

How Can We Make a Friend Out of an Enemy?

How astronomers and journalists can get along better¹

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Summary

Stories about unpleasant experiences when collaborating with journalists circulate among many scientists. Some of them regard journalists as potential enemies against whom they have to be prepared. But is the idea that a journalist must be either friend or foe appropriate at all? This article briefly examines the changing relationship between astronomers, science journalists and the general public over the last few decades. It then gives a view from inside science journalism and finally suggests some ideas on how to establish a better relationship between scientists and journalists.

Introduction

A few years ago a tabloid journalist contacted an astronomer at a Max-Planck Institute. The journalist wanted to know when Venus, Mercury and Saturn would be especially close to each other. I'm not sure whether the astronomer really knew what he was getting into when he gave the information to the journalist – whose interest was not actually in astronomy at all, but in “sex waves from space”. The next morning the name of the scientist could be found in a major German tabloid, linked to the best time to have sex, as determined by the alignment of the planets.

This is a true story. Experiences like this circulate amongst scientists and spread as gossip during academic meetings. Several scientists I have met at my media training sessions and as a journalist know somebody who has heard of somebody else who has had a horrible experience with journalists. “*When we communicate with*

journalists, how can we make a friend out of an enemy?” is a question I am regularly asked by scientists who want to improve their media strategy. This question sounds obvious, but is the idea that a journalist must be either friend or foe appropriate at all? This article briefly examines the changing relationship between astronomers, science journalists and the general public. It will then give a view from inside science journalism and finally suggest some ideas for a better relationship between scientists and journalists.

Why mess about with journalists?

Astronomers and space scientists have a number of different ideas about how the mass media can serve them. Some hope that journalists might help them to increase the public's awareness of space exploration and their astronomical research. Others want to educate and teach the general

public via radio, television and the press. There are some scientists with excellent media skills who use the opportunities the mass media are offering in a masterful way and regard the media as a platform for their personal public appearances. Finally, there are astronomers who refuse to cooperate with editors and journalists as they regard them as mere distributors of superficiality.

No matter which view a scientist takes: most of what people know about astronomy came to them via television, their newspaper, the radio or online media. The German sociologist Niklas Luhmann (1995) even wrote: “*Whatever we know about our society, or indeed about the world in which we live, we know through the mass media.*” Although Luhmann did admit (Hagen, 2004) that he did not need the mass media to know whether he had watered his flowers, he pointed out that we would not know about the wider world without the mass media. The media are the main platform where interaction between science and the

general public takes place. Whether people have positive or negative attitudes about astronomy is often decided by its presence in the media. Therefore ignoring the mass media or not knowing how to cooperate with them mostly results in missing many chances to arouse public interest.

Astronomy and the mass media: how do they relate to each other?

If scientists want to establish a good relationship with journalists, they should know more about what they can and cannot expect from journalists, what separates science from the world of journalism, and what might be a common basis for a dialogue.

The traditional model for popularising science

How is a journalist's work seen by scientists? One view was outlined above: the mass media as science's service providers. This traditional concept of popularisation dates from the 1970s, but is still popular among some scientists. It is based on the conviction that scientific knowledge is categorically superior to lay knowledge. For example, a physician's knowledge of breast cancer is, according to this view, much more significant than the experience of a woman who suffers from the disease. People are perceived as keen to learn from academia and to be trying to understand the wonders of scientific progress. Scientific illiteracy and public ignorance are described as a deficit that has to be corrected, giving the concept its name: the deficit model. Scientists taking this stance consider journalism as a tool for increasing the understanding of science as well as society's acceptance of the researcher's work. Journalists are there to translate and mediate between science and the general public. As a consequence, says the German sociologist Peter Weingart (2005), any popularisation is a simplification at best, and a falsification of scientific results at worst. "Science communication" of this type is very often a one-way dissemination of information.

The failure of this viewpoint has been commonly acknowledged since the mid-nineties (Weingart, 2001; Nowotny, 2004). The deficit model had not succeeded either in increasing public scientific literacy or in improving the public acceptance of science. It had failed to grasp the social context of science production and how the public use scientific knowledge (Kohring, 2005). It regarded highly differentiated audiences as a homogenous, passive mass of people. It also fundamentally misunderstood the role of journalism and tried

to assign it the role of science's propagandist (Weingart, 2001; Kohring, 2005)².

Science in society today: from monologue to dialogue and debate

In the past few decades the relationship between science and society has changed profoundly. Today, people are discussing the meaning and usefulness of research, and science sometimes comes under fire. The problem of climate change, for example, affects everybody and science and technology are expected to come up with solutions. Other fields of study such as stem cell research or genetically modified organisms, conflict with human religious and moral values or are perceived by the public as carrying risks and hazards. Helga Nowotny (2005), vice-president of the Scientific Council of the European Research Council, hints at the change to a more critical perception of science: "*Science can no longer expect unconditional support on the part of society for whatever it wants to do, nor unconditional acceptance of its authority.*"

Communications theorist Matthias Kohring (2005) emphasises that the changing relationship between science and society is not a crisis, but rather the start of a process of normalisation that includes the questioning of authority. This does, however, not mean that the days of the deficit model are numbered, suggests science communication expert Brian Trench (2008): "*Several models of science communication, including one-way dissemination, and the particular deficit-model application of one-way dissemination, continue to coexist with two-way models that place varying emphasis on interactivity.*"

Two public opinion surveys carried out by the European Commission in 32 European countries show strong public confidence in science, but are also critical of the way researchers handle information: 59% of Europeans believe scientists put too little effort into informing the public about their research. The European Commissioner for science and research, Janez Potočnik (2007), points out the growing requirements of a knowledge society and also the increasing gap between people with access to knowledge and those without. Potočnik says: "*Communicating research [...] is more than a priority. It is an obligation.*"

Science communication means — ideally — a respectful dialogue between the different sections of the public and researchers, as well as a public engagement in science, for example, via public debates,

citizens' conferences, co-decisions etc. At the same time scientists who promote their findings aggressively instead of carrying out fundamental research are becoming more of a problem for science as well as for the general public and the media. The interaction now works in both directions: the mass media also influence science: the culture of media celebrity impinges on an individual's reputation in the scientific community, so that a scientist who is often in the media and who therefore receives much public attention, might get funding, while a researcher with a higher reputation in the scientific community, but no popular status, could come away empty-handed (Weingart, 2005). Research institutions are also increasingly adjusting to the needs of the mass media: many large museums, scientific institutes and commercial manufacturers such as pharmaceutical companies have well-equipped press departments that distribute perfectly targeted photos, texts and even ready-to-broadcast film footage. To secure their supremacy in the field outside the scientific community, major journals like *Science* and *Nature* offer science journalists specially processed information on the journal's main topics prior to its publication.

The self-image of science journalism

Let me begin with a clarification: science journalism is not a specialised type of journalism that uses scientific methods; it is not journalism that is practised or controlled by scientists. Science journalism is a kind of journalism that follows science and uses it as source of information. Autonomy and distance from the object of observation are essential prerequisites for high quality journalism. The near-legendary German journalist Hanns Joachim Friedrichs said: "*A good journalist can be recognised by the fact that he does not take sides in an issue, even when the cause is good.*" The journalist's duty is to the consumer, the reader or viewer — not to politics, not to the powerful and not to science. The science journalist Gero von Randow (2003) says: "*The science journalist is supposed to write critically about science; about the process that creates theories and, of course, about the theories themselves. The science journalist, in other words, is not someone who creates acceptance. Just as the political reporter is not the mouthpiece of the government, the business writer is not the mouthpiece of business, the restaurant critic the mouthpiece of food industry, the science writer is not the mouthpiece of the scientific community.*" Michel Claessens, a former scientific journalist and currently deputy head of the communication unit in the research directorate at the European Commission (2008), writes: "*Although*

scientists often speak of a 'necessary' cooperation with journalists, a 'distance' between them is essential to my mind. A distance that guarantees the independence of and critical analysis by the media that is necessary if the general public are to be able to form their own opinion."

The mass media are more than mediators. They present their audiences with the broader contexts of a story and embed it into the current public discussion. The mass media do not portray science in an exact manner; they do not even consider this as their task. Journalists use their own criteria to select topics. Peter Weingart (2001) describes the consequence: "[The media] are constructing their own reality, exactly as science does. But the media are using different approaches to the 'reality' they report on, and different ways to present it. The frequent complaints of science about 'incorrect' or 'distorted' reports or about a seemingly 'wrong' selection of news therefore miss the mark. It is not possible to achieve an 'adequate' media representation of research that will also satisfy the research scientists themselves."

Friend or foe?

What does this mean for science's relationship to the mass media? Can the journalist be an ally for the scientist? No, or at best only to a certain extent, as journalism has to be independent of astronomy, its object of study. But does this mean that the journalist is inevitably an opponent who works in a world that is incompatible with the scientist's realm? No, not at all, as many excellent reports, films or radio documentaries have been shown that have reached huge audiences and have had a positive impact on the discipline. Labelling journalists as either friend or foe does not fit reality. But just because an unquestioning alliance is impossible, this does not mean we need to renounce a good and trusting relationship between the two professions.

A view from inside the mass media

A pretty good starting-point for achieving this kind of relationship is to understand that some of the media professional's points of view and needs are different from those of the scientists. The following view from inside the media and from science communication experts cannot completely cover journalism's attitudes and opinions. Despite this limitation it tries to give a basic understanding of several of the most important rules of journalism.

What topics are interesting for the media?

The mass media place a topic in a broader,

non-scientific context, which is interesting for its readers, viewers or listeners. So any information that journalists publish has to meet certain criteria, which are fundamentally different from those in science: news has to come from a serious source and also be new, which means that it is not previously known. Journalists speak of news factors if a topic affects many people, if it takes place in their spatial vicinity or social proximity, if it is of consequence, if it is dealing with a conflict, if people hold strong opinions on the topic, rouses emotions, is entertaining or has anything to do with celebrities. The more of these elements that a story has, the more likely it is that it will be covered by the media. Journalists often take one or other of these factors into consideration when they emphasise other aspects of a story than those a scientist would pick out. Scientific significance is a news factor, but far from the only one (and often not the most important one), influencing an editor's decision as to whether to cover a topic or not. Michael Haller (1992), an expert in media studies, emphasises how different the filters of attentiveness and relevance that apply for the mass media are. He suggests that scientists "should accept that from the perspective of an ordinary way of life the apparently marginal can be of enormous meaning, as well as the reverse case, where the scientifically important can be very marginal".

This does, however, not mean that only the big stories have a chance of being covered. Science journalist and head of an editorial department Markus Bohn³ explains how strongly connected to current news topics science can be: "The unknown and the exceptional always have a good chance, of course; as do topics that are relevant to other current news." When, for example, everybody is talking about the Kepler mission, experts on Earth-like planets should seize the opportunity and contact the media. But due to the different criteria for selecting topics, space scientists and astronomers cannot expect everything to be covered. Bohn says: "Proving things that non-experts already think they know is uninteresting for the general public. For science it may be of importance, but the public wants something new."

Precise v. understandable: about different priorities

A common complaint of astronomers is the — in their opinion — lack of precision of the media. As journalists have to think of their audience, precision has a different importance for them. In journalism, only a story that reaches the recipient is a good story. If too many details make a story too difficult to comprehend for the target audience, it may be necessary to omit facts. Of

course, this can be a balancing act. Udo Zindel⁴ is an author and editor for a daily radio broadcast with half-hour documentaries. He says: "Comprehensibility ranks above precision, but is important not to falsify the facts. We do not want to broadcast anything false, as we have a reputation to lose as well."

How (not) to communicate with the media?

Sometimes journalists might prefer to interview the best communicator rather than talk to the best researcher. This can be irritating for the scientific community. Markus Bohn emphasises how important it is that a scientist can communicate well: "A scientist, who is not able to convey in a few sentences what his or her research is about, is not suitable for the mass media." Surprisingly, quite a number of researchers come across as bored or uninterested when an interviewer asks them a question. But giving an interview is not only about facts, but also about emotions, says Bohn: "It is important that the scientist can convey a certain enthusiasm. Anyone who talks about his research topic with the attitude: 'Certainly no one will be interested, I do not even care. It is just my job.' has no chance at all of communicating it." Uwe Gradwohl⁵ manages Planet Wissen (Planet of Knowledge), a one-hour, daily television broadcast. He describes his ideal interview partner: "If a guest is a good narrator, if he doesn't use academic language, if he chats a bit about his field of expertise instead of lecturing, this makes it easier for us to cover a topic." TV journalist Gregor Delvaux de Fenffe⁶ knows that communicating with non-experts requires skill and experience — something scientists regularly underestimate, as he observes: "Every time, when I speak to a professor and say: 'I am interested in what you are working on, I would like to communicate it to the outside world', they beam at me and say: 'I'm all for leaving my ivory tower and I am capable of communicating this project to the general public.' This is often just wishful thinking as I notice then that there's no practical experience there at all. Only a few of them are actually capable of conveying their knowledge to a school class of 16 and 17 year olds!"

Some general recommendations

Gregor Delvaux de Fenffe knows the kind of researchers who refuse to leave the world of science very well. He recommends: "If a scientist wants to establish an issue outside the scientific community, it has to be clear in his or her mind: 'I accept that my topic will be broken down and simplified.' Of course they shouldn't feel that the issue

hasn't been covered properly; this has to be balanced out. It is not about hyping and distorting a topic. It is about developing a feeling for processing it in such a way that people from outside the profession will be interested." Michael Haller (1992) puts it bluntly: "The scientist should find it proper that his data and interpretations are not only 'popularised' for lay people but transferred into a comprehension context which is strange to them."

Coming back to the beginning of this text: what could the Max-Planck Institute astronomer mentioned earlier have done (assuming that he did not want to appear in an article about sex waves from space)? When a journalist phones a scientist, she or he should find out for which news organisation the journalist is working and what the article will be about. These are completely legitimate questions. If the astronomer does not trust the journalist or is not happy with the direction that the questions are taking then it is better to stop the conversation. It is possible to decline to give an interview.

Of course, there are good and bad journalists — as in any profession. Udo Zindel comments on risk and quality in the communication process: "Anyone who addresses the general public always takes a risk. A scientist can choose with whom to collaborate, but even then a residual risk remains." Zindel gives some precious advice: "A good conversational atmosphere exists when the journalist and the scientist trust each other. So, as a scientist, I would expend more energy on choosing the media that suit me, than on trying to control everything."

Conclusion

I have roughly sketched out the changing relationship between science and the world of journalism. I have tried to explain clearly why the media viewpoint differs from the scientist's and presented views, opinions and recommendations of journalists and science communication experts that might serve as a basis to improve cooperation. For reasons of space I could not present more than a few highlights here — and many aspects had to be omitted.

However, the question is not whether a science journalist is hostile or friendly (although this can happen). A certain professional distance on the part of the journalist is a prerequisite for high quality coverage. Articles, radio documentaries or films could all be improved if astronomers and space scientists were to extend their knowledge about the media so that they can cooperate with them on a basis that is reliable and constructive for both sides.

Notes

¹ This article is a thoroughly revised and expanded version of a paper given at the 3rd Annual Ename International Colloquium, Ghent, March 2007.

² The communication difficulties that the scientific community had were declared to be a problem for science journalism: journalism should solve these difficulties, not science. Matthias Kohring (2005) makes the following comparison: "This is as if organised religion expected journalism to be working for the Christian conversion of a supposedly impious society."

³ Interview with Markus Bohn (Baden-Baden, 10 August 2005)

⁴ Interview with Udo Zindel (Stuttgart, 9 August 2005)

⁵ Interview with Uwe Gradwohl (Baden-Baden, 29 July 2005)

⁶ Interview with Gregor Delvaux de Fenffe (Baden-Baden, 21 November 2005)

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Biography

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