

# Science Journalists Speak their Minds

## Mariana Barrosa

IYA2009/IAU/ESA/Hubble/ESO  
E-mail: mbarrosa@eso.org

## Lee Pullen

Freelance Science Communicator  
E-mail: leempullen@hotmail.com

### Key Words

Journalism  
Questionnaires  
Media

## Summary

Science journalists are a vital link in the process of communicating science to the public, and yet their personal opinions are rarely taken into account. This paper documents a small-scale attempt to rectify this situation, by asking journalists to complete questionnaires designed to provide an insight into their working practices.

Since journalists play a central mediating role in the dissemination and communication of science to the public, often translating scientific jargon into more accessible language, it is important to know their views on the process. It also is also important to identify the nature of any barriers that can prevent European research from reaching the news headlines, as far as journalists are concerned.

## The Questionnaire

A questionnaire was produced and sent to science journalists working in different areas of the media throughout Europe. The questionnaire was designed to gather general information about the way science journalists work, their educational backgrounds, their sources and their view of the kind and quality of information that reaches them or that they are able to acquire. These results should be seen purely as an informal

survey — a sort of “vox pop” of opinions on the subject of science communication from a small number of European journalists. Too few journalists in too few European countries were contacted to give the data any real statistical validity, but the results are an indication of possible trends among professionals working in the European media.

The questionnaire was divided into two sections to allow us to gather both quantitative and qualitative data. The first part consisted

Table 1. Types of Media

<ul style="list-style-type: none"> <li>• Newspapers                             <ul style="list-style-type: none"> <li>» Daily</li> <li>» Weekly</li> <li>» Online</li> </ul> </li> <li>• Weekly Magazines                             <ul style="list-style-type: none"> <li>» Specialised</li> <li>» General Interest</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Monthly Magazines                             <ul style="list-style-type: none"> <li>» Specialised</li> <li>» General Interest</li> </ul> </li> <li>• Television</li> <li>• Radio</li> <li>• Science website</li> <li>• Science blog</li> </ul>
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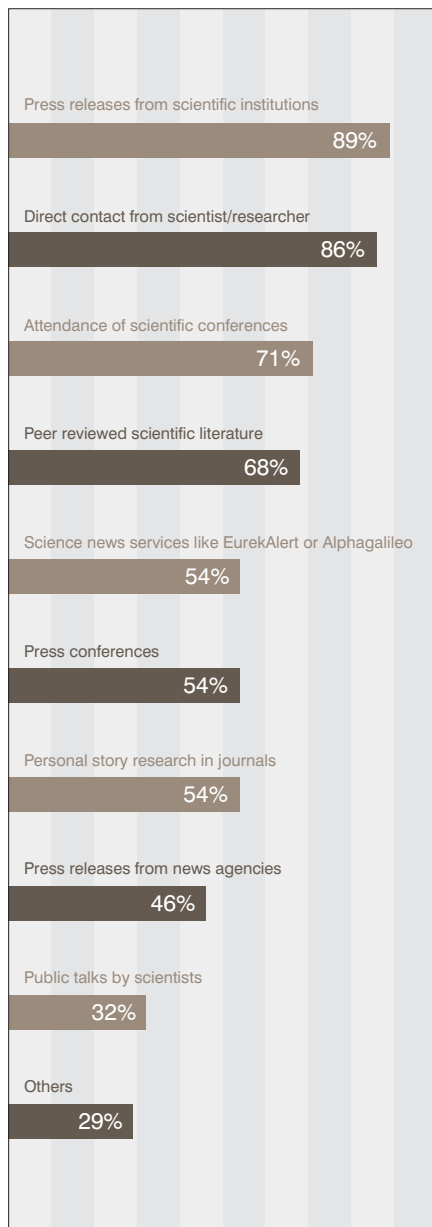


Figure 1. Most frequent sources for science news. Credit: Authors.

of questions with closed answer options and the information gathered was intended to frame and characterise both the journalists and their work in terms of quantities and percentages.

The second part of the questionnaire allowed the respondents to express their views in a less restricted manner and was designed to obtain qualitative and personalised information.

The questionnaire form, designed in Microsoft Word, used check boxes and text fields to make it as quick and easy to complete as possible. The form was protected to ensure that both the formatting and the text of the questions remained unchanged. It was then sent by e-mail as an attachment, accompanied by a short explanation of the purpose and aim of the research. A Portuguese version was also produced.

## The Results

### Framing the Information

The following results are based on a sample of 28 questionnaires received from science journalists from the UK (14), Portugal (8), Germany (2), France (2), Romania (1) and the Netherlands (1).

The responses came from journalists working in all the types of media referred to in Table 1.

Most of the journalists work for several types of media simultaneously. In this particular sample, 50% were freelancers and 61% write exclusively on scientific topics. Only 50% of the journalists who responded to the questionnaire had an academic background

in science, most of them in physics, astrophysics or mathematics.

Figure 1 shows the sources most frequently used for science news by the respondents.

The journalists were also asked what was important for them in this form of communication, with "Subject" and "Credibility" coming first in the responses. The complete results are shown Figure 2.

In this group of journalists, 46% always contacted the principal scientist or someone directly involved in the scientific research/discovery when they research a topic, while the remaining 54% only did so sometimes. The majority (79%) consider it "easy" to contact the scientists.

The analysis of the responses show us that science stories are not often passed over by editors in favour of more popular subjects. In fact, 43% of the interviewees state that this "never" happens to them while 46% say this only happens "sometimes".

The results seem to confirm the popularity of astronomy and space sciences with the media and the public. 64% of our interviewees state that these subjects are "very important" in their work when compared to other sciences and 25% consider it "of

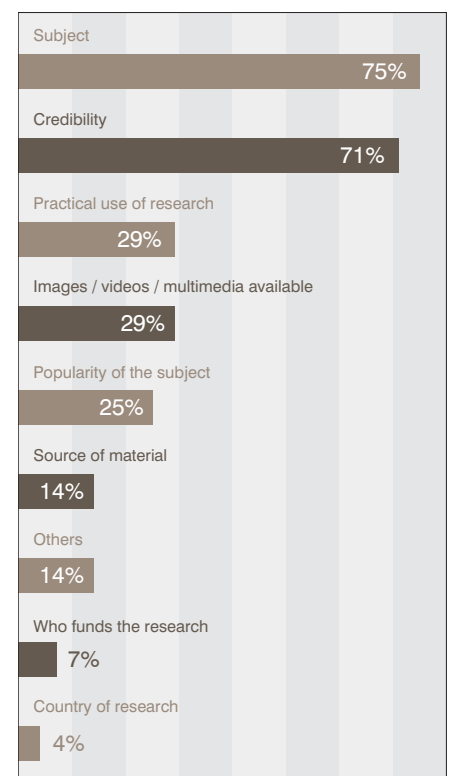


Figure 2. Most relevant aspects for choosing a press release. Credit: Authors.

## Question

## Responses

Things that make the work of a science journalist hard

*"Time to prepare and write the texts."*  
*"Not enough space to explain certain things."*  
*"Time differences between UK and US."*  
*"Quickly finding experts for interviews."*  
*"Balancing the need to meet tight deadlines, yet understanding the topic in question well enough to write a factually sound piece."*  
*"Lack of sympathy from TV schedulers to science programmes."*  
*"Convincing TV commissioners to show programmes about science."*

The different meanings of "news value" for different professional groups

*"PRs that waste my time trying to sell pointless surveys."*  
*"Convincing editors that science doesn't need to have an immediate application to make a good story."*  
*"When press officers present bland research as major 'breakthroughs' in press releases."*  
*"Selling stories to editors."*  
*"Stories about new images that have lousy images."*  
*"Making sure the images are all available and at high resolution."*  
*"Better definition of news value and credibility of the scientific paper, as every researcher seems to think they are doing groundbreaking research."*

Language and communication problems that affect the work of journalists

*"Bad reporting or inaccurate reporting of science stories makes the scientific community and the public distrust all science journalists and it makes my life more difficult, it should stop."*  
*"Responding to, or clarifying, stories appearing in mainstream news outlets that sometimes confuse the prevailing scientific data."*  
*"Making science/scientists easily understood by general audience."*  
*"Stimulate scientists to help me find metaphors that are accurate and appealing at the same time."*  
*"Scientists are not always skilled in translating their often specialised language into ideas that can be understood even by the specialised press."*  
*"Encouraging scientists to make their work accessible/easily understood."*  
*"Obscure press releases [this is a very minor hardship, but sometimes releases are pitched at such a low-level that it's hard to work out what's new; sometimes they merely bury the news]."*  
*"Scientists' difficulties in expressing themselves and in communicating."*  
*"When scientists back away from their grandiose claims once you go on record."*  
*"Researchers being unavailable, especially during conferences."*  
*"Poor number of releases for European science missions."*

Uneasiness in the relationship between the media and scientific institutes, scientists and journals

*"PRs that are over-controlling (the ones that basically don't trust their own scientists)."*  
*"The fear of God put into researchers by the journals (which makes them dither about whether they can talk to you)."*  
*"Organisations are sometimes overly bureaucratic and defensive in nature with respect to journalists."*  
*"Lack of centralised EPO responsibility within ESA and ESA member-states."*  
*"Restricted access to some journals on the internet."*  
*"Embargoes."*  
*"Scientists are sometimes overly wary of journalists' intentions."*  
*"Locations of scientists."*  
*"Release of papers when key researchers are on holiday."*

some importance". Only 11% regard it as "not important".

In the first eight months of 2007, most of these journalists (93%) had already completed stories, features or programmes on astronomy and space sciences.

## Speaking their Minds

In questions 14 and 15 of the questionnaire, interviewees were asked to list the things that made their work as a science journalist difficult and things that would make it easier. By allowing journalists total freedom in their answers, this part of the questionnaire produced some quite interesting comments and insights into what journalists think about their relationship with scientists, science institutions, press officers and news agencies. The results seem to confirm a certain climate of suspicion and friction between the journalistic and scientific communities (Gregory & Miller, 1998) and indicate that there is still much to do in finding a common language and work methods that suit both journalists and scientists. The following comments reflect the journalists' points of view and may provide clues as to why the presence of science topics is unsatisfactory in the European media when compared, for instance, with what happens in the USA.

To avoid wrongful or misleading interpretations, we have opted to transcribe unedited the most significant comments from the respondents (the answers written in Portuguese were translated). As this questionnaire was anonymous, the names of the interviewees are omitted. The views and opinions presented are those of the respondents and not of the authors. Although all the following comments are unique and reflect personal views, we have chosen to group them in similar categories, in order to facilitate the organisation and understanding of the information.

## What Have We Learned?

Previous media studies have underlined that the two professional groups are dissimilar in working practices and professional values (Dunwoody & Ryan, 1983). After reading these comments we are left with the impression that the scientific community needs a better understanding, working knowledge and "culture appreciation" of the media and how they operate.

Also, Peters (1995) showed that scientists and journalists act within different value-systems, following interviews with German scientists and journalists to identify differences in perception of what constitutes "good" science communication in the media. Peters notes that scientific papers, for example, seek to legitimate specific research by referring to a more general, commonly perceived research with a strong focus on presenting results and proving their validity. On the other hand, for journalists, important issues are: who performed the work, what

the results mean and what the likely impact of the research is.

As Fahnestock (1986) notes, in public communication the purpose is to celebrate, not to validate. Also, the communication must be explicit about the value of the results, discoveries, etc. This makes the rhetorical genre of journalism very different from that of the scientific paper.

It may be necessary for journalists to understand the way the scientific community operates in terms of communication. To quote Nelkin (1995), "scientists and journalists must accept and come to terms with an uneasy and often adversarial relationship".

Question	Responses
<b>Things that would make the work of a science journalist easier</b>	<p>"More time!" (x2)</p> <p>"More broadcasting time."</p> <p>"Greater appreciation by TV schedulers of science programmes."</p> <p>"More time to investigate the issue."</p> <p>"More space in newspapers."</p> <p>"More resources to allow in-depth coverage of stories of note."</p> <p>"More thought given to image availability."</p> <p>"Available footage."</p> <p>"Available animations."</p> <p>"Better images, videos and graphics for online content."</p> <p>"For press releases about science to be written by the scientists themselves or rather to at least be checked for accuracy by the scientists, rather than being written by a press person trying to 'sell' a story and getting facts wrong or playing up one area that they think has more popular appeal. As a science journalist, I can generally work out for myself what the merits of a piece of science are."</p>
<b>Language and communication problems that affect the work of journalists</b>	<p>"If scientists realised that journalists are not scientists, and that they write science divulgation articles, not papers."</p> <p>"Mandatory communication training for scientists ;)."</p> <p>"More scientists who are able to talk simply and clearly about complicated subjects."</p> <p>"Well thought out press releases and background information for journalists wishing to delve into the material, perhaps as a supplement to the main press release that must be written for a wider number of less-interested people."</p>
<b>Uneasiness in the relationship between the media and scientific institutions, scientists and journals</b>	<p>"A better understanding of the role of the media by the scientists."</p> <p>"For the popular science journals (Science &amp; Nature etc.) to make sure the scientists are not away when they decide to publish their paper."</p> <p>"Greater professionalism from the scientific institutions in communicating results."</p> <p>"For ESA and its member states to have a centralised contact or department for outreach, etc."</p> <p>"Open access journals."</p> <p>"Better availability of scientists." (x2)</p> <p>"That more scientists look at journalists as allies and not a necessary evil... and stop asking to read the articles before they are published."</p> <p>"Better attitude from scientists to the media."</p> <p>"More notice of forthcoming stories."</p> <p>"Less liaison by public relations agencies that often know little about the work."</p> <p>"Direct access to principal researchers once the material is public."</p> <p>"If some scientists stopped thinking of us as a parasitic subspecies."</p>

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## Biographies

**Mariana Barrosa** is the IYA2009 Coordination Assistant. She obtained degrees in International Relations (University Fernando Pessoa, Portugal) and Cooperation and Management of non-profit organisations (ISAG, Portugal) and a master's degree in Communicating Science (University of Glamorgan, UK). Before assuming her current position, she worked as assistant manager for the Navegar Foundation in Portugal and has been involved in several space science projects in Europe.

**Lee Pullen** puts his astronomy degree and science communication master's to good use, engaging a wide range of hard-to-reach audiences. He specialises in science education and journalism, having taught several thousand people about the cosmos and regularly writing for NASA's astrobiology web-magazine. His website can be viewed at [www.leepullen.co.uk](http://www.leepullen.co.uk).