

VA-day 2005 on science and media

Murmuring ripples through the packed auditorium of Studio 2, Radiohuset in Stockholm. It is November, and the theme for the fourth VA-day is science and media.

Suddenly the lights go down and there is silence. The spotlight focuses on a man who comes in and places himself at the keyboard of an enormous organ. Music suddenly breaks out, filling the hall with a chromatic and rhetorical collage of pieces from 17th century Europe.

After the applause we meet the musician, **Hans Davidsson**, artistic director and Professor of Organ at Gothenburg University and Eastman School of Music, University of Rochester, New York State.

Camilla Kvartoft, programme leader for Swedish Radio's morning news programme P1 Morgon and the discussion leader for the day, asks Hans Davidsson what organ music has to do with science.

– In the medieval and baroque periods, music was science. Today, we can research the formation and structure of music, and its expression and interpretation, but also how instruments are formed and how they can be constructed and built, says Hans Davidsson.

– At Gothenburg Organ Centre, for example, we wanted to know why historical pipes resonated better, in our opinion, than modern ones, and to try and recreate an instrument that has great significance, a Hanseatic Baroque Organ, he explained.

– The project became both an interdisciplinary and cross-cultural co-operation involving 200 people, ranging from material researchers and musicians to craftsmen and technicians. In the end, we ended up rebuilding a whole church in Örgryte. And now the knowledge is spreading throughout the world – a kind of global cultural conservation.

According to Hans Davidsson, organs are mirrors of time. He ended his presentation with examples typical of the 1960s, cosmic, rhythmic music to suit Radiohuset's 1960s organ. It is easy to understand why his work has attracted the interest of journalists.

And that is what the day is all about: what happens when science and the media meet. What divides them is rhetoric, agenda, ways of expression, explanatory style, temperament and tempo. What unites them is a desire to try to understand and explain the world around us. And language is the bridge.

Vetenskap & Allmänhet aims to promote dialogue between researchers and the public. We concentrate on young people, who will live in the society of tomorrow. And the majority of young people get their knowledge of research from the media, which can both interest, frighten and shock, says VA's chairperson **Majléne Westerlund Panke**, as she invites the managing director of Swedish Radio, **Peter Örn**, onto the stage.

The University on the Radio

– I'm thinking about my father. He smoked fish, sold herring and eventually became a politician, even though he had wanted to study for the priesthood. But his generation was excluded from the universities. The popular movement and folk high schools provided opportunities for learning, and so did the radio, with its lectures on science, art and culture, he says.

Today, Swedish Radio is still a force for community knowledge and learning. But today, when we see burning suburbs and young protesters are called gangsters, it can be said that there are people who are excluded from society. So today I want to welcome you to our university, says Peter Örn.

Journalists view of science

When **Anna Lindmarker** from TV4's Nyheterna (Swedish Channel 4 news) and **Per T Ohlsson** from Sydsvenska Dagbladet were interviewed about their experiences of researchers, it was Professor **Hans Rosling** from the Karolinska Institute and Professor **Jan Hjärpe** from Lund University, who were asking the questions.

The questioning showed that both sides carry a great responsibility. The notorious competition that exists in academia means that it is in the researchers' interest to publicise their results. In some cases this can be at any price, perhaps without peer review and consequently without the scrutiny of other researchers. The results of this can be devastating when journalists in turn neglect to do their homework and check their sources.

Would it be true to say that news journalists and editorial writers have different aims? Could it be that columnists seek to have their own attitudes confirmed by researchers?

– There are differences, of course. News journalists are driven by the hunt for news stories, whilst editorial writers have a more commentary role, says Anna Lindmarker.

– There are other reasons why we journalists have research contacts. They give us knowledge, not only to confirm our own understanding, and they give the readers an indication that the article has credibility. But we all learnt a great deal from the acrylamide story some years ago – that research doesn't always make the grade, that researchers don't always understand the mechanisms of the press, and that we as journalists must always seek a second opinion, says Per T Ohlsson.

– There isn't always a qualified researcher on hand who wants to comment when something happens, Anna Lindmarker pointed out.

How do you know when you have a good news story?

– We go with our gut-feeling to a great extent, and today we are extremely consumer driven.

– Initially, we don't know. Of course, we see the consequences afterwards; what reactions we get and whether we see any changes in behaviour. It is often an interplay between researchers and journalists.

How should we solve the problems?

– Through more knowledgeable journalists, and perhaps through educating researchers in the ways of journalism rather than the other way round, says Per T Ohlsson.

What is it that steers the direction of the questions?

– Current events, our idea of what is important and the news journalists' pursuit of news stories, says Anna Lindmarker.

– What is written in the editorial section is highly influenced by the cycle of opinion and the general zeitgeist, answers Per T Ohlsson.

– Researchers themselves can of course have an influence. But today editors are so stretched and there are so few scientific journalists that it requires a great deal of effort, not least in the wording of press releases, to reach out.

Understanding is a question of democracy

Tim Radford, who worked for 20 years as the science editor for the British newspaper *The Guardian*, agrees on the importance of language when one writes about research.

– Words like phenotype, alpha-particle, mitochondria; you don't hear them in the pub or in the bus queue, and if you want to be read, you should avoid them. It is important to find a word that makes the story comprehensible and yet still expresses the correct meaning to those who are not familiar with the subject, he says.

– Science journalists are the only journalists who truly write about things that have never happened before. Political journalists to a large extent are only continuing to spin stories in the same old soap opera, and sports journalists only have one story, he says.

– One problem with scientific reporting is that even within one's own field, one doesn't always understand what the researcher is talking about. The editors of both *Science* and *Nature* have both admitted to me that they don't expect to understand more than half of the articles they publish... So here is a challenge.

– It is a question of democracy. The goal is of course to be both "read and right".

VA's journalist studies

VA's Secretary General **Camilla Mod er**, research manager **Karin Hermansson** and

project leader **Karin Lundqvist** presented VA's interview study of journalists. Nine out of ten journalists have a high level of trust in researchers. They often meet researchers and generally have positive experiences of these contacts. However, many journalists would like it to be easier to access both researchers and comprehensible information about research.

VA has also analysed the scientific content of youth, family and regional publications. This study showed that the youth press contains the most material with a (pseudo) scientific connection, and the regional press the least. At the same time, youth publications are the worst when it comes to proper referencing of sources.

– What we are hoping for today is an answer to how scientists and researchers can be persuaded to communicate better, says Camilla Mod er.

Parallel Seminars Science Journalism

A conversation between *Gunnar Bjursell, Bj rn Fj estad and Inger Atterstam, lead by Camilla Kvartoft*

– I think that journalists are easily deceived. Obvious inaccuracies are included in reports. Researchers can mislead journalists, and can have a hidden agenda. And this is particularly serious since trust in the whole research community is put at risk. Today the majority of academics are employed more or less on a contract basis, and so must plead their own cause, says **Gunnar Bjursell**, Professor of Molecular Biology, Gothenburg University and initiator of the Gothenburg Science Festival.

– Increased commercialisation leads to lobbying of journalists. And this is bad as researchers benefit from trust. It's easy to burn sources; when one reviews money and contacts, they easily become sullied, says Inger Atterstam, Science Editor of Svenska Dagbladet.

– Researchers are an interest group like any other, even though they see themselves as guardians of the truth. It is clear that the research lobby has three objectives: more money, fewer rules and minimum quality standards. And this is shown in the media at regular intervals, says **Bj rn Fj estad**, Editor-in-chief, Forskning & Framsteg.

How should research be reviewed?

– One wish would be for more qualified journalists with a background in research. From the academics' point of view, we must achieve a more balanced relationship. We have discussed creating reference groups that can quickly comment on current events. But we realise that journalists do not want to be served with stories, but want to be first with the news, says Gunnar Bjursell.

– It is important that editors discuss how we can reduce the excessive trust in researchers and see them as actors, like any other. To always pose the question, what commercial links do you have? Academic institutions should oversee their own ethical rules about

how people should handle their businesses and meetings with journalists. The ideas of experts and panels are, on the other hand, dead in the water. Every journalist has his or her own network, and it is easy to find critical voices, says Inger Atterstam.

– It is possible to specify at least three areas to review: 1) researchers` morals, 2) scientific ethics and 3) criticism within science, says Björn Fjæstad. Much of the frustration amongst researchers is probably due to the fact that journalists have the decision making powers, both choosing what is published and in what form.

– And researchers consider that consensus gives the best picture of reality, whereas journalists think that the right picture is given by several conflicting voices, says Björn Fjæstad.

New media, new meetings researchers–journalists–public

Conversation between Viggo Cavling, Sara Kjellberg and Gunnar Nygren, lead by Cissi Askwall

The internet has brought with it a series of new media, and not least blogs which have attracted a lot of attention. It is said that the new possibilities will soon enable everyone to publicise themselves, get information and easily make contact with journalists. And journalists can be involved in increased dialogue and in extending democracy. Researchers will be able to get comments on their current work and journalists will be able to find new ideas. But even so, virtually no Swedish researchers are blogging as yet.

– Often it`s due to a lack of time, or other priorities. Maybe also people are afraid that someone will pinch their ideas, says **Sara Kjellberg**, a PhD student at Lund university studying how new media are affecting the research process.

– A lack of time can be an excuse. In the academic world, there is a resistance to coming out of the ivory tower, says **Gunnar Nygren**, researcher in journalism at Stockholm University.

– Journalists use the internet as their first source. Journalism is also becoming a faster process, information addicts want to have short, fast information and newspapers are adapting to suit their readers and with that, development is driven, says **Viggo Cavling**, Editor-in-chief, Resumé.

All were in agreement that the range of media is becoming more oriented towards niches, with many special newspapers and blogs for specialist interests. And technical developments will lead to even more forms of media. Podcasting – to download sound files and listen to them on portable players – is going to be even bigger, as is taking part in virtual communities.

– We are going to see more specialist channels with increased science and technology and more mobile media forms. To watch TV on mobile phones will be the next big thing and it will be launched in time for the football world cup in 2006, says Gunnar Nygren.

New VA studies

Presentation by Arne Modig, Temo, Annika Rosing, Nutek and Karin Hermansson, VA, who also leads the discussion

Since 2002, VA has carried out an annual investigation into the public's attitude to science and researchers. This "science barometer" shows for example that to a lesser and lesser extent, the public considers science and technology too difficult for most people to understand. This year's study also indicates an increased confidence in the potential of research to slow down climate change, and stronger support for the funding of research into gene-technology where there is for example the potential to treat diseases.

Teachers' view of science and their contacts with researchers were the focus of VA-day 2004. This year VA, within the framework of Nutek's entrepreneurship programme, investigated how teachers work to encourage students' creativity, initiative taking ability, the ability to work cooperatively and their independence. Teachers think that it is important to develop these entrepreneurial skills and their experience is that there has been an increase in the number of activities with such a direction in the last years. They consider however that students should develop their own ideas and take the initiative first and foremost in their own free time – not at school.

The journalist – researcher relationship

A conversation between Sven Otto Littorin, Hans Rosling, Margaretha Fahlgren, Per T Ohlsson and Jan-Olov Johansson.

– The problem with researchers is that like the mole, they bury themselves in their research – for four years – and become both blind and deaf to what goes on around them, and also extremely specialised. The solution is presumably better trained journalists, says **Jan-Olov Johansson**, senior reporter for Vetenskapsradion (Science Radio).

– There is a fault in the system in Sweden where journalism can be considered to include any skill you want. In anglo-saxon countries journalists often have qualifications in politics and so on. There is a conflict here in that journalists know a little about a lot and researchers know a lot about a little, says **Per T Ohlsson**, publicist for Sydsvenska Dagbladet.

– It is important to defend the university as a critically thinking entity. The humanities need to be more visible than they are today. We must get out of our ivory towers – and money makes us become more visible. But we must also be more strategic with our information, says **Margaretha Fahlgren**, Professor in Literature, Uppsala University.

– It is unfair if a researcher becomes the mechanism through which the job of the journalist is made easier, says Hans Rosling. I think we researchers should take care of and be proud of our shyness.

– But at Stanford it is often said that you should be able to explain your research during a ride in a lift, says Jan-Olov Johansson.

– It would be devastating if researchers should become totally dependent on politicians with regard to what they choose to research. We politicians need to win elections every four years but researchers need to be more long-sighted, says **Sven Otto Littorin**, party secretary for the Moderaterna party.

The most important measure for better communication between journalists and researchers?

– Develop competent editorial staff and allow them to work as journalists, says Jan-Olov Johansson.

– As journalists we are good at understanding social scientific research but we ought to be better at understanding natural sciences. And researchers should definitely be better at understanding journalism, says Per T Ohlsson.

– We must create and facilitate meetings and make it possible for researchers to understand the working methods of journalism. And we as researchers must become better at expressing ourselves intelligibly, says Margaretha Fahlgren.

– Meetings, training, practise, and thus opportunities for exchanges between researchers and journalists, and possibilities for entering deeply in each other's work, says Sven Otto Littorin.

We must realise that we live in a new world, one where we must not forget international research. I often say that the world is more important to the Karolinska Institute than the Institute is to the world, says Hans Rosling.

Politicians in agreement

The basis of Sweden's prosperity was laid a hundred years ago through painstaking and patient research. Today, society is pervaded with the desire for instant results. How do we reverse this trend? This question was directed to the minister responsible for research, **Leif Pagrotsky** and Sven Otto Littorin.

– Research is long-sighted and any commitments made will not give results in time for the next election. Today, Sweden contributes the most in the world per capita of public funds towards research and we hope that the voters benefit from this, says Leif Pagrotsky.

– I agree that we should have a large proportion of state funded research. The only problem is that the public do not receive the financial benefit. One needs to consider the imbalance in patents, that the rewards are reaped elsewhere, says Sven Otto Littorin.

– It is important for society that communication works. Research is financed through taxes and support is fragile; if one is found cheating or wasting resources, or if people do not understand what benefit could come from the research. I would like researchers to be generous and to share their work with others – like a Nobel prize winner I met the other

day. He didn't have the slightest problem with talking about his research in an understandable way, says Leif Pagrotsky.

– It is important that we don't get caught up in ridiculous scare stories, says Sven Otto Littorin.

– Yes, “Deadly ‘Flu on its way to Sweden tonight”, I read on a newspaper board earlier. It is important that we have a functioning set of rules for the media and I have suggested that all dissertations should be prefaced with a comprehensible summary in the Swedish language. In this way, the public can directly take account of the results, says Leif Pagrotsky.

Camilla Modéer brought the day to a close and stated that improved dialogue between researchers and journalists need not be an election issue – politicians are completely in agreement. But next year VA is going to examine closely how politicians view science.

Erika Ingvald, freelance science journalist