

**INCENTIVES AND IMPEDIMENTS TO SCIENTISTS  
COMMUNICATING THROUGH THE MEDIA  
A PRELIMINARY REPORT**

**Thomas H. Gascoigne and Jennifer E. Metcalfe, Communication managers  
Commonwealth Scientific and Industrial Research Organisation,  
Canberra, Australia**

**Introduction**

What encourages scientists to communicate their work through the media? What incentives and rewards – for themselves, their programs, their organisations - does the media offer? And on the other hand, what discourages scientists from using the media? Are they adequately trained? Do they receive sufficient support from their organisations, in terms of logistics and recognition? How have they coped with the pressures of going public?

Little research has been carried out in Australia on exploring the attitudes of scientists towards using the media as a mechanism of communicating their research. Researchers have counted and analysed media coverage of science and technology in terms of column inches and minutes-to-air<sup>1</sup>. They have asked the general population how interested they are in reading or hearing about science in the popular press, and then compared these views with those of journalists and their editors<sup>2</sup>. They have compared the attitudes and understanding of science issues of people with different occupational and educational backgrounds<sup>3</sup>, but rarely have they asked the scientists themselves.

This paper gives a preliminary report of both qualitative and quantitative research which has sought the views and attitudes of scientists to communicating through the media in Australia. Most of the scientists in the study belong to Australia's largest scientific research body, the Commonwealth Scientific and Industrial Research Organisation (CSIRO). CSIRO has 35 Divisions where the scientific research is done. These Divisions are grouped into six industry-orientated Institutes which tend to concentrate on developing and implementing policies. The

Institutes in turn report to Corporate Centre which determines national priorities and research directions.

The “popularisation” of science and technology began in Australia about 15 years ago when people realised that the message of science was not getting through by the traditional methods of scientific papers, museum displays based on static nineteenth-century models, and an educational system firmly wedded to the “aim-method-results-conclusion” paradigm where everyone had to end up with the “right” answer.

Both CSIRO and successive Ministers for Science have urged scientists to be more active in the media. The current Minister has told scientists bluntly that they “have got to go out and sell themselves”; and CSIRO’s current ‘Guidelines on Public Comment’ talk about an “increasingly important responsibility to communicate with the public about the scientific aspects of their work. CSIRO Management encourages such communication... [and it is] taken into account in staff promotion processes”<sup>4</sup>.

### **Research method**

Information and data was collected from 178 scientists from all mainland states of Australia through a series of national focus groups and a mail questionnaire.

The focus groups were held in five capital cities (Adelaide, Canberra, Sydney, Melbourne and Brisbane). In each city, two focus groups were held with an average of eight participants in each group (see Appendix One for moderator’s guide). One focus group drew participants who had little or no experience with the media, and the other used participants with wide media experience. Each discussion lasted about ninety minutes, and the conversations of the groups were recorded and transcribed. Focus groups were run in accordance with the general principles summarised by Wimmer and Dominik<sup>5</sup>.

The mail questionnaire (see Appendix Two) was sent to 107 participants of the ten Media Skills Training courses run by the authors between August, 1992 and September 1993. Ninety two forms were returned (86%), of which 75 were from CSIRO scientists. The course runs over two days and is designed to equip scientists

with the basic skills necessary to get their message across to the media accurately. A feature of the course is the involvement of practising print and electronic journalists throughout (see Appendix Three for a course outline).

### **Issues**

The issues which emerged from the focus groups and questionnaire are summarised below.

#### *Public perception of science and scientists*

Most of the focus group participants (in both groups) thought that the public had a negative or stereotyped view of science and scientists and a limited interest in science:

“... look like mad scientists”

“The public won’t understand it [science]”

“Men in white coats...in a world of their own”

“Oddball...”

“We are kidding ourselves if we think people think about scientists...at all.”

“... holding a test tube”

“Vague [person]”

“Male, middle-aged and balding”

“...pretty boring”

“...the school kids call us nerds”.

There was concern that scientists were generally portrayed as men and that science was not seen as a rewarding career:

“...scientists haven’t got a sexy image. It’s all men”

“...you never see a mad scientist who is a woman”

“...young people are beginning to realise that science isn't a rewarding profession”

“... the community at large... does have a reasonable opinion of science provided they don't have to pay for it”

“...we are still shrouded in mystery”

“Young people see scientists as not being highly rewarded...”.

But despite these perceptions of the way science and scientists were viewed by the community, it was accepted that CSIRO as an organisation had a positive image within the community.

#### *Scientists' view of journalists and the media*

Inexperienced media performers generally had a far more negative view of the media than those with experience in the media. They essentially distrusted the media and doubted its potential to help their science. They were particularly fearful of misrepresentation:

“...the media see scientists as people that can be exploited purely for notoriety...”

“There are so many traps you can fall into. You can fall into divulging something that the Division doesn't want divulged. You can fall into the trap of being too detailed or too simplistic so that it's trivial or unintelligible, or you can fall into the media's game of trying to catch you out”

“You have no say at all about how it [the story] comes out which may completely misconstrue the way you wanted it...”

“...stories are trivialised to the point where any information content is removed”

“...if you know your stories are going to be garbled on the way then you try to avoid it”

“...risk of stuffing up...”.

The inexperienced group rated the quality of media coverage in terms of the amount of hard factual material it contained. The mix of information between image, sound, fact, qualitative and quantitative elements was not considered.

But scientists with media experience and media training were more accepting of the inherent inaccuracies which can occur in the presentation of scientific stories in the media. These scientists were far less likely to be victims of the media but instead attempted to moderate and manipulate the medium and media people in a proactive manner. Scientists with limited experience and no training were more likely to be reactive and fearful towards media “intrusion”.

Most of the experienced media performers reported positive interactions with the media, especially with senior reporters or science and technology writers:

“...genuinely interested in getting a good story”

“...you develop some contacts over the years with particular journalists...if you develop the right relationships, they can be very very helpful and at strategic times they can be of great value.”

A tension was revealed between the need of the medium to get the message across quickly and the scientists’ desire to be detailed and accurate with the right emphasis:

“They [journalists] don’t want qualifications”

“...most of the stories you read in the press ... are either full of factual errors or just completely wrong”

“Even the simplest words, they torture into incomprehension”.

A concern of scientists from all groups was that use of the media or the angle of coverage may raise public or industry expectations prematurely:

“...the story comes out... but the product isn't there for five years and sometimes I think the public may get disillusioned”

“We are making promises that [are]...maybe ten years down the line. When we promise something people expect it next week, the media suggest it will be there next week”

“...their [scientists'] credibility is on the decline because they have made all these promises and claims of what they are going to do...and nothing ever comes of it, and people say 'yeah, same old bullshit'”.

Some scientists said that the rural or regional media were far easier to deal with than the metropolitan or national media, in terms of both access and accuracy. Scientists in both groups made relatively little distinction between press, radio and television in terms of the attributes typically associated with each medium. Nor did they express a strong preference for one form of media over another, with some scientists preferring the detail of newspapers, others the ease of radio, and others again the impact of TV.

Scientists with media skills training were far less likely to be concerned about accuracy, distortion or trivialisation by the media. Those with media exposure since doing the course were satisfied with the coverage. On a scale of one to seven (where one equals low satisfaction and seven high satisfaction) the average score was 5.23.

Of this group, most (51%) described the coverage as having “some mistakes, but generally okay”. The other common descriptions were “interesting” (44%), and “accurate” (24%). Only 8% said coverage was “distorted”, and only 5% said stories had been “trivialised”.

#### *Benefits gained from using the media*

Two key benefits were identified by all groups of scientists in using the media. The first was to convince decision-makers and ensure a funding base:

“...what you put out will influence the Ministers, the politicians, head office...”

“...the funding agencies know who [visible scientists] are, they know who has got a product to sell...it is so much easier to sell your next proposal if you’ve had some reasonable coverage...”

“...an essential part of getting money”

“...it’s a very powerful business tool”

“We have to sing for our supper”.

The second benefit was in improving the image of the organisation with the public at large, to demonstrate that they are getting value for their \$450 million investment. That part of the job was seen to being carried out less well:

“What the public wants to know is whether the scientists are running around in white coats sitting in their ivory tower, or whether they are actually involved in something that will produce tangible benefits for the community”

“...unless the organisation moves to generate substantially more public support...it is going to lose appropriation funding...”.

The three most common benefits identified from using the media by Media Skills Course graduates were seen to be “improved public/end-user awareness” (70%), “lifted profile of research” (60%), and “technology transfer to end-users” (29%). Only 13% said media work helped with their PPE and even fewer (5%) said it “improved promotion prospects”.

Other rewards seen by using the media included improving the international prestige of CSIRO, increasing student interest and awareness, and improved negotiation with commercial interests. One person stated that:

“in the area I was working, I identified more clearly the direction I should take, through the sort of analysis that public interest takes you.”

It was recognised that the media was just one means of communication, even though it was an important one.

“You communicate with stakeholder groups, you communicate with conferences, strategy workshops, the whole box and dice. The media is only one part of that communication.”

Other benefits identified from using the media were:

- development of a more useful and extensive network of personal contacts
- the attraction of commercial interests
- the development of an environment where companies are comfortable working with CSIRO
- technology transfer; public information dissemination
- justification for funding
- attracting young people to science, in terms of interest and career
- providing feedback to science community
- accountability to the community
- input into developing higher-quality media programs
- education of general public in scientific method

*Personal rewards or costs from using the media*

For inexperienced scientists, personal rewards for media use were often unknown or unrealised:

“If you were given the opportunity to spend a week doing media interviews...or getting a paper published, you’d get a hell of a lot more for your promotion out of writing the paper than out of the media interviews...”

“...we get brownie points”

“...we would be less averse to doing it, if there was some recognition or some way you could be guaranteed that the story will be got across and people would take an interest in trying to read it properly”

“There is no doubt that most of what I do is inherently dull to the public. I can't see why anyone would want to read it”.

In terms of improving promotion prospects within the organisation, most of the focus group participants saw media work as neutral or even negative, and only a few people could identify anyone who gained promotion because of media work. There was also disagreement about whether media work should count or not.

“Nothing to do with our personal advancement”

“Just part of the overall job”

“...part of the job at senior levels”

“I think for young scientists and senior technical staff it does count...At senior level it's taken for granted”

“...it is highly recognised, it's actually demanded by our clients”

“It is an extracurricular activity that needs to be done but there are no brownie points for it”

“I would like a more formal method of evaluating media activities in PPE terms... management treats it as non-scientific and not rewardable”.

Inexperienced scientists tended to be far more wary of the attitudes of their colleagues or peers to media coverage. However, there were differences across groups and some were less concerned than others.

“Duck [one's head]!”

“Start making jokes about Hollywood”

“Total opposition....”

“Amusement and scepticism”

“...it came over very well and was very well received within the Division”

“A lightweight issue [media exposure] .... not taken seriously”

“...because we are so unsure and so frightened it is just another outlet to give somebody a hard time...”

“Credibility is the big word...”

“A little bit of jealousy...”

Experienced media performers were far less concerned about possible reactions from their colleagues. They reported support rather than criticism:

“...back 20 years ago...I always thought about what my peers were thinking...That never enters my mind now because all my peers are up there doing it too...”

“It started out with envy, [and changed from] disparagement [to] appreciation, open support...”

The variable level of media exposure between project groups generated a tendency for groups to compare each other in terms of their “press and coverage”:

“There’s so-and-so with his wonder tool again”

“Some people are identified as publicity seekers”.

Costs included the risk of leaving out the names of collaborators or colleagues:

“...why didn’t you mention this group and this is politically sensitive and why wasn’t such and such mentioned...”.

A far more significant cost, though, was that of time, particularly for experienced performers. However, not everyone agreed that time was a problem:

“The media is very easy by and large because most of the interviews are by telephone”.

A large proportion of respondents to the Media Skills Course questionnaire (44%) said there were “no costs” in dealing with the media. However, another 48% said media work was very “time consuming”.

“Staff see benefits, therefore increased pressure for more media coverage, but no increase in staff or budget to cope”

“Main question is how much time should be devoted to media output, its evaluation, and then recognition by management.”

Other personal rewards mentioned for using the media included:

- personal satisfaction or “buzz”
- helping in personal development and knowledge of life
- can indirectly lead to extra funding which may help promotion cases
- being asked to do more publicity
- making it easier to get funding proposals up with funding agencies.

#### *Commercial issues*

In most discussions, the need was identified to maintain secrecy about commercial agreements. Companies paying for research with commercial implications do not want premature release of this information.

“The last thing they want to know or hear is some throwaway line in the media letting their competitor across town know what they might be up to”

“A whole group of people working on one project were asked to sign a legal document before they took part...”

“Many stories have been blocked through commercial considerations”.

On the other hand, it was also thought that most research could afford general publicity at some stage and that CSIRO should ensure that once a product had been commercialised that the organisation received publicity and kudos along with the commercial company. The media were also seen as an important tool in attracting commercial partners or projects.

Scientists from all groups were concerned that the increasing commercial role being played by CSIRO might conflict with its role as honest broker or bring about unwarranted litigation.

“If we license ourselves to a particular company then we are almost like any other commercial company on the market place and we can be seen as fair game”

“If you...simplify it for media consumption and a commercial partner takes it up and then the whole thing falls in a heap...he may take you to the cleaners...”

“Aligning ourselves with individual industry groupings or companies...detracts from that honest broker role”

“Can’t be commercial and lily-white...court cases are inevitable”.

### *Organisational issues*

Many scientists claimed the organisation was quick to complain about perceived inadequate media performance but unlikely to recognise, praise or comment upon good media performance. In this way the CSIRO subtly discouraged scientists from dealing with the media and from using media training and personnel resources within the organisation.

“One thing that upsets me is the lack of emphasis on this aspect of CSIRO and I think it flows right from head office... There is still an anti-publicity culture in CSIRO and we have to battle this”

“...there is probably more pressure on us to produce papers than there is to talk to the media”

“How to’ deal with the media is only half of it. The organisation must ‘want to’ and individuals rewarded for doing so”

“I don’t really believe that the Division really supports you or encourages you”

“The information [from the Media Skills course] should be made available to all levels of Divisional Management and Research Scientists. An important change in attitude is required to allow effective use of the media by CSIRO. It is work important for our future.”

Experienced scientists felt that the responsibility for “getting the message out” was their own. They tended to wish to continue their “hands-on” involvement but were also more likely than inexperienced scientists to ask for assistance from communication specialists. The untrained group generally felt it was the organisation’s responsibility, not their own.

“CSIRO needs a mechanism for getting its science out”

“They [communicators] come to us if they want more information”

“...we have a communicator between us and the outside world”

“There has got to be a central person in the Division who has got to know what is going on, who keeps their ear close to the ground”

“I just sometimes wonder whether there’s a network in CSIRO, whether it’s known people are available who are knowledgeable”

“Targeting the appropriate stories for media release is something that could be discussed more within the Program... We seem to respond to, rather than plan, media events”.

Graduates of the media skills courses sought assistance from a variety of sources in organising planned stories for the media. These sources were:

- Divisional communicators (21)

- Journalists (13)
- Other sources such as peers and communication consultants (9)
- Corporate Public Affairs journalists (6).

Fourteen had arranged to publicise their own stories with no outside help.

Among the inexperienced group of scientists few, if any, knew of the internal media and communication resources available, particularly the services offered by Corporate Centre. Knowledge of these services was patchy among the trained group.

“Are we assisting them [Divisional communicators] or are they assisting us or are we supposed to be working together?”

“There is no real policy, it is just personalities...”.

The value of the role that the six Institutes may play in media liaison was questioned by respondents:

“I perceive the lack is at the Institute level...I am quite disappointed in the...use of the media by [Institutes] in a systematic way”

“The Institute is a bit irrelevant. I wouldn't have a clue about the Institute...”

Most of the Media Skills Course participants over the past two years worked in biological or ecological fields (48%), and were members of agricultural or natural resources Institutes:

- 26 Institute of Plant Production and Processing
- 17 Institute of Animal Production and Processing
- 12 Institute of Natural Resources and Environment
- 10 Institute of Information Science and Engineering

The other Institutes were only poorly represented:

5 Institute of Minerals, Energy and Construction

1 Institute of Industrial Technologies

The most common organisational changes or assistance identified by Media Skills Course participants to continue or expand media work were seen to be:

- more time (49%)
- more personal training in media skills (28%)
- better access to communicators (28%)
- recognition of media work through staff Performance, Planning and Evaluation [PPE] sessions (26%).

#### *Training in media skills*

It was generally agreed by those who had experienced media training that it assisted in improving both the quantity and quality of media coverage. A significant number of participants who had little or no media experience thought training would be helpful.

“Without that training you would be stumped”.

The large majority (86%) of CSIRO Media Skills Course participants did the course because they wanted “to improve [their] own media skills”. The majority (68%) had also had some media exposure since doing the course. This exposure was generally up on their exposure before doing the course, but no definite conclusions can be drawn from the data available.

Most of the respondents thought that the Media Skills course did give them better control over their media appearances (on a scale of 1 to 7 where 1 is poor and 7 is excellent, the average score was 5.56). They also thought it was useful to their communication efforts now (average score of 5.58 on the same scale), and they felt more comfortable with the media as a result (average score was 5.32).

"...[the course] has helped because I understand how the media operates and how best to use them"

"I am not as fearful or loathing of the media.. before they were simply an intrusion to my work".

"Except for the cost in time and money, I would consider participating regularly in these courses every year. I think the contact with like-minded people, as well as a media person or two is very worthwhile"

"Being comfortable with the media is greatly facilitated once a successful, real interview has taken place. The course helped prepare for this first interview"

"This course taught me the fundamentals of the game and some training. Match fitness is what I need and every game I have played since the course has improved that"

"I believe the costs/problems associated with media interactions actually diminish to an insignificant level with the gaining of experience through increased media exposure."

## **Conclusions**

There were significant divisions between the scientists who do use the media, and those who do not. The former group could see significant advantages in having a media presence for themselves, their project, and the organisation as a whole. They use the media as another tool in communicating their work to a variety of audiences, recognising that it is an imperfect but powerful method for reaching end-users, research funders, bureaucrats and other scientists.

They had a much better understanding of the constraints under which the media operates such as tight deadlines, the need for simplicity and speed, and the "infotainment" nature of much of the media. As a consequence, they expected and could tolerate the media's occasional excesses and omissions.

The experienced media users had hurdled most of the difficulties placed in their way by the system because they enjoyed working with the media and saw it as a valuable component of their job. The time that it consumed was the largest difficulty. Lack of recognition by the organisation in terms of providing adequate rewards was shrugged off philosophically as a minor irritant: most of the experienced media performers were senior scientists with established positions.

Many had acquired the skills and experience to deal with the media independent of the organisation, although they tended to use Divisional communicators to assist them in getting their stories out.

In some cases, commercial considerations were a significant barrier to communicating through the media, and there was wide concern about the apparent juxtaposition of commercial roles with that of being an honest broker. For others, commercialisation was either not an issue in their Division or a matter they had learned to work around.

Scientists with little or no media experience saw their job in narrower terms. They tended to lack the political awareness of their media-experienced colleagues, and to have far less trust in the media because they thought it trivialised and distorted the science. This group was more likely to judge science stories in their own scientific terms rather than from the effect the stories would have on the readers and viewers.

As they had not worked with journalists, they had less understanding of the constraints under which journalists work. They did not appreciate that a science story has to be presented in an entertaining fashion to work with the popular media. They regarded journalists with suspicion, and did not understand that journalists and scientists can work together to make the most of a story.

Commercial considerations were both a barrier and a shelter for these scientists. Anxious not to offend sponsoring and collaborating groups from the private sector, and probably overly respectful of a company's desire for secrecy, they felt they had every reason to avoid the media.

Other barriers included the organisation's emphasis on formal scientific publications when promotions were considered, lack of time and lack of media training. Recognition of the value of media work did come out in discussions and several participants expressed their interest in enrolling in CSIRO's Media Skills course. Like participants from other groups, they saw the value in maintaining the high profile of CSIRO as an organisation. They were less sure of how to go about achieving this end, or perceived little opportunity to do so.

The Media Skills course appears to be an effective measure for assisting scientists to communicate their work through the media. Most of the respondents to the questionnaire said they felt they had better control over their media appearances, that it was helpful to their communication efforts, and that they now felt more comfortable working with the media. It is at least a significant step towards helping scientists communicate effectively through the media.

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### **The Authors**

*Thomas Gascoigne* is Communication Manager for the CSIRO Centre of Environmental Mechanics. *Jennifer Metcalfe* is Communication Manager for the CSIRO Division of Tropical Crops & Pastures. They have devised and run courses in Media Skills and Presentation Skills for scientists in CSIRO and other organisations in Australia.

## Appendix One

### Focus Group Moderator Guide

#### START

- Introduce each to each
  - Detail purpose of the meeting
  - Emphasise conversational element
  - Mention tape recorder and observer
- OVERHEAD ONE – press headlines

#### MIDDLE

- Public perception of “the scientists” and of “science”
- Media perception of scientists
- Strategies for placing a story in the media
- Why bother to tell a story – rewards, benefits, opportunities, funding.
  - Explore impact on staff performance, planning and evaluation (PPE) process
- Encouragement or barriers put up by the organisation or by the Division.
- Accuracy/quality of science stories in the media - your stories or other scientist’s stories.
- Value of print (newspapers/magazines), radio or TV for getting the message out or picking up the story.
- Attitudes and perceptions of colleagues to using the media.
- Strategies for making relations/access better to the media at your level, and at the organisational level.

#### END

- Incentives for communicating through the media summarised.
- Impediments for communicating through the media summarised.

## **Appendix Two**

### **Mail questionnaire of Media Skills course participants**

## Appendix Three

### Media Skills Course Program

#### Program Outline

##### *Day One*

###### *First session 9-10*

1. Why we're here
2. Why scientists should communicate
3. Experiences of the participants
4. The journalist
5. Where does your story fit?

###### *Second session 10.30-12.30*

6. Brendan Nicholson, *West Australian*, on print media

###### *Third session 1.30-3*

7. Harvey Deegan, News Director, *Radio PM/FM*, on radio (and during individual interviews, there will be a discussion on media releases)

###### *Fourth session 3.20-5*

8. Handling the media on the day
9. The Coastal Zone Program launch

##### *Second day*

###### *First session 9-10*

10. Analysis of a television interview

*Second session 10.20-12.30*

11. John Knight, media consultant, on television (and during individual interviews, there will be a discussion on television interviews including the showing of an interview before and after editing)

*Third session 1.30-3*

12. View television interviews

13. Handling the hot issues

*Fourth session 3.20-5*

14. Case studies

15. Evaluation

16. Media star awards