

BBC Trust Review

of impartiality and accuracy of the BBC's coverage of science: follow up

November 2012

Background	1
Trust Commentary	2
Executive Report on Science Review Actions	4
Overview	4
Appointment of BBC Science Editor	4
Creation of Science Forum	5
Science training for staff	7
'Due weight'	8
Conference attendance	9
Electronic tools and databases	10
Contacts with scientists	11
The balance of male and female scientists	12

Background

In 2010 the BBC Trust launched a review of the impartiality and accuracy of BBC science coverage. The Trust felt that the importance of science in contemporary life, the sensitive ethical and social issues that it raises and the fact that the public looks primarily to the media for its science information, meant it was vital to ensure the BBC's audience enjoyed science coverage of the very highest standards. BBC content must be accurate and impartial in order to safeguard its independence and public confidence and it is a key priority for the Trust that the BBC covers potentially controversial subjects with due impartiality.

Steve Jones, Emeritus Professor of Genetics at University College London, was commissioned to write his own independent report as part of the review. The review covered specialist and non-specialist science content on TV, radio and online and science was defined to include not just natural sciences but also coverage of technology, medicine and the environment relating to the work of scientists.

In its response to publication of the review, in 2011, the Trust welcomed the clear finding that BBC science coverage was generally of a very high quality. Nonetheless, the Trust was concerned about the deficiencies in coverage that Professor Jones and the content analysts had identified. On the application of due impartiality, the Trust agreed with Professor Jones that, "there should be no attempt to give equal weight to opinion and to evidence" and that a "false balance" (to use Professor Jones' term) between well-established fact and opinion must be avoided. The Trust asked the Executive to report back in a year on progress in addressing the deficiencies identified. That report has now been received and is published alongside this commentary.

Trust Commentary

The Trust commends the Executive for the significant progress which has made since publication of the Review in 2011. It is apparent that the Review has had an impact on output and is likely to continue to do so.

The Trust welcomes the appointment of David Shukman as BBC Science Editor, a new post which was one of the key recommendations of the review, and the Trust is pleased to note the impact he has had, among other things, on the application of due weight in programme making, the creation and presentation of training, and in breaking down barriers in science coverage across the BBC. The Trust notes that the science Forum is also in place, as well as a new Head of Science for BBC Vision, Andrew Cohen, and there is firm evidence that the BBC is boosting collaboration and taking time to consider centrally how to plan output to maximise impact. The Trust expects that the co-siting of the Newsgathering and Radio Science teams will promote collaboration.

The Trust is particularly pleased to note that a new system of training is now in place, with journalists taking part in workshop sessions. The Trust notes that the training took longer to put in place than anticipated and that an online system proved unworkable but the final result is researched and the Trust considers it should have a significant effect on editorial confidence and on the application of due weight.

The Trust considers that several solid and innovative drives to widen contacts with scientists and to change the gender balance should have an impact in the longer-term, though this will need to be tracked. The Trust was pleased to see that a BBC science journalist has been tasked with addressing issues raised by the content analysts in the review, such as an over-concentration of stories emanating from institutions in the south-east and a preponderance of men presenting science programmes. The Trust hopes that developments such as the University Ambassador scheme and a media attachment scheme should make a difference here. The Trust welcomes an increased use of female scientists as contributors and the fact that more science programmes are now presented by women, with a strategy in place to find more female scientists as contributors, presenters and reporters.

The Trust notes that one of several welcome initiatives by the new BBC Science Forum is the establishment of new audience research, 'Audience Insights', enabling the Executive to track the performance of BBC Science every six months. The Trust had asked the Executive to report back on the take up and efficacy of the College of Journalism seminars and is disappointed the first of these has not yet taken place, though it notes planning is well underway.

The Trust understands that the experiment with electronic tools has not worked for the BBC but that the review of conference attendance has already broadened the reach of the BBC and will now be annual.

There are some areas where progress can only be properly assessed in the long-term or where progress has been slightly slower than expected. The Trust has therefore asked the Executive to report back in 18 months, for publication, with an account particularly of:

- Progress on gender balance for contributors and presenters;
- Feedback and effect on output of the new science training workshops;
- Effect of the science seminars;
- Progress in widening the range of universities and institutions across the Nations and regions that are used to source stories and contributors.

Executive Report on Science Review Actions

Overview

We have worked hard since the Jones report to carry out the commitments we made in our response to the review. We believe we have taken important steps towards greater co-ordination and co-operation across the BBC with the appointment of a Science Editor and the creation of the pan-BBC Science Forum. We have discussed with editors the importance of the 'due weight' stipulation and in this paper we provide examples of where this has had an impact in our coverage. We have launched initiatives to widen our contacts beyond the south-east and among women scientists and believe this too has had an impact on air. We have reviewed our use of electronic databases and our attendance at conferences.

We have also launched our science training course, although this took us longer than we anticipated as its development was a more complex exercise than we foresaw. We felt, however, that it was sensible to take our time to ensure that the course was both accurate and useful, rather than providing training which we deemed to be unsatisfactory.

Appointment of BBC Science Editor

The first step we took to meet the commitments we made in response to the Jones report was to appoint a Science Editor both to lead the BBC news coverage, and to act as a central figure for the whole organisation. We saw this as a key role in delivering our proposed actions, including the creation and presentation of training, and to break down barriers in science coverage across the BBC. The BBC's environment correspondent David Shukman was appointed. He was immediately involved in helping the College of Journalism to develop science training (below), writing and recording a film for the course.

In his first months in the role, Shukman has advised editors that the BBC should regularly stand back from regular science news to offer audiences coverage of important themes that may not, in the normal run of events, attract headlines. The first fruits of this policy led to two days of reporting on Today, on BBC News Online and on News at Ten on the emerging but important field of synthetic biology, one of a number of growing areas of science which have huge industrial potential but which bring with them profound ethical and societal implications.

The new Science Editor has attended the new Science Forum (below) and has led and contributed to debates both there and in other smaller meetings. Shukman briefed the group on his new role and the ambition to complement on-the-day news coverage with a more thematic approach to science. This led the forum to investigate whether it could create a more strategic view of coverage across News and Factual.

The editor has started to build relationships with senior figures in Vision and Radio Science. On a number of occasions he has provided a link between science programme makers and news outlets. An early example saw BBC News working with Vision Science during 'Stargazing Live' to ensure that the discovery of an exoplanet by a member of the audience was covered on the Ten.

Creation of Science Forum

The pan-BBC Science Forum, suggested in the Jones Review, is chaired by the Director of Vision on behalf of all the content divisions and brings together the new Science Editor with radio and TV commissioners and production heads from the radio and TV network, producing multi-media BBC Science content. The forum, which is held every six months, has strategic oversight of science coverage across the BBC.

Its aim is five-fold: to exchange ideas and stimulate debate, engaging the extensive scientific expertise that exists within the content divisions; to identify and discuss key scientific developments which may themselves be controversial or may relate to public debate and political controversy; to review recent coverage within the BBC Science portfolio; to develop links within the BBC's science output, providing an appropriate level of co-ordination across the BBC around key scientific events, themes and topics; and to maximise the impact of BBC Science by aligning plans and co-ordinating major seasons, events, and anniversaries across television, radio and online.

The first session opened with a lengthy debate on commissioning strategies for 2012: for example, the ways in which science on BBC-2 will embrace topicality, and Radio 4's more conversational approach to science, including the new daytime strand, The Life Scientific.

The forum has established new research, 'Audience Insights', enabling it to track the performance of BBC Science every six months and measure quality, distinctiveness and reach, and improving understanding of audience cross-over between different BBC platforms.

Deborah Cohen (Editor, Radio Science) and Aidan Laverty (Editor, Horizon) have also presented their findings of their investigation into the peer review process to the forum. Their thinking about the editorial judgments will be made available to journalists in the newsroom.

Each forum discusses the new 'Science Map', which charts the BBC's multi-media coverage over the year ahead, and has already resulted in greater co-ordination across the BBC. In addition to 'Stargazing Live', there was coverage across the BBC of 'So You Want to be a Scientist?' – both were projects backed by BBC Learning.

The next session will hear a report on the Universities initiative (below) – what the new engagement is delivering and how we might build on it.

In addition, the Science team from Newsgathering and the Radio Science Unit (RSU) are now co-sited. This has already proved beneficial. For example, the Radio Science Unit's new work on Alan Turing was broadcast on the morning radio bulletins by a member of its team; the winner of 'So You Want to Be a Scientist' appeared on BBC Breakfast; and a news correspondent went on a jointly-funded trip to Nigeria to gather material for both teams.

The benefits were also shown in coverage of the discovery of the 'Higgs boson' which was the first major breaking story in science since the Jones report. BBC News and the RSU were able to liaise on key interviewees and discuss background details. We are now looking at ways to expand collaboration across the BBC at an earlier stage in programme development, with forthcoming joint projects for Horizon, and Panorama.

After the Jones review, and as part of Delivering Quality First, BBC content divisions challenged themselves to:

- take advantage of the merits of scale, increasing the firepower of BBC Science
- leverage our strengths, range, diversity and talent
- capitalise on innovation and creativity
- simplify communication and processes among science specialists across the BBC

The Director of Vision set out key measures to begin progress towards the BBC's vision of "One BBC Science" in October 2011.

These were the objectives and the results:

OBJECTIVE: Work towards a co-sited "One BBC Science" in New Broadcasting House - siting London TV science production in W1 to bring TV, Radio, News and Online Science production together in a single location.

RESULT: Radio Science, Newsgathering & BBC Learning specialists are now in place. Vision moves in February 2013.

OBJECTIVE: Establish an effective resource-sharing mechanism across London and Scotland science production teams, concentrating on creation of a single shared science diary and co-siting of Vision and Audio & Music teams in London.

RESULT: As part of pan UK Network production, Vision has appointed a new Head of Science, Andrew Cohen. He is now the creative lead for Science across the UK, managing talent in Glasgow and London as a single production team. There have been some immediate results: the new structure gives us the opportunity to produce timely, topical science with a wider pool of specialists to draw upon. The shared science diary is now BBC-wide; and it is updated and discussed as part of the business of the Science Forum. Vision and Audio & Music teams will be co-sited in W1; Learning journalists are co-sited with Newsgathering colleagues; radio science is already in situ.

OBJECTIVE: Foster effective connections between Radio 4's Specialist Factual Commissioner and Vision's Science TV commissioner.

RESULT: Both commissioners are key voices at the Science Forum and play a pivotal role in establishing the agenda and content; they are also working together offline to join up ideas where appropriate.

OBJECTIVE: Implement a protocol for Vision, Audio & Music and Scotland to share science planning and commissioning information with one another at key points of the year.

RESULT: This is a key part of the Science Forum and extends to all interested parties e.g. National History Unit (NHU); Nations; BBC Learning; BBC News Online; Newsgathering; English Regions.

Science training for staff

Our original idea was to introduce science training as an interactive online module. But in our experience, online modules work best when the issues are clear-cut and can be presented as a choice between right or wrong answers. Given the complexity of some of the issues involved, it was decided instead to build the course around face-to-face workshops.

The creation of this course proved to be more time-consuming than our past experience of creating courses in other disciplines had suggested. We realised that helping BBC journalists discriminate between facts and opinion in science, while providing a framework for tackling any editorial issues which might arise, is an complex task, given that even the most fundamental scientific tenets can find themselves open to challenge.

The broad principle of 'due weight' is, of course, easily explicable, and in practice the centre of gravity in some subjects can be readily identified. But in a wide range of areas (for example, badger culling, stem cell research, genetically modified food or nuclear energy) it is harder to delineate where the scientific consensus might lie. This meant we have spent many months gathering guidance and information from a range of distinguished experts and organisations outside the BBC. We have been able to secure interviews with some of Britain's most senior scientists, including Nobel Laureate Sir Paul Nurse, Professor Colin Blakemore and Professor Karol Sikora.

This has been a valuable, and indeed essential, exercise, one that has enabled us to demonstrate both the principle and the practice of 'due weight' to our journalists in a range of key areas, but it has been time-consuming. The workshops, although they started later than we would have wanted, are, however, far richer for this attention to detail. Pilots began at the end of July, attended by the Director of News, the heads of editorial standards for Vision and Audio & Music, the Science Editor, the Head of Radio Science and the senior adviser, Editorial Policy.

The training was launched at the end of August, and already 75 senior editorial figures from across BBC journalism have attended. By the end of October, this figure should be in the region of 250. The Director of News has made the training compulsory for Band 10 assistant editors and above, across the UK, and highly recommended for others. The training will initially be delivered in London, but will also be taken to Salford, Glasgow, Cardiff, Belfast and other centres over the next few months.

Divisions outside News group have been encouraged through the Science Forum to send people to the sessions if they think the training would be relevant and useful to them. Two sessions for Audio & Music staff have been arranged for October.

The first "science seminar" will hear from the minister for Science, David Willetts and the government's chief scientific adviser, Prof. Sir John Beddington. The ambition is to create the space for BBC commissioners and producers to engage in conversations with specialists and academics about longer-term trends, exploring the intersections between science and technology, economics and society.

'Due weight'

At the first Science Forum, Philip Abrams, senior adviser, Editorial Policy, gave a presentation highlighting some of the practical issues that arose when seeking to achieve impartiality in science reporting, especially in areas of very intense debate and divided opinion, such as climate change.

Professor Jones's recommendations on 'due weight' are already a factor in day-to-day decision-making. For example, shortly after publication of the review, in July 2011,

Newsnight's Science Editor reported on primate research. For the live studio element she suggested that the programme should run a discussion between two scientific perspectives on the issue, instead of the traditional "pro" and "anti" discussion. The introduction also made address another of Professor Jones's points - the need to make clear the background of contributors, and the context in which they are speaking:

"With me now is Tipu Aziz, professor of Neurosurgery at the John Radcliffe Hospital, who's used monkeys in his research into Parkinson's disease. And Paul Matthews, Professor of Clinical Neurosciences at Imperial College London, a panel member of today's Bateson report and specialist in human-based brain imaging - a possible alternative to some testing on monkeys..."

Professor Jones also suggested that we look more widely for our subject matter. Newsnight's coverage has ranged from the regulation of "fracking" to the revolution in the science of treating mental ill health, and from the first glimpse of the Higgs boson to GM crop science.

The Today programme examined recent experiments on genetically modified wheat over a period of several months by discussing the science on its own merits without introducing arguments which were not based on science. Clearly, it would be wrong simply to silence awkward or contrary views, but the Jones report makes clear that care should be taken if they are to be presented in a scientific discussion about, for example, the risks associated with a novel technology.

Conference attendance

We have audited our conference attendance and made some changes, reducing our commitment to the American Association for the Advancement of Science and introducing new conferences such as the experimental biology conference in Ottawa. These other main ones we attend are: American Astronomical Society; American Physical Society; European Geosciences Union general assembly; International Whaling Commission; European Society for Evolutionary Biology; International Europhysics Conference on High Energy Physics - European Physical Society; American Geophysical Union; Conference of the Parties - UNFCCC in Durban; European Society of Human Reproduction and Embryology in Istanbul; Society for Experimental Biology's annual meeting Rio +20; Family Planning Summit; Ocean Sciences Meeting; Lunar and Planetary Science Conference; UK National Astronomy Meeting; International Conference on High Energy Physics (ICHEP). We also attended the Cheltenham Science Festival and held a session for members of the public to discuss reporting science.

This year, we will also attend new northern-based conferences including a conference at the University of Staffordshire on how the loss of hedgerows is making wildlife more vulnerable, and the European Congress of Conservation Biology in Glasgow.

With greater co-operation across the BBC, conferences are producing greater rewards – for example a news correspondent attended the American Astronomical Society meeting in January and reported from there for Science in Action. A member of the 'Click' television team reported from South by Southwest festival for Click radio in March.

As well as the Cheltenham Festival, BBC Vision Science had a strong presence at other major science events throughout the UK including the Edinburgh Science Festival and the British Science Festival. It is in advanced negotiation with the World Congress of Science And Factual Producers to bring this premier event to Glasgow in 2014. This will be an opportunity to showcase the strength of BBC science in Glasgow and also the strength of Scottish scientific research.

Since the Jones report, we have decided to review our conference attendance annually.

Electronic tools and databases

We have carried out a comprehensive review of our electronic tools in the light of the Jones report.

Professor Jones was a particular proponent of the Web of Science. Ten journalists in the Science and Environment team trialled it for a month. Two others joined later and had a few weeks' access to it. The overall view was, however, that the site was not very useful for finding news stories. Although it pulls together a wide number of journals, many journalists in the team felt they already knew about these from other sources. In addition, WoS does not carry embargoed material, and it can take four days to put new material onto its site.

A few journalists thought that access to the site would be useful from time to time for in depth background research. This would not necessarily deliver a story but it might enhance one.

We also examined a rival service, Scopus, which is the world's largest abstract and citation database of multidisciplinary peer-reviewed research literature and scientific web sources.

Our overall conclusion was that much of the material was freely available elsewhere and the cost of adopting either service was too expensive, but we are examining the possibility of access to some material.

Contacts with scientists

In terms of widening our contacts with universities outside the south-east of England, we asked one of our science journalists based in Salford to take a lead in this initiative. He is building contacts with different institutions to gather stories and future interviewees, with a particular note to address the on-air gender imbalance. So far he has visited the following universities and organisations: Salford; Manchester; Liverpool; Sheffield; Durham; Lancaster (Centre for Ecology and Hydrology); Chester Zoo; Museum of Science and Industry in Manchester; Martin Mere (wetlands reserve).

There are many examples of how this new approach has made a difference. For the discovery of the 'Higgs Boson' we used several scientists from northern universities, including Professor Tara Shears, a senior lecturer in experimental particle physics at Liverpool University, Professors Jeff Foreshaw and Stefan Soldner Rembold from the University of Manchester, and Professor Themis Bowcock from the University of Liverpool. Other reports have included Sheffield University scientist Dr Stephen Martin on how varroa mite spreads lethal disease through bees; Manchester University scientists on how orang-utans build nests; University of Liverpool scientists on modelling the strength of a T-Rex bite; and the University of Salford's energy house project. Three of the four mentors of the amateur scientists in the Radio 4 project, So You Want to be a Scientist, were from northern universities – Leeds, York and Salford.

BBC Vision Science is embarking on an innovative project, the University Ambassador scheme, to place a senior BBC science executive in an ambassadorial role in universities across the UK. The BBC Vision Head of Science, Andrew Cohen, has just been made an honorary lecturer at the University of Manchester as an initial part of this project.

This year, BBC Vision Science ran a media attachment scheme with the Royal Society, the Wellcome Trust and the British Science Association, enabling senior British scientists to work with us across the year. It is currently planning a training scheme with the Royal Institution, to promote the media training of young British scientists. (BBC News and the Radio Science Unit have been taking media fellows on summer placements for more than twenty years.)

Other initiatives include:

- an open day for students from both Edinburgh and Glasgow University and with the Engineering and Physical Sciences Research Council in Scotland
- collaboration with the Glasgow Science Centre and Edinburgh Zoo on BBC-4 programmes 'Afterlife' and 'Planet Ant'

- working with Professor Anne Glover, Chief Scientific Officer for Scotland, to improve the flow of information between the BBC and Scotland's research institutions.

The balance of male and female scientists

We are working hard to increase the number of female scientists we put on air, in the knowledge that women form 12% of the scientific, engineering or technology industry.

Question Time – which was singled out for criticism in the report - has gone to considerable lengths to increase the number of scientists in its recent series, featuring Colin Blakemore, Dr Phil Hammond, with Brian Cox booked for the autumn. It has also featured Stella Creasy, an MP with a science PhD.

The team has bid for many more potential panellists from the science world – but most refuse because they wish to talk about their field and do not want to become involved in current affairs.

In other coverage, programmes look to use female scientists where it is practical and relevant to do so. These have included Dr Julia Schroeder from the University of Sheffield on how urban noise is drowning out the calls of baby song birds, with an impact on population numbers; Pippa Wells, project leader on the Atlas Detector Experiment at CERN; experimental particle physicist Professor Sinead Farrington from Warwick University; Dr Maggie Aderin-Pocock, engineer and space scientist (see below); and Professor Elizabeth Fisher, a neurogeneticist at University College London.

We are developing a strategy to find more female scientists as contributors and as presenters and reporters, where it is equitable to do so. British science journalist and author Angela Saini has recently presented a couple of editions of Radio 4's Material World. Sophie Robinson, a Ph.D. student at Liverpool University's Aeronautical Engineering Department, also featured in a recent edition of the Radio 4 strand, Frontiers, on future flight. She was discovered talking at the Cheltenham Science Festival – an example of the importance of attending conferences and public events.

There has also been an effort to identify and use more female presenters across Vision Science output. There are some constraints: good presenters of Science programmes are hard to find, irrespective of gender; the number of female scientists is smaller at the top of the profession than in the emerging ranks; and much of the TV Science output for 2012 was in place ahead of the Jones report. There has, however, been some obvious progress. Three editions of our flagship, Horizon, have been presented by female scientists – Alice Roberts on Evolution, Gabriel Weston on Obesity and Rozina Ali on the Science of Skin.

New science programmes are presented more frequently by female presenters. These have included: *Orbit: Earth's Spectacular Journey* (BBC2 2012) with a new presenter, Dr Helen Czerski, and Kate Humble; *Transit of Venus* (BBC2 2012), presented by Dr Lucie Green, Dr Helen Czerski and Liz Bonin; and *Do We Really Need Satellites* (BBC2 2012) presented by Dr Maggie Aderin-Pocock.

Dr Aderin-Pocock's work for the BBC was recognised when she won the Best Newcomer category at the Women in Film and Television awards. She now regularly appears across BBC output, for example *The One Show* and *PM*.

Our next steps include identifying new female presenters of science output across all channels, including BBC Four, and to continue to develop the female presenters we have already identified, as well as increasing the number of female contributors.