

## *Norway and the 'Center for Advanced Study'.*

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I have had the opportunity to spend the last 14 summers at the University of Oslo as a STATOIL Professor supported by VISTA. VISTA is an organization that was created by an initiative from STATOIL and the Norwegian Academy of Science and Letters. It has been both a rewarding and frustrating experience. Rewarding because I find that a few dedicated people still do good science in Norway, but frustrating because science is so little appreciated. In official documents and in newspaper articles in the last few years, Norway has several times been described and positioned as a "Knowledge Nation", but unfortunately this dream has at present no basis in fact.

So where does Norway excel? The Norwegians are very good in the Winter Olympics, both as organizers in 1994 in Lillehammer, and as participants in Salt Lake City this year. And Norwegian soccer players are stars in many European clubs. The sports figures enjoy high prestige and receive on average lots of money. This proves that Norwegians are great organizers and competitors, and are willing to work hard to succeed if paid well. So when there is a will, Norwegians can succeed.

Unfortunately when it comes to science and education Norway is unwilling to pay the price. Clearly we care about sport because of the entertainment value, it is exciting to watch it on TV. So why should we care about science, as it has little or no entertainment value? We should because science creates wealth; it improves human conditions on almost all fronts. Patents protect new technology for a period of 20 years, but science enjoys no such protection. The strangest fact about science is that it is freely available to everyone, whether you live in Jerusalem, Kirkenes or Bangkok. But truly to understand and use science it is necessary to be educated and employed as a scientist. Simple Simon and Smart Alec are no longer relevant; all the information out there can only be used if you have sufficient education.

How can Norway position itself better in the world of science? The obvious answer that no politician likes to hear: by spending a sufficient amount of money. One heroic attempt was the creation of the Center for Advanced Study (CAS) about ten years ago. The purpose was and is to attract outstanding scientists from all over the world to study a special field or subject together with Norwegian scientists.

I have obtained information about the CAS from the Internet and also from my colleague and friend Torstein Jøssang. He served as its director for a long period. I know he always set the highest standards for himself and therefore also for the Center for Advanced Study. I was not surprised when after the first 5 years the official evaluation of the center was very favorable.

Will the CAS continue to be successful and in the lead in encouraging Norwegians to appreciate science? Can the Norwegians accept an elitist organization? Is it accidental that the Norwegian Research Council is finally establishing new "Centers of Excellence"? Has the time arrived when Norwegians will embrace science? As for the last question, unfortunately I do not think so, but I do believe that the CAS has helped to show the way, and has played a significant role the last ten years. Thus, let me end by congratulating the Center for Advanced Study in Oslo on its first successful ten years and wish for many, many more! I hope it will continue on the road so carefully staked out: to become not only a Norwegian elite institution,

but also an international elite organization and thereby enhance Norway's scientific reputation.



*Professor Ivar Giaever received the Nobel prize in physics in 1973. He was born in Bergen and graduated from the Norwegian University of Science and Technology 1952. He emigrated to USA a few years later, and joined the General Electric Research and Development Center in 1958. In 1988 he became an Institute Professor at Rensselaer Polytechnic Institute and he is also a professor of physics at the University of Oslo.*