

Science and journalism

A survey of science writing i Norwegian dailies

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Introduction

After educating as both a journalist and a political scientist, and having worked for many years as such, I have always been fascinated by the relationship between the two professions. In a broad sense the common ground for both professions is the urge to communicate. Instead of focusing on the problems that may occur in the interaction between the two, I will offer an alternative perspective here. Science and journalism should be regarded as complementary means of communication. I will base the following conclusions on a survey among scientists who were used as sources in 13 Norwegian daily newspapers, and among the journalists who wrote the articles. Over a six-week period these newspapers printed 1608 articles related to science. I sent questionnaires to each of the 249 scientists who could be clearly identified as sources and another questionnaire to 109 of the journalists that had written the articles. In both cases the response rate was 77. In addition I interviewed the news-editors.

I asked both the groups some general questions concerning attitudes to science, journalism and the working relations between the two professions. And I traced the specific communication process between them that lead up to publication of the article. I also asked the scientists about their views on the quality of the article, some questions on accuracy, if the publication of the article had had any consequences for them and what aspect of their research was in focus in the story. In the questionnaire to the journalists I confronted them with the views of the scientists and asked for their comments.

In several studies the focus is concentrated on the problems and contradictions in the communication between journalists and scientists (Ryan, 1979; Dunwoody and Scott, 1982; Moore and Singletary 1986). Instead of drawing attention to the possible problems in the working relationship between journalist and scientist, I will suggest a perspective that view science and journalism as complementary means of communication (Diggelmann 1988).

In a few key word this perspective can be presented like this:

Science	Journalism
Scientificcally oriented	Politically oriented
Interested in general results that can be verified	Interested in the unique and unusual
Oriented in the long term perspective	Demand for quick results of work-effort, brief period of circulation
Level of analysis thematically oriented	General approach with a geographical approach (regional)
Differentiated interpretation - largely specialized	Simple interpretation (popularization)
Attempts to understand complex causal connections	Interested in simple connections
Specialized language	Clear and simple language

With reference to the general questions asked to both the professions, I find no evidence to justify stereotyped attitudes towards neither journalists nor scientists. On the contrary it is suprising how unified both the journalists and the scientists are when it comes to critisizing some neaglive aspects of journalists' working routines, - such as the general tendency to use few written sources and tendencies to focus on the sensational rather than typical aspects in a given field. There are also shared attitudes that underline the responsibility of the scientific community to contribute to popularization of science in the media. Surprisingly enough, the two professions share the view that the researcher's fear of being labelled as too P.R- eager, is an important obstacle to more science coverage in the media.

They also agree that problems that might occure in the working relationship between journalists and scientists are generally caused by differences in the communication process, rather than resulting from bad will or specific characteristics in either of the proffessional groups.

There should in other words be a solid basis for fruitful cooperation between the two

professions, and it seems that a general attitude among them that they both have a lot to gain by closer professional ties. It should, however, be underlined that there is not always (nor should there be) a common base between them. If for instance a journalist is working on a critical article on a certain research project the scholar or researcher will obviously not be interested in cooperating if it can harm his or her career. Thus it is difficult to generalize the concept of journalism regardless of genre, but since my time here is limited I will in the following talk about journalism in general.

Scientists with a background from the social sciences were overrepresented, and scientists from the technological sciences strongly underrepresented as sources in the articles from my sample. Journalists and editors also tend to think that their readers regard topics from the social sciences with greater interest (Friedmann, Dunwoody and Rogers 1986). This tendency is also confirmed by a previous study I did on science coverage in the Norwegian television (Ottosen 1987). In terms of backgrounds, most of those journalists with academic training have in fact studied social science subjects (Ottosen 1989).

More than 90 per cent of the scientists in my sample had been previously quoted or interviewed in the media. 80 per cent had been in contact with journalists before on the same subject. This can be an effect of the limitations in the journalists' use of written sources. According to my survey clippings from back issues of their own newspaper are the written sources most used. Thus they tend to use the same scientists as sources over and over again. This narrow use of written sources in the journalistic process was also confirmed in a previous study of Norwegian use of sources in journalistic work (Syvertsen 1982). Journalists use very little "heavy sources", such as research reports, books or public archives. The majority in my sample rarely consulted more than 2-3 sources when preparing a science story. This is the same as the average for Norwegian journalists in their work with an article, regardless of topic. 20 per cent of the journalists in my sample based their science article only on one oral source. A further of 20 per cent, however, did consult more sources than the average.

The initiative to the article could in 25 per cent of the cases be traced back to the scientists themselves - either by direct contact with the journalists, or indirectly through an invitation issued to a seminar or a press conference. Only 9 per cent of the journalists had personally read

the research report that they wrote about. This means that the journalists to a large extent base their stories on secondary sources.

40 per cent of the scientists were questioned by the journalists about new findings in their research. Equally many were contacted for more general information from their field of work. Scientists who were interviewed about new findings in their research, tended to be more critical towards the final article than those who gave more general comment on their field.

Scientists were, however, not in general more critical towards the journalistic presentation than interviewees from other occupations. This finding appeared when my survey was compared with an earlier survey among interviewees regardless of occupation (Vaage 1985). Only 5 per cent of my sample were "dissatisfied" with the article for which they were interviewed. 47 per cent were "partly satisfied", and 46 per cent "totally satisfied". Nor did scientists find more mistakes than interviewees from other occupations. 48 per cent said they found one or more mistakes in the final article. In 65 per cent of the cases the journalists agreed with the criticism put forward by the scientists interviewed.

The scientists did not differ from other groups when they explained why mistakes occurred. Misunderstanding, inaccuracy or lack of knowledge on the part of the journalists, were the most usual explanations. Only 19 per cent of the scientists who found mistakes in the article believed that the mistakes would have negative consequences for them. Only 1 per cent had received any negative response from their colleagues after the article had been published. The journalists were in fact less satisfied with what they had written than were the scientists. Only 29 per cent were "totally satisfied", whereas 60 per cent were "partly satisfied" and 4 per cent "dissatisfied".

Journalists focused more on the journalistic form of presentation than the scientists, who in their criticism put stronger emphasis on the correctness of the reporting of the scientific results as such. Scientists were particularly sensitive towards exaggerations and unprecise quotations.

The journalists who used scientists as sources were, to a larger extent than journalists who used other sources, willing to blame their own lack of accuracy for the mistakes that occurred.

Only 14 per cent of the scientists interviewed or presented in the articles were women. In general in Norway, women are greatly underrepresented in the mass media.

37 per cent of the journalists in my sample were women, which is 10 per cent above the average in the trade union for Norwegian journalists. Female journalists are in general better educated than men. My survey indicates too that the journalists who write about science are better educated than the average.

Conclusions

Rather than stigmatizing each other, both journalists and scientists should look for problems within their own professions that can represent obstacles to better science-journalism. Both the journalists and the scientists in my survey emphasize inadequate knowledge among journalists as the main obstacle to improving the science coverage of newspapers. Indeed this factor is connected to the poor use of written sources already mentioned. The fact that 57 per cent of the journalists in my survey characterize scientists as "extremely good" or "good" sources indicates the possibility for fruitful cooperation. 84 per cent of journalists mentioned that they wanted more science coverage in their newspapers.

Seen from the scientific community, the main problem seems to be lack of professionalism when it comes to informing the public and the media about their work. 60 per cent of the scientists in my sample said that their institutions totally lacked regular routines for informing the media and the public about their research activities. There is a clear indication that those information activities that do exist seem to influence the priority of the journalists. To get more science into the media each institution will have to give greater priority to professional information. I am sure that this can increase the number of science articles in the daily press. The danger, however, is that this may become journalism on the premises of the scientific community. Independent critical journalism is dependent on having a large number of professional journalists who have a scientific background themselves, and who are granted the resources to work on a longterm basis with their field of interest. On this point I have to be pessimistic. Norway is a small country with only a few major newspapers that have sufficient

resources to work on this basis. Even if the present survey clearly indicates a willingness among news-editors to increase their activity in the field of science, most newspapers lack the resources to carry out corresponding activities in a really professional way. This is regrettable as a reader survey, equally presented in my report (Ottosen 1989) proves that as many as 37 per cent of the readers regularly read science articles presented in newspapers, thus placing science in a category with other "heavy" fields like economy and culture.

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