

# Science and Faith Dialogues

The faith communities are relatively easy to identify and to communicate with. Faith leaders often have little or no scientific training, and probably many of their followers do not either. They might be expected to have moral and ethical points of view about scientific issues that would be of use to practising scientists. Scientists, on the other hand, have knowledge that might be of use to people of faith when trying to cope with life-changing events.

So in the spring of 2005 five ‘Grosseteste Dialogues’ were organised between scientists and people of faith in the East Midlands to discuss science-based issues that affect peoples everyday lives. A total of 260 people attended the events, 23% of whom were Asian.

A variety of formats were tried. The most successful were those using a script to follow a person or family through a hypothetical situation. Participants rated these as more satisfactory than formal presentations or relatively informal conversations, and they also produced dialogues that involved more scientific, moral and ethical discussion.

The Dialogues were dedicated to the memory of scientist Robert Grosseteste, Bishop of Lincoln (died 1253) who united the roles of priest and scientist, and pioneered the use of mathematics in optics in an era when the Western Church was undivided.

The East Midlands Regional Officer of the BA (British Association for the Advancement of Science) Philip Brown (PB) obtained a Copus Grant<sup>1</sup> of £9285.

This report aims to summarise the lessons learned for those working in the Science Communications Industry.

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## Format

A variety of different formats and styles were tried.

- A formal presentation was used in which the speakers sat on a stage and stood at a podium to give their prepared speeches. The audience asked questions but there was almost no discussion of the moral and ethical issues involved.
- One event was a relatively informal conversation in which the panel were asked to present their own ideas on a major problem, and the audience were encouraged to present their own ideas.
- One event was led by the Chair acting as facilitator. Since she had no knowledge of the highly technical subject or experience of facilitation, a script was prepared to help her. The script followed the fictional life story of a person. The Chair encouraged Dialogue by actively calling for the audience to respond to the panel’s statements by giving their moral and ethical views of what had been said.
- Several people advised that the Start of Life discussion, held at Lincoln Cathedral, might easily degenerate into a polarised argument from pre-determined points of view. The subject is also rather technical, involving issues such as pre-implantation genetic diagnosis and stem cell research about which the Chair was not an expert. For these two reasons it was felt that a prepared Chairman’s script, following a hypothetical family through their reproductive lives, was the most appropriate format. However, since the audience might well have strong feeling

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<sup>1</sup> These grants provide funding and support for activities and projects across the UK that improve two-way communication between scientific communities and public audiences. Copus Grant Schemes are funded by the Office of Science and Technology and the Royal Society, and are administered by the Royal Society.

about the issues raised, it was felt that the event should be Chaired in a sensitive and fairly loose manner, allowing the audience to steer the discussion in whatever way they wished. In the event there was no pro-life lobby. This could have been because the script concerned a couple who were themselves pro-life! They were already asking the kind of questions that such lobbyists might have wanted to ask.

- Finally in one event the Chair was given some notes about how the event might be conducted. However the relative lack of complex scientific basis and the importance of social issues, which the Chair was perfectly able to cope with, meant that the event was run more as an informal conversation. The level of audience satisfaction for this event was the highest of all events, at 92% with a similar score for Stimulation. The personality, style and confidence of the Chair contributed to this in no small measure.
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## Evaluation of Scripted Fictional Scenario

### **Preparation**

Writing the script involved extensive research upon the subject in hand, and consultation with one or more experts. The script was reviewed by an expert in the field. The script was then reviewed by the panel of speakers. Panel members' names were placed against each question, so they all knew which subjects they were expected to be able to talk about.

### **Benefits**

Novice speakers were able to prepare their answers to a specific question beforehand, so did not have to field questions off the cuff, so giving them confidence in approaching the session.

Likewise the Chair was able to steer a large group through a discussion without extensive preparation. Otherwise an expert facilitator would have been required, imposing a significant cost. This method is of particular value when the topics covered are of a technical nature.

The script mapped out the range of issues that might be covered, so ensuring that the discussion would not grind to a halt.

Background information was provided and this was used by some panel members as well as the chair.

By following a fictional character through a life-changing episode the audience was able to identify with the story, so giving concrete form to otherwise abstract ideas. The panel could be asked what information would be given to a person in this specific situation and the audience could be asked how they would respond.

The narrative was coherent and satisfying, providing an experience of rounded debate. By ensuring that the discussion covered a wide range of issues the discussion generated a sense of completeness which might be difficult to reproduce by other structural methods.

### **Disadvantages**

Some panel members spoke very little apart from answering the question they had been nominated to answer. However, this shows that even if they had little confidence outside their own sphere of expertise they could still usefully play a part on the panel.

### **Evaluation**

Audiences awarded the events an overall satisfaction rating of 73%. However the relatively low level of satisfaction in the Participative element, at 69%, is regarded as disappointing for events that were supposed to be Dialogues.

The reason could be because the audiences were too big to allow most people to feel comfortable speaking. People are unwilling to speak before large groups of strangers. So for better Dialogue the events either should have had far smaller audiences or the

audience should have been broken up into smaller groups. This, however, raises logistical problems.

All scripted events had higher satisfaction scores than unscripted ones. The facilitator-led style event had the highest Participative rating, perhaps because of the constant questioning of the audience by the Chair. The End of Life event was ranked highest on all other ratings. This was possibly in part because of the personality and style of the Chairman.

### **Dialogue**

Did these events produce an effective dialogue between scientists and people of faith? In some ways the communication was one sided. The panels communicated scientific ideas to the audience, but the audience often did not have a ready-made moral or ethical point of view to bring to the table. As one audience member put it:

‘we don’t know anything about [this subject], so we wouldn’t have an official church position’.

On the other hand many panel members expressed the moral and ethical implications of their work. It is something they were already struggling with in their daily work. Also some panel members were themselves people of faith, and so could express this dimension effectively.

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### **Recommendations**

We feel that the use of a script following a person through a hypothetical situation is a very effective way of structuring a discussion and we recommend that it be explored further.

The resulting discussion was coherent and satisfying, providing an experience of rounded debate. By ensuring that the discussion covered a wide range of issues the discussion generated a sense of completeness which might be difficult to reproduce by other structural methods.

By focussing upon the issues of a single individual, abstract scientific issues are made concrete and both panel and audience are able to identify with the story, so increasing engagement and attention.

By having a prepared script the panel are able to think about their answers in advance, so reducing the stress upon those unused to public speaking.

More moral and ethical issues might be raised if the panel included faith leaders who could think about and express their point of view. The script might help them to focus their thoughts before the event.

### **Audio Workshops**

These events were recorded in digital audio (as described at the end of this report), and these recordings are now being developed into CD audio workshops suitable for use with faith groups, schools and patients. The first of these is available for review and trial. For samples of the CD please contact:

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### **Technical Notes on Recording**

We include here a technical note on recording the events in digital form and producing the CDs.

The audio from all the events were recorded onto mini-disc. The system used two boundary microphones for the panel members, a desk stand with a dynamic mic for the chair and a wireless mic for the audience. These fed into a Yamaha Mg10/2

Mixing Console which fed a Sony MZ-B10 mini-disc recorder and a Marshall Valvestate VS100R guitar amplifier.

The wireless mic was the cheapest we could find, as gave extremely poor results, such that the quality of most audience comments were not useable. Audience members were very reluctant to use a microphone and almost always held it too far away from their mouths. The other microphones worked well.

The mixer was splendid, and the mini-disc recorder was adequate.

We had no way of transferring the data to a PC apart from re-recording it from the audio input. We used the free software WavePad to record and edit these recordings. The price of Net-MD recorders has since come down, and they are preferable as their output can be played on the PC via a USB interface using the supplied SonicStage software. However it is no use transferring the recording to the PC using SonicStage as it cannot be replayed (to avoid copyright infringement).

The amplifier was the only one available and was extremely heavy. A much lighter weight audio amplifier (using solid state rather than valves) would have been much easier to carry. We also did not have separate speakers, with the result that some hearing impaired members of the audience could not hear some of the event.

We also had problems controlling feedback, which tended to spoil parts of the event.

We have since learned about the Carlsbro Traveller PA System model: MA3500 which wraps up a 2 x 75W RMS 4 Channel Stereo Powered Mixer, DSP, 2 speakers on stands, a microphone and all leads into neat carrying case that weighs a reasonable 27kg. For information see <http://www.carlsbro.com/traveller.htm>.

The only problem with it is that it appears not to have an output that could be fed into a recorder.

The conversion of these recordings into audio workshops is greatly facilitated by having a transcription of the event. Wavepad was used and a CD writer is required.

Two of the events had their own audio systems, and that was used instead of the above. One worked perfectly. The other, however, caused problems as we could not make the output feed into the minidisc recorder. Nor would we make the mixer feed into their amplifier because we did not have a phono to XLR converter. The result was that the minidisc was placed on the speakers desk and a spare recorder was used to record the audience.

Getting to grips with the technicalities of audio recording is a profession in its own right, and we recommend that a sound engineer be employed if at all possible.

