

Science & Media - A Snapshot from Norway¹

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At the 'Science & Media' session at the ALLEA General Assembly in Brussels in March 2004 I presented a glimpse into the present situation on how science is covered in Norwegian media. This short chapter is based on this presentation. While there certainly are differences in how media cover science in our various countries, European scientists face many of the same challenges when trying to promote reliable, yet appealing science coverage. An exchange of experiences and ideas can thus be useful.

The chapter is mainly based on personal impressions obtained by following how science is covered in media and from personal experiences from interacting with science journalists in their profession. I have also discussed the topic with journalists and scientists with extended experience in presenting science in media. The year 2005 has been declared to be the 'Year of Physics', and I am a member of the national committee coordinating the national activities aimed at profiling and promoting physics during this celebratory year. Early 2004 we arranged a meeting with miscellaneous Norwegian journalists, and strategies aimed at increasing physics coverage in the media were discussed. Some insights gained at this meeting have also been incorporated into this chapter. It should be noted that I am a physicist by training and occupation, and that the nature of this chapter is thus of necessity more anecdotal than scientific.

Brief overview over present situation

TV and radio

After the break-up of the state monopoly on TV and radio broadcasting, several commercial TV and radio channels were established during the last two decades. These new commercial channels are typically dominated by easy entertainment, sport and to some extent news. Despite occasional

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¹ The author acknowledges his journalist friends Erik Tunstad and Anders Giæver for useful discussions, as well as Knut Jørgen Røed Ødegaard for providing information about his numerous successful activities in presenting astronomy to the general public.

showings of foreign-made popular science programs, science is generally not high on the agenda.

The (tax-funded) national broadcasting corporation (NRK) still has a dominant position in terms of numbers of viewers and listeners. Even though some critics claim that NRK has become too similar to the commercial channels by emphasizing light entertainment, these public channels still seem to feel somewhat obliged to the traditional idea of using TV and radio to enlighten and educate the public on topics such as science. They air self-made popular science programs aimed both at adults and children on a regular schedule. The programs attract sizable audiences, and I find the programs generally to give a fairly balanced view of the science it presents. The problem with the public channels is rather that science seldom makes it to the general news or culture programs.

Newspapers

Norwegians read a lot of newspapers, more so than others according to statistics. Newspapers may thus to a larger extent than in other countries set the media scene compared to TV and radio. At the national level three newspapers dominate (*VG, Aftenposten, Dagbladet*). None of these papers has (unlike NRK) particular departments for research or sizable groups of journalists specializing in covering science. Science is covered by a handful of journalists who typically are responsible for covering other areas as well.²

When reading these newspapers thoroughly, one actually finds quite a few notes and stories somehow relating to science. Most stories are within social and health sciences, typically consumer-oriented and often based on a single scientific report (Researchers find X to increase/reduce risk for Y!). Only rarely is the wider scientific context presented. Some topics such as astronomy and space exploration are perceived (probably correctly so) to appeal to the curiosity of the general public and are also frequently covered.

Science journalists

Very few Norwegian journalists specialize in covering science; in fact not all young aspiring journalists seem to think that science can be considered to be news at all. With a few honourable exceptions, our science journalists do not have a basic training in science. This contrasts the attitude of, for example, the high-quality weekly news magazine *The Economist*. In their advertise-

² In *Selling Science* by Dorothy Nelkin (Freeman, New York, 1995) it is stated that such journalists (in USA) sometimes refer to themselves as SMEERSH: "We cover Science, Medicine, Environment, Research, and all sorts of other SHit".

ment for an internship in their science department it is stated: "Our aim is more to discover writing talent in a science student than scientific aptitude in a budding journalist".

The tradition of using 'general' journalists to cover science may be related to limited resources in newspapers in a small country with only 4.5 million people. It may also be related to what has been claimed to be a non-academic tradition in Norwegian media: journalists do not need background knowledge when writing about any topic, a general training in critical journalism is sufficient! Another reason may be that while *The Economist* presumably is aimed at the more educated subgroup of the population, the three dominant Norwegian newspapers are, roughly speaking, all intended for the total population. Compared to the English press, I would guess that these newspapers are all safely placed somewhere in the middle between *The Times* and *Sun*. Likewise, I would guess that the quality of their science coverage ranks somewhere between that of these two English newspapers.

Problems with science coverage (and lack thereof)

One could ask whether science coverage in media is something to strive for at all. It could be argued that media presentation of science often is so inaccurate and incomplete that the net effect is negative. The two main Norwegian tabloids (*VG*, *Dagbladet*) need to sell their papers on newsstands to between 5 and 10% of the Norwegian population every single day. A titillating front page is thus essential, and (when nothing else is happening in the world) a headline like "Alcohol good for cholesterol" (*Dagbladet*, 19.03.04) can attract buyers. Such an oversimplifying headline may be a problem in itself, but it becomes particularly troublesome in combination with other newspaper stories proclaiming the exact opposite. Conflicting reports confuse readers and can lead to less trust in science and the scientific method when the real culprit is poor science journalism. Biased science journalism can also lead to unwarranted fear of new technologies as maybe exemplified by the significant consumer scepticism towards genetically modified food.

Nevertheless, instead of trying to keep science out of media to avoid such problems (this would not be easy anyway), we should rather try to promote better science journalism. It is essential that science is visible for the general public to attract young people and assure that society allocates appropriate resources to science.

The biggest worry is maybe the low number of young Norwegians choosing science and technology as their career. There are many reasons for this, but I think lack of good science coverage in media is one. Norway is presently an affluent society where salaries are too high to make it internationally competitive in standard industrial production. As in other European countries the government's remedy is to strive for jobs in high-tech businesses, and this is impossible without a workforce highly skilled in science and technology.

The Norwegian situation is maybe particularly problematic since the state's present high income from the oil industry serves as an economical band-aid making the society complacent. The connection between science and welfare is more difficult to make in Norway than in, say, Finland where severe economical problems in the early 1990s were resolved thanks partially to successful high-tech companies like Nokia. Norway spends a lower fraction of its gross national product on research than the OECD average, and much less than some of its Nordic neighbours. Interesting and alarmingly, even the daily business and industry newspaper does not seem to think that this is a problem.³

A full-page Sunday commentary in *Aftenposten* (08.02.04) may further serve to illustrate the problem. Here the journalist, one of the regular commentators, suggests taking mathematics and physics out of the grade school curriculum (first to tenth grade) claiming that in modern societies these topics, like Latin, have little relevance. This remarkable point of view may not be shared by most people; for example the present government instead tries to strengthen these topics in school. But the fact that such suggestions can be presented in high-profile newspaper commentaries is certainly a warning sign. Opinions are not formed in a vacuum, and such commentaries may indicate a widespread lack of understanding of the importance of science in society.

In addition to the abovementioned societal reasons for promoting and educating the public in science via media, there are also other reasons: Scientific knowledge and the critical thinking inherent in science make life as a consumer and citizen simpler. And maybe the most obvious reason of all: Science is arguably the greatest cultural achievement of mankind, and everyone should be given the opportunity to learn about it.

³ Editorial in *Dagens Næringsliv* 15.05.04.

Positive initiatives

Many positive initiatives have lately been taken to increase and improve media coverage of science. These initiatives reflect that the government and research institutions, as well as individual researchers, have become more aware of the importance of increasing the visibility of science in society. Here I will describe a few of these initiatives.

National initiatives

The most important new development is the establishment of the new net-based research magazine *forskning.no*⁴ co-owned by seventeen Norwegian universities, colleges and research institutions. The site provides research news, facts and background material with articles written by science journalists at the central office in Oslo and by a host of freelance journalists and other contributors. Journalists from the owner institutions also produce articles directly to the web site. In addition to attracting a lot of readers by itself, the articles in *forskning.no* are also often picked up and used by the general media. In fact, the net version of the tabloid *Dagbladet* now has a 'knowledge section' where articles from *forskning.no* are used directly.⁵

In a recent Ph.D. thesis⁶ it was claimed that Norwegian research journalism generally is too uncritical and could be better characterized as research 'mediation'. This may be true, even though one can question whether most Norwegian science journalists have sufficient background knowledge to play such a critical role. At the moment the closest thing we have to critical science journalism can be found at *forskning.no*.

While *forskning.no* is aimed at older teenagers and adults, another new initiative, *Nysgjerrigper*⁷, is directed at schoolchildren from the first to seventh grade. *Nysgjerrigper*, which is sponsored by the Norwegian Research Council, is a graphically appealing popular science magazine with well-written stories. The paper version is sent to individual subscribers and school classes with the sizable circulation of 80,000. A nice side effect is that the children's parents tend to read the magazine as well and often find it interesting and entertaining.

⁴ <http://www.forskning.no/>

⁵ <http://www.dagbladet.no/kunnskap/>

⁶ Harald Hornmoen, *Forskningsjournalistikk i en brytingstid: kritisk diskursanalyse av amerikansk 'science journalism' på 1900-tallet*, Dr.art. thesis, University of Oslo, 2003.

⁷ <http://www.nysgjerrigper.no/>

The government has donated the equivalent of 25 million euros for the establishment of a new annual, international research prize in mathematics to be administrated by the Norwegian Academy of Science and Letters. It is named the Abel price in honour of the 19th century Norwegian mathematician, and (as for the Nobel prizes) the price winners receive a significant monetary sum (750000 euros) presented by our king under pomp and circumstance. The price is awarded for the second time in 2004, and the announcement of the winners in March was duly covered by the media, often followed by a small piece about the importance of mathematics in society. As time goes by the Abel prize will become better known, and hopefully develop into an even bigger media event.

Local initiatives

A strikingly successful local initiative has been made by astrophysicist Knut J.R. Ødegaard and a few colleagues at the University of Oslo. They now run a heavily visited astronomy and astrophysics web site⁸. They further write press releases and ready-made stories about new discoveries (sometimes reporting directly from conferences they participate in) and send them to a personal network of journalists in local and national media. Since 2000 Ødegaard has participated in more than 200 TV and 600 radio programmes, and he has featured in several thousand newspaper and magazine articles⁹. Due to this large exposure and his great enthusiasm for science (that is apparent to everyone), he has become maybe the most public figure in Norwegian science. He has also recently gotten his own science show on a newly started commercial nationwide radio channel.

Astronomy seems to fascinate the public, and an additional advantage is that great events in our solar system often are known in advance. Ødegaard and colleagues have benefited from this by organizing several mass events. For example, in May 2003 they were able to gather 30,000 people in a park in Oslo to watch the solar eclipse at 5 AM in the morning (!). In June 2004 a similar event is planned when Venus passes in front of the sun, and here even the minister of education and research will participate.

A few years ago I had the privilege to be science consultant when the internationally acclaimed theatre play *Copenhagen* was shown in Oslo. The play addresses a much-debated meeting in 1941 between two of the giants of atomic physics, Niels Bohr and Werner Heisenberg, when the prospects of an atomic bomb confronted physicists with grave personal dilemmas. With

⁸ <http://www.astronomi.no/>

⁹ Knut J.R. Ødegaard, personal communication.

physics as a backdrop to the play, a golden opportunity was offered to the physics community for presenting our science in conjunction with this cultural event. Both the theatre producers and the Norwegian Physical Society saw this as a potential win-win situation, and several actions were taken: (i) incorporation of information about the physics relevant for the play in the programme handed to the theatre audience, (ii) organization of a special event on 'physics behind the play' with contributions from physicists, the actors and the instructor, and (iii) writing of several newspaper chronicles on the physics and political drama discussed by the play. In addition numerous journalists were fascinated by the play and wrote comprehensive highly visible newspaper articles on the topic. Finally the theatre production, which received excellent reviews, was adapted and recorded as radio theatre by NRK. This recording can, for example, be utilized in future teaching of atomic physics both at the high-school and university levels.

The Norwegian Physical Society has also recently made several web-based presentations of present-day physics¹⁰ where the main goal is to catch the attention of high-school students. In connection with the celebration of the 'Year of Physics 2005' several initiatives towards media are planned. Among them we are discussing with *Dagbladet* to provide a simple physics puzzle for a dedicated back-page column every day throughout 2005.

The long-term effects of these and other initiatives to promote science via media are difficult to assess. There are, however, positive signals. For example, a (different!) Sunday commentator in *Aftenposten* noted in a recent commentary (14.03.04) that the perception of engineers and scientists are changing. Under the headline "Not so boring anymore ..." with a smiling female engineer looking out from an enormous pipe, she said: "Engineers suddenly look creative. Mathematicians claim to have fun. Space scientists celebrate. Who removed the dry, stern and absent-minded scientists from the Norwegian public life?"

Concluding remarks

As described above a snapshot of the current relationship between science and media in Norway gives a mixed impression. On the negative side one could list:

- Lack of science coverage in general news and culture programs in TV and radio;

¹⁰ <http://www.fysikknett.no/>

- Superficial and sometimes misleading coverage may put science in a bad light;
- Few dedicated science journalists; even fewer have a university level education in science.

However, on the positive side:

- Popular and generally well-made science programs are aired on TV and in radio (predominantly in the public NRK channels);
- A new high-quality research web site (forskning.no) has been established; it contributes positively also to the science coverage in the general news media;
- Politicians are becoming more aware of (and concerned over) lack of recruitment of young people to science; more resources for promoting science have become available and national initiatives have been made;
- Awareness of importance of media visibility of science is growing among scientists; more local initiatives to promote science to a wider audience are taken.

An important observation is that the lack of good science coverage in Norwegian media does seem to reflect a lack of active animosity among the journalists towards science. The situation rather reflects national journalistic traditions and limited resources. This is in some sense encouraging since it gives us as scientists reasons to be optimistic that we can improve the situation. Rather than waiting for the journalists to approach us, we should maybe be more proactive. The abovementioned success of Ødegaard and his colleagues can be attributed to long-term, consistent work on building personal relationships with journalists, writing press releases and pre-made stories, organizing mass events, and steady maintenance of their web site.¹¹ The flip side is that this requires a lot of work over an extended time period, but more research departments should maybe consider allocating a person for such essential promotional activities.

Acting proactively towards media can also mean advance preparation of tailor-made science stories to fit with upcoming media events. Most science fields are not like astronomy where major planetary events (thanks to Newton) are known years in advance. But taking physics as an example, we could prepare stories on the physics of curling free kicks before big football championships or the physics of solar radiation before the beach season. To rephrase a famous American, we should maybe ask what we can do for media rather than asking what media can do for us?

¹¹ Knut J.R. Ødegaard, personal communication.