

The Black Diamond

November 4, 2016



Welcome speech by Liselotte Højgaard

A warm welcome to all of you. Minister Ulla Tørnæs, Members of Parliament, Permanent Secretary Agnete Gersing, Hans Müller, all others from the Ministry and agencies, and the D NRF family – previous and present researchers, chairs and board members, directors and staff. Welcome to the universities, foundations, academies, ladies and gentlemen of the press, and friends and colleagues. We are so happy that you are here today celebrating with us. It is a privilege, an honor and a joy to welcome you here in the Black Diamond to celebrate the 25-year anniversary of the Danish National Research Foundation. Thank you to the Royal Library for lending us the wonderful premises for a modest sum.

The old Babylonians studied the heavens 6000 years ago, developed astronomy, and described the zodiac with the Scales, Bull, and Twins. Thousands of years ago, the Chinese developed paper and ink and the old Indian culture invented the zero.

In Denmark, Tycho Brahe, our world-famous Danish scientist, had the first Center of Excellence on the island of Hven with the Uranienborg Observatory, which had an annual budget of 1% of the Danish-Norwegian GDP in 1585. The Renaissance king Frederick II indeed supported national funding for basic research.

Think about 1% of the present Norwegian and Danish GDP for one Center of Excellence – it would be quite a place. Brahe described the Stella Nova and carried out very careful observations. His measurements were among the basis for the heliocentric model developed by Kepler – and before him Kopernicus - and defended by Galileo.

Standing on the shoulders of giants - All of the exquisite, curious, creative and brave scientists together have discovered all of our knowledge. As Aristotle said: “All men by nature desire to know.” So do women. In those days, as today, research is carried out not only for the sake of new knowledge and research itself, but also for innovation and as the basis for research-derived education. Neither in those days nor today is it meaningful to look at basic research and applied research as being in opposition. As the Rector of Cambridge University,

Sir Leszek Borysiewicz, says: “There is applied research and not yet applied research; it is all about quality.”

William Conrad Röntgen discovered X-rays more than 100 years ago on a November evening in 1895 in Würzburg, Germany. By the year after, the idea had already been commercialized to the use of medical X-ray equipment and more than 1000 publications on the medical use of X-rays or “röntgenstrahlen” were published in 1896. One is humbled just thinking about it: In those days, they had no computers, no internet, not even a typewriter. Nowadays, we have computers, the internet, digitalization, Big Data, the molecular biology revolution and robots. Think about what we can develop over the next years with these tools as the basis for new discoveries. It also increases our obligation to perform.

At the moment, we have disruption and globalization, and research is needed more than ever for our small country. The Brookings Institution – the highly respected political think tank in Washington, DC, advocates for knowledge and education to counteract the present post-factual society and symptoms of a deeper antidemocratic mood. We need to be strong in knowledge and to be well educated to secure a good society for all in the future.

We at the foundation cannot predict where the great new breakthroughs will arrive; otherwise we would have found the “lapis philosophorum - - de visis sten - the philosopher’s stone. Most everyone agrees that transformative research cannot be predicted; however, the National Academy of Science says that transformative research arises in milieus with high research quality, freedom and a certain level of anarchy. That goes well with the reports from economist Mariana Mazzucato, informing us that the big breakthroughs behind GAFA - Google, Apple, Facebook and Amazon - came from universities and were not developed by the industry itself.

At the Danish National Research Foundation, we have tried to develop and refine the instrument for selection and support of the Centers of Excellence, our prime instrument. The foundation has supported 100 Centers of Excellence, as you will see in the little booklet about the first 25 years of the foundation, which you will get when you leave today. Thank you to Gitte, Steen, and Søren-Peter for making this very fine booklet. Thank you to Klaus Bock for writing the chapter on the history of the DNRF.

The Centers of Excellence have been evaluated, and the research outcome is on a par with the best in the world from Oxford, Cambridge, Harvard and Stanford. At the moment we are busy with the 9th application round. We look for the idea, the research leader, and the research group and place. It is all about people driven by curiosity. In particular, we look for the idea, the great daring hypothesis, the transformative idea on the cutting edge, which is creative and sometimes wild. We look for a research leader who is of the highest quality but who also has the ability to take care of a rather large sum of public money and to be responsible for fellow human beings. It is possible to be a Center of Excellence leader when you are young, at least below 40.

I would like to express my great respect for and thank you to those who established the foundation 25 years ago. Minister Bertel Haarder, minister then and now, could not be here today, but he has sent us his warm regards. Professor Peder Olesen Larsen is here with us today, and you will meet him in the panel in a little while. Thank you to the ministers, ministries, and MPs, previous and present. We appreciate the support of basic science, the recognition of it and the good collaboration. To Minister Ulla Tørnæs, thank you for coming and being with us today.

Thank you to the universities for their good collaboration. That is highly appreciated. Thank you to the other foundations, private and public, for their intense collaboration and mutual help; it is appreciated and acknowledged.

Thank you to those who have worked at the foundation – all the board members, previous and present, chairs Peder Olesen Larsen, Henrik Tvarnø, and Klaus Bock. You have secured this wonderful instrument and we owe you our great respect. The board has done a lot of reading - thousands and thousands of pages - and has had a heavy responsibility.

Thank you to the staff who have worked so diligently all these years with meticulous effort.

I would like to say thank you to the directors - Professors Peder Olesen Larsen, Ole Fejerskov, and Thomas Sinkjær, and our present director, Søren-Peter Olesen, and to our former deputy director Mogens Klostergaard and the present one, Steen Marcus. Again, a warm thank you.

Most of all, thank you to the DNRF researchers, center leaders, and Niels Bohr professors, and all those who are engaged with and affiliated with the centers, both past and present. **You did all the real work.** It is your dedicated effort that **is** the DNRF. Honors to all of you.

Thank you to the present staff, led in a positive, academic atmosphere by Professor Søren-Peter Olesen; thank you for the enjoyable and positive collaboration. Thank you to Steen Marcus, Ellen-Kristina Kock Rasmussen, Johanne Juhl, Gitte Tofterup Hansen, Connie Hansen, Metha Nielsen, Peter Rønholt, for the fine job done, this exquisite meeting over the last few days, and all your diligent effort. And, Steen, thank you for also taking good care of the DNRF's finances. I am very grateful on behalf of the board and I also personally thank you. The DNRF always has a very friendly, happy and helpful atmosphere

Have we had some failures? Oh, yes. If we had not, we have not been daring enough. We have been asked: "Can you predict who will not succeed?" No. If we could, it wouldn't be high risk, high gain, and we have alas not found the philosopher's stone. To quote 25 years of experience at the DNRF: "If you go for quality, quality, quality, people not projects and the grand idea – you might be on the right track." On days like this one we should be

allowed to wish for the future. I wish for the Danish National Research Foundation and for Denmark that we will preserve the idea and the methodology of the foundation for a very long time. Of course, that will happen only if international peer reviews at regular 10-year intervals continue to demonstrate the exquisite quality of the research. We must support strong research of all types in Denmark, of the highest quality, the best academic methodology and in good collaboration within Denmark and with the rest of the world.

New is the new normal, as Flemming Besenbacher says, himself a previous Center of Excellence leader. (The rest of you should think about what a COE leadership can bring.) Yes, Flemming, new is the new normal. But also - and as defended by you - the classical academic ideas and the concept of quality and trustworthiness are as old as the observations from the Babylonians.

The beautiful picture of the starry night, the heavens above, as Tycho Brahe looked upon them and, before him, the Babylonians. Let me now "wish upon a star" that the DNRF, the Danish National Research Foundation, will support a thriving science community and society for many years to come.