

Communicating science

Tips from a top journalist

Clive Cookson

Scientists now appreciate the importance of communicating their work through the media to the general public, with the help of journalists. Here, I hope to give you some idea of the way journalists work and how we differ from scientists; where the media get their stories from; and a few 'do's and 'don'ts' of dealing with the press.

Room for improvement

The amount of coverage given to marine science in the general media has certainly increased substantially since the 1980s. The graph below shows the number of articles containing the phrase 'marine science' in the world's main English-language newspapers for each calendar year from 1989 to 2003, according to the Lexis-Nexis news database (if you search for articles about 'oceanography', you get very similar results). Coverage more or less doubled during the 1990s, with a particularly steep increase during the first half of the decade – the peak in 1995 could have been related to the *Brent Spar* controversy that year.

Of course, more doesn't necessarily mean better. But my impression over 20 years in science journalism is that the quality of science coverage has improved – not so much because journalists have got better but because science-based organizations and individual researchers have become better in their approach to the media. By 'better', I mean more open, responsive to journalists, and proactive in their public relations policy. But there is still room for improvement.

Scientists and journalists

To help bridge the gap between science and the media, let's look first at what scientists and journalists have in common as individuals. Typically, we are:

- Curious
- Analytical
- Sceptical
- Discovery-loving
- Competitive
- Highly motivated
- Free-thinking
- Self-critical.

But we have little in common when it comes to reporting results. In the scientific world you start with the detailed evidence. Journalists – and most other people – start with the conclusion, then go on to broad facts and then (maybe) down to the details.

Many scientists don't really understand the operating constraints on science journalists in the mass media. The challenge uppermost in the journalist's mind is often not so much to get the scientific truth across to the reader or viewer as to sell the story to the news editor, or whichever other internal gatekeeper the newspaper, magazine or TV programme employs. The media always has a vast oversupply of potential stories, even at slack periods like the Christmas/New Year lull or the August 'silly season'. If your story isn't sensational enough, the editors will ignore or delete it – 'spike' it, in journalists' jargon.

I myself would rather read a serious science story than anything about the

entertainment business or the Royal family or most things about politics; but news editors have different values, even on serious newspapers, and a scare story about 'Frankenstein salmon', for example, may tune in better with those values than a measured attempt to communicate the real risks and benefits of genetically engineering fish. Remember that the mass media are about entertainment as much as about information.

So if I pick up what I believe is a good story, I normally negotiate with the appropriate newsdesk (the UK desk, world news, financial and so on) before I even think of writing it. If it's really important I may go straight to the overall news editor, who controls what appears on the front page. For longer, in-depth articles known as features, I would run things through with the appropriate features editor. As the writer, I agree a word count, the outline of the piece and its delivery time.

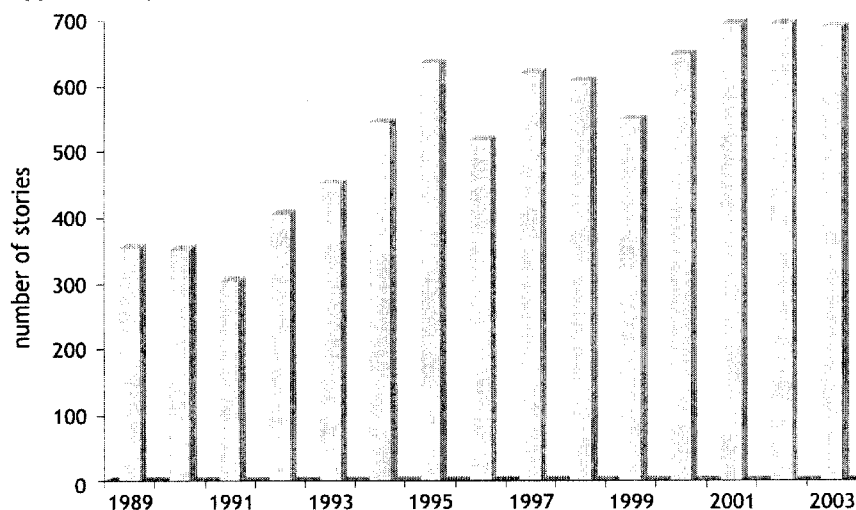
The point is to avoid writing for the spike – something that happens very frequently on papers like the *Daily Mail*, where the science correspondent often writes four stories a day, only one of which actually appears in the paper. On the *Financial Times* most of the pieces that are written do appear, though they may be cut substantially during the editing process; the writer is not usually consulted about the cutting (unless the story is particularly sensitive) or about the headline that appears above the piece.

The processes that determine which stories are picked up and run in the media, while others never get started, are quite chancey, even capricious. Coverage will depend on how many other stories are around on the day, and who happens to be on duty among the writing and editing staff. If I am away at a conference, for example, there are likely to be fewer science stories in the *FT* than if I were on duty in London.

Where do news stories come from?

Science journalists' news sources fall into five broad categories. Firstly, there are **press releases and official announcements**. These arrive in gigantic quantities by mail, fax and email. On a typical day I'll get maybe 70 press releases and publicity materials such as corporate magazines – a pile of paper about half a metre high if they're all printed out. I'm afraid the vast majority go straight into the 40-gallon oil drums that we use for waste paper at the *FT*. *continued*

The number of newspaper articles containing the phrase 'marine science' approximately doubled between 1989 and 2003



Secondly, **personal contacts by letter, phone or email** can give the best stories of all – those sought-after scoops and exclusives. But we have to beware of the false exclusive: all too often, a PR person rings up and says: 'You can have this story all to yourself if you agree to run it prominently in the *FT*', when in fact it's so obscure that no-one else will want it.

Thirdly, **visits to press conferences, scientific meetings, academic and industrial laboratories** etc. will usually produce a worthwhile story. With modern communications technology, it would be possible to work as a reporter without leaving the office, but I think it's essential to get out at least once a week to meet people and see their working conditions.

Fourthly, there are the **academic journals**. Original papers in *Nature*, *Science* and so on are a vital source of news for science and medical journalists. The journals normally give us access to their most interesting papers a few days ahead of publication (on an embargoed basis) to provide time for us to prepare stories. Two web-based services are important sources of embargoed information for registered science journalists: one is AlphaGalileo, based in the UK and focussed on Europe, and the other is Eurekalert, which is run by the American Association for the Advancement of Science.

Finally there is the source that we like least but which we are often forced to use: **following up something from another paper or magazine, or radio or television**. Once a story starts in one newspaper, it may well develop what journalists call 'legs' and run in many others. The advent of computer databases has made it much easier to follow up stories than it used to be in the old days of paper cuttings, but it means that an error in one newspaper is more likely to be imitated elsewhere unless you get it corrected in the database.

Non-journalists often ask me what attracts media attention – what makes a 'good story'. Unfortunately this is extremely hard to define for outsiders. You can list some attractive ingredients: sex; intrigue; corruption; death and disease; bizarre events; genuine scientific breakthroughs. If someone doesn't want you to publish the story, that adds a frisson of excitement. Above all, a good story is about something unexpected. Does it pass the 'Guess what, darling!' test – i.e. is the story interesting enough to tell your beloved about over supper?

I cannot over-emphasize the vast number of science stories that I *could* write, compared with my time and the space available for them in the paper.

Given unlimited time and resources, I *could* produce thousands more pieces than I actually do. And the longer I do the job, the longer grows my list of subjects to cover in the future.

Establishing the rules

One particular question that scientists often ask nervously, before giving information to journalists, is whether they have any right to see the copy after it's been written but before it's published, to give them the chance to correct any errors.

Of course there's no general answer that applies in every circumstance but there are some general guidelines. First, if you are going ask to see the copy or check your quotes in advance of publication, it's best to do so at the beginning of the interview or before providing the information. If you wait until afterwards before asking, the journalist is under no obligation to comply, whereas if you agree the ground-rules beforehand the journalist should feel obliged to stick to them.

The *Financial Times* policy is that writers must *never* show their whole story to a source or anyone else outside the paper before publication. This is mainly because, as a financial paper, we dare not let price-sensitive stories leak out. But *FT* writers are allowed, at our discretion, to let sources check specific quotes or statements attributed to them. We can also let a source check facts or complex technical passages for accuracy.

If asked, I'm usually happy to read out or email quotes and specific pieces of information to a source. However, I have to say that, if I'm writing an article with potential quotes from several people to choose between, I tend to use the ones that don't need approval, if only to save bother. Other people and publications have different policies; for example, Roger Highfield, Science Editor of the *Daily Telegraph*, always checks a story with a source if he has time.

If you're worried about being misquoted or misinterpreted, it's always worth asking in advance if the journalist will check quotes with you. The bargain struck between source and writer over checking copy will depend on who needs whom more. A PR person desperate to get a story into the paper will not be able to insist on anything, but if you're a uniquely valuable source for a good story and you don't care whether you're mentioned or not, then you're in a strong bargaining position.

A case-study in success

I'd like now to move from generalities about communicating science to a specific example of how well things can work for marine science, if sufficient

effort and resources are put in. The news story in question was about the dramatic decline in stocks of large predatory fishes, and began with a paper by Ransom Myers and Boris Worm, published in May 2003 in *Nature* (and put on its cover). This was one of the biggest marine science stories of the year, as far as the mass media were concerned.

Here are some of the ingredients that made it work:

- There was a well thought-out programme to reach out to the media.
- The paper appeared in a leading journal – and on the cover.
- The scientists involved were committed to communication, and willing to put in a great deal of time talking to journalists and getting their message across.
- The research results were striking and the message relatively simple.
- The findings had policy implications.
- And finally, Lady Luck was on-side – there were no big competing news stories at the time.

The outcome was excellent worldwide media coverage, including – the ultimate measure of success – cartoons as well as articles.

For this example I'm indebted to SeaWeb (www.seaweb.org) – a wonderful organization based in Washington DC which has done a lot in North America to raise public awareness about the oceans and life in them.

What journalists want

To summarize, journalists are looking to scientists for:

- A story that is compelling – or at least interesting.
- Access both to the scientists who did the research and to others who can put the work in context.
- Responsiveness: if you get a call from a journalist on a daily paper with an immediate deadline, make an effort to return it quickly.
- Ability to answer the 'So what?' question.
- Good sound bites for broadcasters and metaphors for the print media.
- A willingness to guide journalists to other people with different perspectives.

It's important to remember that your future as marine scientists depends on communicating and engaging with the public, because funding for your research depends on public and political support. If people don't understand what you're doing, they won't pay for it.

Clive Cookson is Science Editor of the *Financial Times*. This article is a based on his keynote talk at the EurOcean Conference in Galway, May 2004.