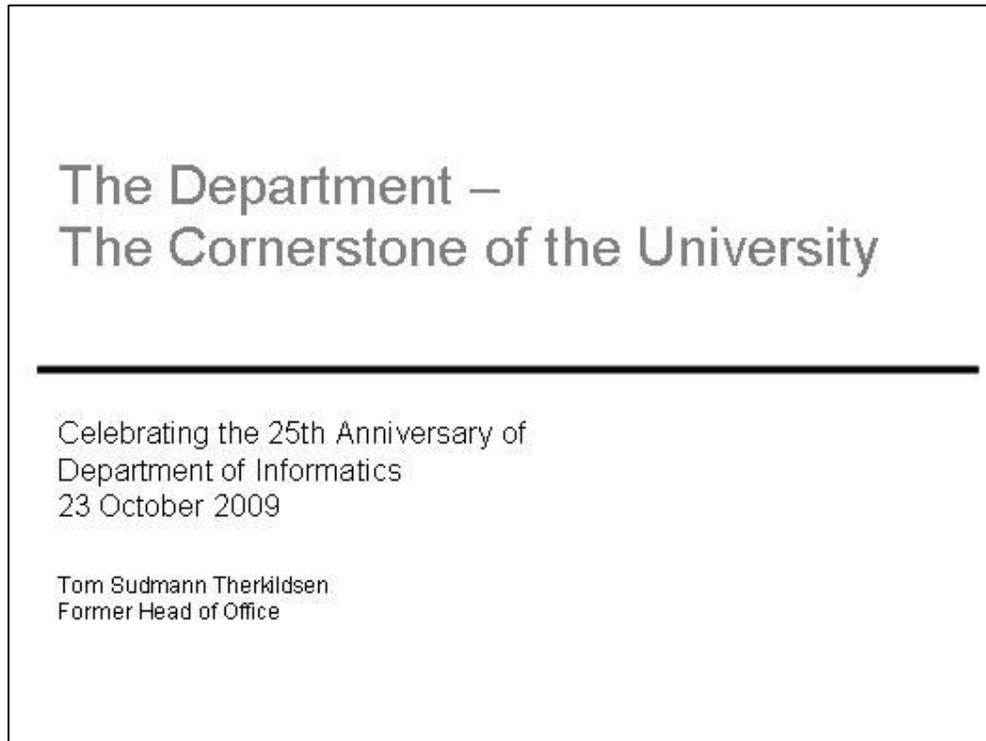


The Department – The Cornerstone of the University
Celebrating the 25th Anniversary of Department of Informatics
23 October 2009

Tom Sudmann Therkildsen
Former Head of Office

I.



Ladies and gentlemen,
Dear old colleagues and fellow students at the Department of Informatics,

Allow me to begin by saying how honoured I am to be given this opportunity to address you on this very special occasion. In fact, when I was first asked to come I didn't hesitate for more than a fraction of a second before I accepted – and I think Sverre Storøy can confirm this.

It is truly an honour, and truly a pleasure.

This is, incidentally, something of a *paradox*. Because it is exactly here – at the Department of Informatics – that I can look back at not just one, but *two* interrupted careers. First as a research fellow, - which never ended in anything like a Ph.D. And then as Head of Office, which ended somewhat abruptly when I was called to do full-time politics in what was at the time called the Ministry of Industry and Energy.

So I left the Department, not only once, but *twice*, never to return. This explains why I am especially happy to be back today. And because I am now a middle-aged man I found this to be an irresistible opportunity to share some of my thoughts on the importance of universities in general, and of university departments in particular, with you.

II.

Where it all comes together

- Research
- Education
- Imparting of knowledge
- Technical and administrative services
- Relations across the University
- Cooperation with industry and other academic institutions – at the national and international level

I have entitled my intervention today “The Department – The Cornerstone of the University.” Why? Simply because the Department *is* the cornerstone of the University. This is where everything comes together. This is where the *action* is. This is where results are produced, where education takes place, where research is advanced, where knowledge is shared and distributed, where new relationships are established and old ones maintained.

The Department level is where technical and administrative services and support functions must be focused. This is where all the big plans and ambitions are ultimately put into practice. The Department level is the single most important execution level at any University. Because if the Department level fails to operate and deliver, - then the whole University fails to deliver. In fact, it is possible to imagine successful departments without the rest of the University organisation – and such institutions *do* exist. But the opposite is not the case: A University without successful departments is, well, not a very successful University.

So this is my starting point: A University can have as many research centres and associated research organisations as it wants. And in most cases that is for the good. But without a strong and well-functioning *primary organisation* - the level of departments - such associated activities will soon deteriorate and eventually fall apart. And the reason is that all such activities are, at the end of the day, carried out on the back of the quality and strength of the primary units. This is not only a matter of balanced or unbalanced partnerships. It is about recognising where to put the horse and where to put the carriage. Eventually, if you want to move along the order of things must be right.

III.

The original



"The School of Athens" – Raphael 1510/1511

This is the famous painting by *Raphael* entitled "The School of Athens." It can be seen covering one of the walls in the Palace of the Vatican – the official residence of the Pope.

At the centre of the painting you can see two men dominating – *Plato* to the left, in red, and *Aristotle* to the right, in blue. A bit further to the left you can see a man dressed in green, busily engaged in a conversation. That is *Socrates*. Further to the left and in the front, there is a man sitting and making notes. That is believed to be *Pythagoras*. And to the far right, still at the front, there is another man bending over a blackboard. That is supposed to be *Euclid*.

The painting is 500 years old and it is an idealistic and somewhat confused representation, not least as far as architecture is concerned, of a remarkable social phenomenon that was born in ancient Greece almost 400 years BC: *The systematic and critical pursuit of knowledge*. The Greek Academy is supposed to have existed from 387 BC and until 529 AD – a time span of more than 900 years. It was founded by Plato and named after his garden, which was again named after the Greek hero *Akademus*. If you go to Athens you can still see its remains not very far from the Acropolis.

This is the mother of all universities, based on a few, but extremely powerful ideas that were to change to world forever:

- First, the idea that knowledge is worth pursuing in and by *itself*. By gaining knowledge we become *wiser*. And by becoming wiser we can become more *just*. In fact, the just person is a wise person, and knowledge helps us understand the nature of that wisdom.
- Secondly, that the key to advancing knowledge is to develop the necessary *concepts* to describe all aspects of reality. Concepts are needed because *precision* is needed.

Without precision arguments become blurred and it is difficult to see whether new knowledge is actually gained.

- Thirdly, that there are types of knowledge that are, in a sense, *timeless*. They are true now, they were true yesterday and they will remain true tomorrow. By systematically putting together such pieces of knowledge by way of valid inference we can continuously expand the universe of firm knowledge. So the way by which new knowledge is *acquired*, and the way by which *arguments* are put forward, are in themselves important issues.

Greek philosophers, however, disagreed on almost everything. They disagreed on the nature and status of reality, they disagreed on the definition of fundamental concepts such as “truth” and “validity”, and they disagreed on the relationship between our senses, our ability to reason, and on how we could establish firm knowledge. In fact, even after 900 years they continued to disagree. And what is even more remarkable is that if you visit our own Department of Philosophy here in Bergen, you will find that the scores have not been settled up to this very day.

Based on this, it is quite surprising how science and systematic inquiry has managed to advance throughout the centuries and reach its current level of importance. Today it is not a controversial statement that science is a key driver – perhaps *the* key driver – of how society develops, not only by way of technology, but even more importantly: By the way we use knowledge and scientific results to reflect on ourselves, the quality of society, and the challenges we face.

IV.

The role-model



Humboldt University of Berlin – founded 1810

This is a picture from the Humboldt University of Berlin, founded in 1810, and named after the Prussian diplomat, philosopher, linguist and educational reformer *Wilhelm von Humboldt* (1767-1835) and his brother, the naturalist and explorer *Alexander von Humboldt* (1769-1859).

It is the oldest University in Berlin, and its history is almost as dramatic as the history of the city itself. Time does not allow me to dwell on the details, but this institution has been host to some of the greatest thinkers in the last two centuries, and according to my information it is the home of no less than 29 Nobel Prize winners.

Wilhelm von Humboldt was a prime representative of Prussian liberal thought. He was perhaps the most important university reformer of all times, at least as far as Western Europe and North America is concerned. His views on the role of a university were based on three ideas:

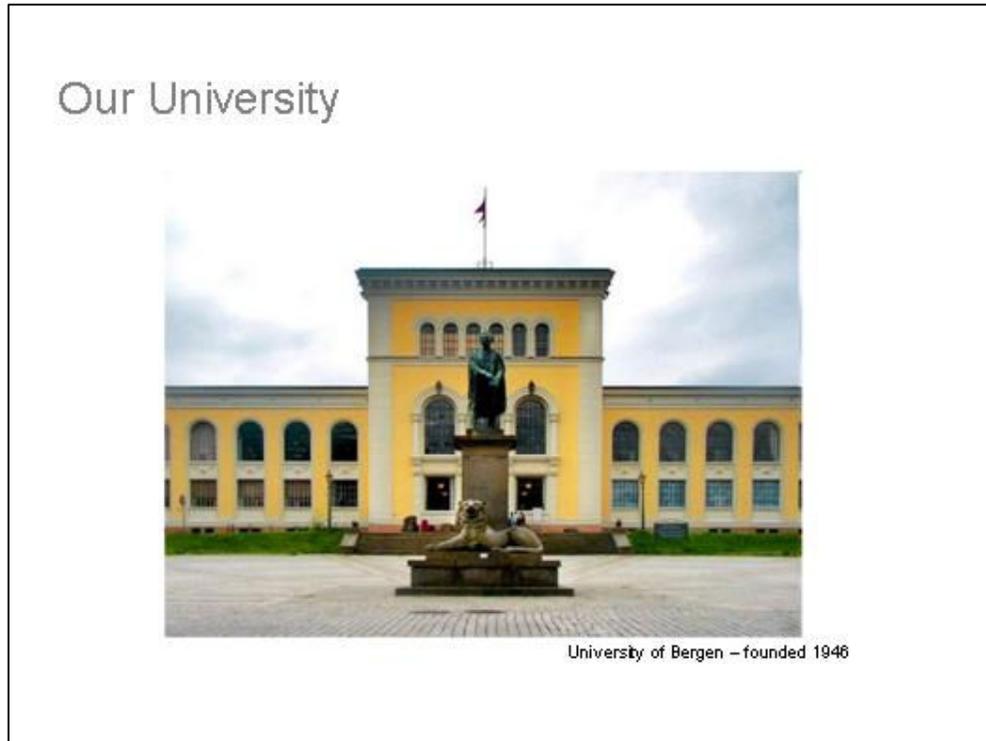
- That *education and research should go hand in hand*. Hence, a “Humboldt-type” university, such as the University of Bergen, is an institution where teaching and research ideally should be considered equally important activities. Professors are more than teachers, they are also active researchers. And students are required to do more than work their way through approved textbooks; they are expected to acquire a sense of active research themselves. The higher the level of study, the greater share of personal engagement in active research.
- The second idea from Humboldt was that a university should cover *all the major sciences and disciplines*, not only natural science and the humanities, but even law, medicine, theology and philosophy. The University should be “universal” – it should mirror the highest level of knowledge and research within all – or at least most –

areas. It should be a true “mother institution”, not only for society’s most highly trained professionals – teachers, lawyers and medical doctors – but also for the recruitment of the next generation of University professors, within all its fields of inquiry.

- Finally, according to Humboldt the University should enjoy a level of *independence and liberal freedom from the rest of society*. In order to secure the highest level of quality in education and research the University should *not* be dependent on the goodwill or tactical support of the government. On the contrary, it should be allowed to pursue new knowledge and critical thought independent from the views and priorities from any current rulers. It should be *self-governed*, and it should be free to explore any subject matter it found necessary. Only then would the University be able to thrive, expand knowledge and supply the best possible talents and professionals back to society.

Of course, all these ideas were controversial in one way or the other, and they have remained so ever since. Nor have they been easy to implement. Never the less, they have proved to be powerful ideas on which many modern day universities still rest, and this was certainly true both for the first University in Norway – the University of Oslo, founded in 1811 and opened in 1813 – and the University of Bergen, founded in 1946 and opened in 1948.

V.



Our university was a continuation of the research activities at the Museum of Bergen – founded in 1825. So academic research was far from new to Bergen in 1946, - for instance the Weather Forecasting Institute of Western Norway was established already in 1918 and Chr. Michsens Institute was founded in 1930.

There were a number of specific issues up for discussion during the establishment of the new University here in Bergen – among them:

- The particular responsibilities of the new institution towards the needs and challenges in Western Norway – of which Bergen of course is the capital;
- The role of popular impartment of knowledge, in particular with relation to the traditional role of the Museum;
- The number of faculties – should there be separate faculties of theology or law, or even social sciences?

In the end the University was established with three faculties; one for philosophy and the humanities, one for medicine and one for mathematics and natural sciences. Faculties of dentistry and social sciences were established in 1970. Faculties of psychology and law were added ten years later – in 1980. To this day, however, there has been *no* faculty of theology here in Bergen, so whatever you feel about the quality of the Norwegian clergy, the University of Bergen is not to blame.

Aside from this it is easy to recognise how the University has grown into a “classic” institution in the Humboldt tradition – with an aim to cover a wide range of disciplines and professions.

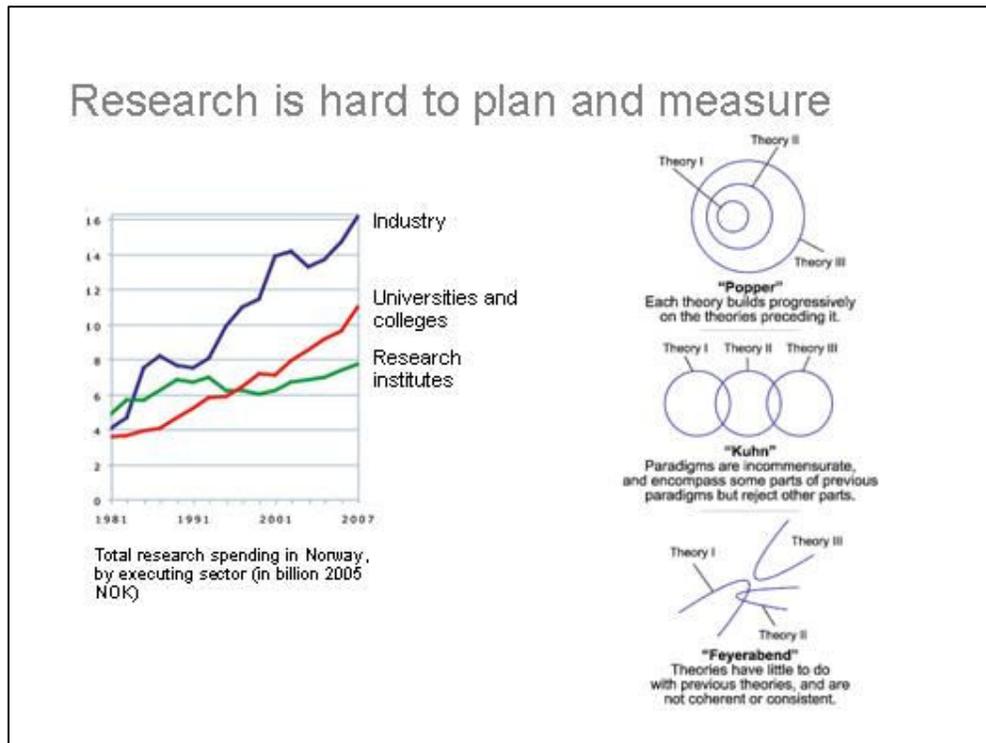
This traditional view was also true for the governing system of the University. It has always consisted of *three* main levels; departments (or institutes) are organised into faculties, and

the faculties collectively constitute the University itself. Decades of growth and reforms have not changed this, even if the governing bodies have changed somewhat, both at the top level and the level of the Department. Today, there is a wider “external” representation at the level of Board of Directors, while the Head of the Department is no longer elected among colleagues, but employed by the faculty instead.

At the same time, even with a strong interest from society both in *how* the University is governed and with the *results* that it produces, there has been recognition of the principle that it should be *self-governed*, - at least in one way or the other. This self-governing can take many shapes and forms, but the very idea that the University should retain a level of independence – compared to other state institutions such as ministries, directorates and even state-owned companies – has seemed to survive. At least in principle.

To me, this is a core feature of the University – we often name it “academic freedom.” There are many aspects to this freedom, but the *two* aspects that I believe are particularly important right now are how this freedom coincides with modern thoughts on *liberal values* on the one hand, and with the idea of *scientific progress* on the other.

VI.



Universities earn their right to exist by living up to their purpose. Again, this may seem obvious, but in my mind it isn't. One of the major problems we have today is that there seems to be lack of agreement between society at large and the universities themselves about what this purpose really is. A few days ago I read a comment in a Norwegian newspaper (Morgenbladet), saying that "the problem with the university sector is that no one can remember the last time the sector was really satisfied."

We are faced with a *gap in expectations*. Universities expect more from society, more recognition of the important role that they fulfil and a stronger willingness to fund activities – in order to maintain quality of both research and education. Society, on the other hand, strives to understand what these quality issues are all about. Governments and stakeholders expect improved efficiency, more graduates spending less time with their education, and research results that are more hands-on in relation to the needs of industry and government.

The problem seems to be *twofold*: By its very nature science is difficult to plan and project, at least as far as the results are concerned. In fact, there is no general consensus about what constitutes scientific progress in the first place, let alone the mechanisms that drive science forward. Ultimately, we are confronted with problems that belong more to the Philosophy of science than to the spending in the State Budget. Indeed, the various scientific disciplines have their own specific challenges in this area, and they are widely different.

What we *do* know is that science does *not* move forward in a linear fashion and that there is no clear relationship between the money, time and effort you put in and the results you get out. The only general rule we have is that *more* money is probably more useful than *less*. But that is not much of a theory.

At the same time the inherent quality and relevance of scientific results is not something that can be decided in the domain of politics. The quality of science is decided by science. So, while politicians may decide how much should be spent on this or that research area, they are not in a position to decide whether alternative ways of spending money would be better – as far as the possible *results* are concerned. Of course, most politicians hate this. In their world linear relationships are much more attractive, which is why they often prefer politically “programmed” research to the research that is initiated within the scientific community. This gives an illusion of restoring a more predictable input-output relationship, but as far as scientific results are concerned I would argue that this method is (at least) questionable.

Another thing they can do is to find measures of the “productivity” of spending. This would be things like the number of publications in recognised academic journals, the number of citations of individual publications and – of course – the number of graduates delivered. Also, from time to time they can initiate specific evaluations of research areas or institutions, in order to decide whether they are at an acceptable level or not.

I am in favour of all of this. I do *not* believe that science should not be subject to political decision making – at least at not at certain aggregate levels. Also, I believe that it is justified to reward both quality and productivity. However, there are two “myths” in the area of research policy that I believe we should get rid off once and for all. The first one is that there exists something of a fundamental difference between what is called “basic” research and “applied” research.

I believe this distinction is dangerous for *all* types of research, because it suggests that if you are looking for something that is “applicable” you should put your money into the so-called “applied” research sectors. In Norway – by tradition – this would imply giving priority to industry research and the various research institutes that exist in proximity to the universities.

By pure semantics the “applied” and “basic” distinction indicates that the research going on at the universities is somehow more “remote” and “less relevant” than other types of research. I find this ridiculous. What university research is concerned with is almost by definition “relevant” to society; the subject matters range from our languages, our literature, our history, our psychology, our illnesses, our beliefs, values and ideas, our organisations and political systems, our legal systems, our common nature in all its shapes and varieties, and all the way to the foundation of the technologies we use to solve specific tasks. What could be more relevant to society than all of this? In my mind the issue is not one of “relevance”, or of “basic” versus “applied.” The real issue is how research funding is *managed* and *evaluated*, whether it is politically “programmed” or whether it is at the hands of the research institutions themselves.

And this leads me to the second “myth” that we should combat; - the idea that politically programmed research somehow is more “efficient” and easily managed than research which is initiated by the universities. There is an old-fashioned management idea involved here. It deals with concepts such as “competition”, “reporting” and the “objective” measurement of progress. I would suggest that no-one to date have demonstrated that this idea actually works as far as the quality and “productivity” of science is concerned. Instead, what we hear from almost every corner of the scientific community – and not only here in Norway – is that the concept of external and programmed funding does little more than add to bureaucracy and administrative overhead. Researchers get bogged down with constantly writing applications for new funding on the one hand and with reporting back on the other. In addition, they spend a lot of time evaluating applications from other researchers and with commenting on their reports. Instead of doing science, they spend more and more time *applying* for doing science.

VII.

The need for curiosity and enthusiasm



Sir Charles Antony Richard Hoare
Professor of Computer Science
Queen's University of Belfast
Oxford University
ACM Turing Award 1980

"I felt that universities were coming under increasing pressure to concentrate on short-term research and research with short-term industrial goals. (...) the funds have usually been earmarked, and come with certain political strings. The research has to conform to the currently politically fashionable goals of being fairly close to commercial application, having a good prospect of giving short-term economic benefit, and having a clear path to application."

In preparing for this presentation I came across an extremely interesting interview with the legendary computer scientist Tony Hoare (<http://www.cbi.umn.edu/oh/>), a person that does not need any additional introduction in this audience. Conducted back in 2002, he talks in the interview about leaving the University of Oxford and taking up a research position with Microsoft Corporation. What I found particularly striking was his views on the nature of research at the University compared with joining industry.

Among other things, he talks about how his University position imposed a need for "creating a string of grant proposals." He says: "The research has to conform to the currently politically fashionable goals of being fairly close to commercial application, having a good prospect of giving short-term economic benefit, and having a clear path to application." He further says: "I felt, and indeed a number of people feel, that science doesn't progress only by a series of short-term goals and that, although they can contribute greatly to the progress of science, one needs also to consider long-term goals of a kind that transcend individual research projects, while working with limited budgets on fixed time scales. In most mature scientific disciplines, the long-term goals are generated as it were from the logic, the structure of the science itself. They're motivated by curiosity and enthusiasm, and they are somewhat detached from the eventual application which the knowledge will prove to be relevant for."

The paradox here is that what Professor Hoare found lacking at the University - long-term goals, enthusiasm and curiosity - he would rediscover when signing up with the industry. Now, the University of Oxford is not just *any* university, and Professor Hoare certainly is not just *any* scientist. So what this indicates to me is that something is seriously wrong with the way research funding is organised, and how this - in turn - affects the internal life at the universities. And I believe that this is a structural phenomenon that has grown beyond proportion, and needs to be seriously addressed.

VIII.

Research and education are normative activities



University of Al-Karaouine – founded 859

- The Mertonian norms (CUDOS):
 - Communalism
 - Universalism
 - Disinterestedness
 - Organised Scepticism

To the left you see a picture from the University of Al-Karaouine, in Morocco. Founded in 859 it is the oldest continuously operating academic degree granting University in the world. With a massive religious, scientific and cultural history it played a leading role in the cultural and academic relations between the Islamic world and Europe in the middle ages. In the history of science there is little doubt as to how important these relations actually were.

In order to understand why institutions like this have survived for more than a 1000 years, and why we still count our universities as key institutions in society, we need to go far beyond the short-term economic value of research and education. In order to fully appreciate what they have to offer we need to go into the core of values that these institutions have refined and developed through the centuries.

In short, the main purpose of a University – of *any* university – is to become as good as it can possibly get in terms of research, education and the promotion of scientific knowledge to a broader audience. And the standards are not regional, or even national, they are *international*. They have to be, because science has been an international activity ever since the days of the Roman Republic. Any world-class university will bring a lot of advantages to the community in which it belongs. However, it will do so primarily because it is a world-class university, not because of its location. If you take away the quality, you take away the value.

Of course, not all universities can be at the top of the ranking order at the same time. However, that does not change the scale of things, or lower the standards. It simply means that the ambitions, or norms, that regulate the internal life of the institution are comparable, whether the University is located in Bergen, Berlin or Beijing.

Principally, universities are valuable to society because of three things: *First*, because they impart and expand well-founded knowledge. *Secondly*, - because they provide education at the highest levels. And *finally*, because they offer to society a place where criticism is not only *allowed*, but actually *required*. Universities are institutions where – ideally – the better arguments survive and those that can no longer be defended by way of rational discourse eventually face certain death. Obviously, if you remove the third quality, the two first will soon start to deteriorate.

My proposition here is actually very *simple*: It is that *no* society can develop without proper knowledge, proper education and a proper place in which the quality of arguments is put above other considerations. Even if the argument is unpopular, even if the argument is complicated.

Without such institutions the world would be a much less knowledgeable, and – in many respects – a much less civilised place. So I believe that universities have earned their longevity by offering something that has proven to be valuable *irrespective* of type of government, type of society and even time period. They live on because they offer values and norms that have passed the test of time, because – in a sense – they represent an everlasting human aspiration.

Now, there is no general consensus about the precise norms of science, but the norms proposed by the American sociologist *Robert Merton* (1910-2003) at least have attracted a lot of attention:

- *Communalism*, that scientific discoveries and progress represent a common good;
- *Universalism*, that claims to truth are based on impersonal criteria and not on race, gender, religion or nationality;
- *Disinterestedness*, that the distinguished scientist acts in a selfless way;
- *Organised Scepticism*, that all ideas must be tested in a rigorous way, and that an important role of science is to provide for such testing.

What Merton did was to study the extent to which the scientific community actually lived up to norms like these. And what he found was – unsurprisingly – a mixed picture. Never the less, the *idea* of a University – in my mind – is to be an institution where such norms are guiding values, a place where they can be *practised* and *passed on* – however difficult it may be. *That* is when it earns its right to exist and prosper. It is also how it serves its host society in the best possible way.

It is on the one hand *elitist*, celebrating the superior results and excellent arguments, but on the other hand it is strongly *egalitarian*, in the sense that the quality of an argument does not rest with the personal attributes or previous achievements of the person putting it forward. In principle, it could come from anyone. In principle, it could even come from *me*.

I fully realise that this is idealism, but my point is that the key values rest in such ideas. The usefulness to society of research and higher education goes far beyond short-term economic value. In fact, if we *only* applied the perspective of short-term value I don't know if we would have universities at all.

Let me add that this is *not* an argument against industry research. Nor is it an argument for avoiding programmed research in all cases, or for eliminating every form of external funding of University research. All of this can be for the good. I am not against fighting cancer or understanding climate change. Nor am I against developing new energy technology or of doing focused research in areas with high commercial and industrial potential.

However, it is an argument in defence of the inherent qualities of the *particular* kind of institution that universities really are, and for restoring the balance between our basic – and therefore indispensable – institutions on the one hand and the more temporary institutions on the other.

I believe that once a firm scientific and educational quality is demonstrably established, society would be wise to trust such an institution to have *more* self-governance, not less, and *more* freedom to initiate research programs, not less. Because, - at the end of the day, without high-quality universities much of the research that goes on in other places would also be in jeopardy. Hence, the concept of a university as the Alma Mater, the “nourishing mother” on which all other achievements rest.

IX.

The Cornerstone



- Department of Informatics
 - Algorithms
 - Bioinformatics
 - Optimisation
 - Programming Theory
 - Reliable Communication
 - Visualisation

Haven taken this small detour, it is time to return to the very cornerstone of the University; - the Department.

The current version of the Department of Informatics is very different from the one I left. By this, I am referring to the tremendous scientific and educational growth that has taken place. Not to mention the technological advances that has taken place in 15 years.

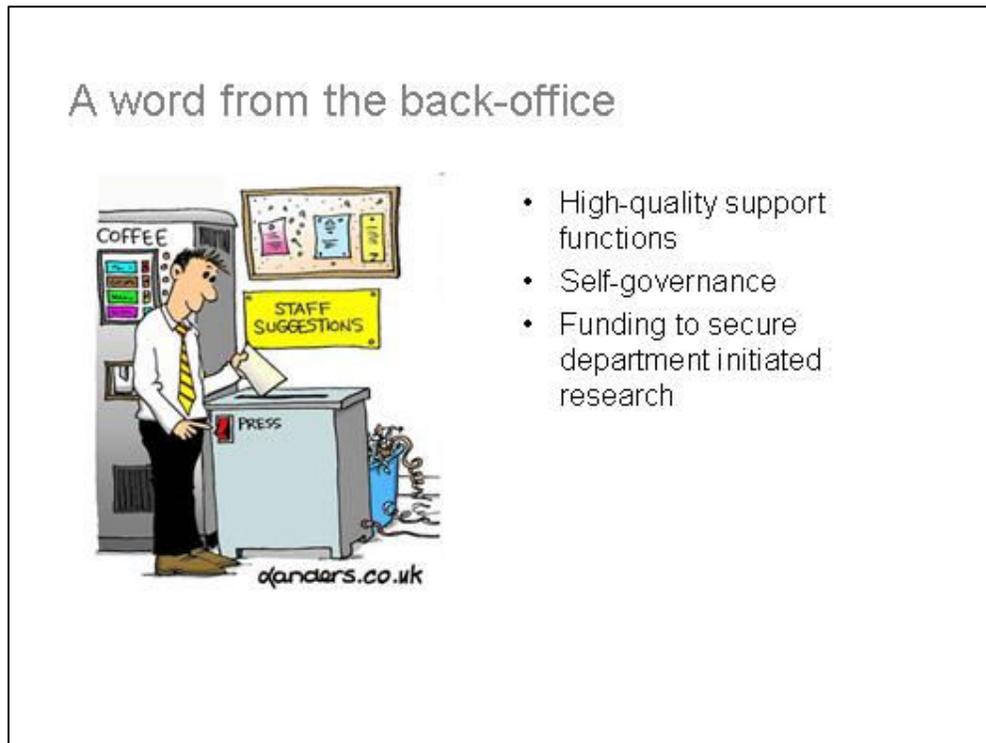
Back in 1984, when the Department was first established, it had become apparent, not least internationally, that the field of computer science (or informatics) had long since developed into a scientific discipline in its own right. Actually, I used to think that *informatics* or even *computational science* is a better name for the field than computer science. Edsger Dijkstra once said that “computer science is no more about computers than astronomy is about telescopes.” However, the important thing is ultimately not the name of the field, but its content. And the content in this case is on the one hand a rich and long tradition from logic and various fields of mathematics, and on the other hand an almost unbelievable explosion in theory building, technology and application areas. In a sense, from the very first days the field was both “old” and “young” at the same time, and this has continued to be the case ever since.

Two times has the Department received positive recognition from tough and extensive international evaluations. Among the staff you will find people that are recognised internationally as leaders within their respective fields. Back in the early 1990’s relations with academic institutions in Russia, China, North-America and all over Europe was already established. I would be much surprised if international relations are not even stronger and more extensive today. A high number of graduates at all levels have always been a distinctive characteristic of the Department, as has its willingness to explore new areas of scientific investigation. Visualisation was not on the program 15 years ago. Neither was bioinformatics,

at least not in its current form. Already they have proved to be successful additions to the Departments research portfolio.

So this is a place where development truly takes place. This is *no* “ivory tower.” This is a place that students are attracted to. This is a place that is fully capable of competing for external grants. This is a place where people enjoy working, and where individuals achieve results beyond expectations. This place is nothing short of a *success story*. Of all the decisions that were made at the University of Bergen back in 1984 I challenge anyone to come up with one that has proved to give better long term results than the decision of creating the Department of Informatics.

X.



Finally, - a word from the back-office, - from my position in the administration of the Department.

At the back-office there is really not much time for Plato, or Humboldt or the liberal traditions of the University. We don't have much time for quicksort algorithms, communicating sequential processes or new and exciting codes, for that matter.

At the back-office we are really most concerned with keeping the wheels rolling. We deal with the *trivial* stuff, such as money and budgets, offices, computers and networks, with keeping the software running, with employees and guests, with a horde of students and with all the complaints that anyone can come up with at any time. The variety can be endless.

We deal with what I like to call "pragmatic optimisation." And pragmatic optimisation is a noble art, because it is about securing high-quality support functions to the primary activities. The very definition of such functions is that you never think about them until they fail. Hence, they are essential.

When I joined the department as Head of office I was very well received, from every one. Quite a few of the people from those days are still around, and I am glad to see it. At the time the Department didn't have a function such as Head of office. That doesn't mean that it didn't have an administration, because it certainly did – and it was a good one as well. I was privileged to work with Tor Bastiansen – a steady rock in the history of the Department, and of course with Marit Nordvik. Torleiv Kløve was probably just as important for the Department then as he is now. My main boss as Department Head was Sigurd Meldal, who left for the US many years ago, but at the time was a young, hard working and enthusiastic professor. I am sure he is hard working and enthusiastic still, however not quite so young.

The post of Head of office came in combination with a test arrangement for granting the Department more self-governance, especially in matters of managing the budget and deciding the level of the staff (within overall limits, of course). I think it was a good idea. The Department was obviously ready for it, and it gave us an opportunity to move beyond the previous mandates given at faculty level. Just as it is a good idea for universities to be self-governed, it is a good idea to leave as much decision making as possible with each individual Department. Under beneficial circumstances it can contribute to the “curiosity and enthusiasm” that I talked about earlier.

The way I remember it, we achieved a lot of that. I always enjoyed the work environment and the atmosphere at the Department, even during rainy days with some level of conflict and stress. And such times are probably unavoidable. I sensed the optimism and drive, from the students, from the research fellows and from the permanent staff, and it made *my* job an easy one.

Make no mistake, however, in order to be successful as a Department there is always a lot of politics involved. Politics at all levels, - including a special branch of politics that is called “university politics.” It deals with the distribution of real stuff such as money and people, but also with less concrete stuff such as symbolism, prestige and institutional infighting. It can be rough from time to time, not least because there is always some sort of internal pecking order and there is always the “Matthews effect” – also identified by the former mentioned Robert Merton: “Those who have shall have, - those who have not, shall not.”

This is what all newcomers with any University are faced with. You have to demonstrate your right to exist. Initially, you can rely on the support from higher levels, such as the faculty, and the central University authorities. However, the most important political leverage of any department is the results achieved by the department *itself*. Quality and results - in terms of research and education. If you have *that* then you start to carry weight, and then you can move on by way of your own engine, just as the Department of Informatics has done.

I would like to leave you here, by repeating my sincere congratulations on this 25th anniversary. And with this very simple image: Universities are *not* built from the top and downwards. It works in the exact opposite direction: From the bottom and up. Every high-quality University needs a strong foundation. A set of firm cornerstones.

And that is precisely what a good University department really is. It is the basis for everything that makes a University good, and for every good thing that a University can offer to society.

Thank you for your kind attention.