMAX



Tonie Mudde (1978) studied aerospace engineering and is a science journalist and writer. His work has been published in *Quest*, *nrc.next*, and *Het Parool* newspaper and elsewhere. In 2009 he was awarded a Tegel, the annual prize for journalism. Last year saw the publication of his debut novel, *Spaghetti Spoetnik* (Spaghetti Sputnik).

bailiff appeared. P. was found the same day, crying in his car in a remote car park. In his smart suit with his laptop bag. He had failed a couple of subjects but failed to tell anyone; hence, he became entangled in an ever-increasing web of lies. What I mean is: some Ps live the lie for a lot longer, maybe even for their entire careers... On LinkedIn, alumni have suggested various ways of unmasking these frauds. Simply ask to see their diplomas, someone commented, a suggestion which reminds me of the ‘authenticity documents’ that accompany Old Master paintings. If anyone is able to forge a Vermeer, complete with 17th century craquelure, then surely he could also manage to forge an A4 document with a few stamps on it. I had another look at my own diploma: easy enough to photoshop into a fake that any unsuspecting employer would accept. A digital archive perhaps? A public website with the names of all Dutch ‘ingenieurs’? Hardly seems watertight, either. Look at Wikileaks, and the recently hacked DigiD

site: the power of a nerd with a laptop knows no bounds. He can erase your title at the push of a button. Or worse still: change the ‘ir.’ in front of your name to ‘drs.’. I’m afraid we’ll just have to accept the situation. Unless you have an army of detectives to verify every CV, you’ll never know for sure whether or not an applicant is telling the truth, although my advice would be: if in doubt, trust your intuition. I mean, suppose someone claims to have a degree in aerospace engineering, but the most he can do is to type frivolous columns. Now that would set off my warning bells.

www.twitter.com/toniemudde

Under Construction



Photo: Sam Rentmeester/FMAX

Students at the faculty of Architecture searched for aspects and potentials of the ultimate European skyscraper. This research resulted in a collection of 676 models of Lego in scale 1:1000, which are presented as a grid of 26 linear iterations. This midterm review is a project of Eurohigh design studio, of The Why Factory. This international think tank is run by Delft University and MVRDV Architects.