

HOUSE OF COMMONS  
ORAL EVIDENCE  
TAKEN BEFORE THE  
SCIENCE AND TECHNOLOGY COMMITTEE

**CLIMATE: PUBLIC UNDERSTANDING AND POLICY IMPLICATIONS**

WEDNESDAY 17 JULY 2013

DAVID JORDAN, RALPH LEE and FIONA BALL

ROS DONALD, ANDREW MONTFORD and JAMES PAINTER

Evidence heard in Public

Questions 77 - 150

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## Oral Evidence

Taken before the Science and Technology Committee

on Wednesday 17 July 2013

Members present:

Andrew Miller (Chair)  
Stephen Metcalfe  
David Morris  
Stephen Mosley  
Pamela Nash  
Sarah Newton  
Graham Stringer  
David Tredinnick  
Roger Williams

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**Examination of Witnesses**

*Witnesses:* **David Jordan**, Director of Editorial Policy and Standards, BBC, **Ralph Lee**, Head of Factual, Channel 4, and **Fiona Ball**, Head of Environment and Engagement, BSkyB Limited, gave evidence.

**Q77 Chair:** I welcome the witnesses to the session this morning. For the record, I would be grateful if the three of you would formally introduce yourselves.

**Ralph Lee:** My name is Ralph Lee, head of factual programmes at Channel 4.

**David Jordan:** I am David Jordan, director of editorial policy and standards at the BBC.

**Fiona Ball:** I am Fiona Ball, head of environment and engagement at BSkyB, so I look after environment strategy for the group.

**Q78 Chair:** Thank you. First, we were slightly baffled that some organisations were not terribly keen to give evidence to us. As professionals in the industry could you speculate on why that is?

**David Jordan:** I hope I can do more than speculate—I can give you a reason. There are fundamentally two reasons why the BBC always looks carefully at its appearances before Parliament, not just before Select Committees. First, we seem to be doing an awful lot of it these days and there is a general desire not to appear more often than we absolutely have to. Secondly, we jealously guard our editorial independence, so for us it was a question of making sure that the session that you wanted to conduct was not going to impinge on the editorial independence of the BBC, which is one of its most important attributes. We simply sorted that out with your Clerk and, through your Clerk, with you, and, once we were satisfied that was not an issue, we were happy to come along and talk to you.

**Ralph Lee:** On behalf of Channel 4, I can underline only the same point about editorial independence, which is something that we precious guard. It will always be a factor in our discussions about appearing before Parliament.

**Fiona Ball:** We were happy to attend to discuss these issues with you.

**Q79 Chair:** It is fairly obvious that climate scientists have learned the hard way that lack of transparency has a tendency to cause bad press. Has that been a problem for broadcasters as well?

**David Jordan:** I don't think that has been a problem from the perspective of the BBC. We approach this in the same way we approach all the other subjects that we deal with. The issue of transparency and accountability is one that I know the BBC has taken enormously seriously over the past five or 10 years, and it has increased the levels of transparency hugely. We are accountable to our licence fee payers and our audiences via the BBC Trust. That also holds us accountable for what we do, what we broadcast and how we broadcast it, and what perspectives we offer on whatever subjects we are dealing with. I do not think that transparency is a particular issue in relation to this subject. In general, the levels of transparency and accountability of the BBC have hugely increased over the last five to 10 years.

**Ralph Lee:** As to general transparency, I represent the programming floor of Channel 4. I am a commissioning editor, so my main responsibility is generating the programming that you see on air. From my perspective, Channel 4 is a very transparent and open organisation, and I do not think there is a lack of transparency in our processes and the way we operate.

**Q80 Chair:** In some respects, there is a possible disconnect between what you do as corporate organisations about climate change and your editorial approach. In terms of the BBC in particular, we were impressed by the work done by Steve Jones for the BBC Trust. I understand from some of your colleagues that that is still having an impact on the way science is reported. Is there still a disconnect?

**David Jordan:** I am not entirely sure I know what you mean by "disconnect." There is an obvious difference between the way in which we approach any subject editorially and corporate positions that we may take on something. Today, we could have fielded Fiona's equivalent in the BBC who is in charge of making sure the BBC reduces its energy footprint to the greatest possible extent and does various other things that might be regarded as part of a corporate social responsibility agenda, but that is kept completely separate from what we do editorially and the huge number of editorial decisions we have to make about the subjects we cover on a day-to-day, month-to-month and year-to-year basis. I don't think there is very often any impinging of one on the other, and you can see that most clearly when the BBC has to report about itself. Almost uniquely, the BBC is prepared to report about itself in a way which is not always, from a corporate perspective, entirely helpful. None the less, our journalists feel a duty and keenness to do that, whereas in other media organisations that perhaps would not be greeted in quite the same way by the bodies' corporate entities. There is a substantial distinction between the corporate and editorial positions we take.

**Ralph Lee:** That is as entirely true of Channel 4 as it is of the BBC. The editorial independence of the commissioning floor is not influenced by the corporate positions that Channel 4 in general takes.

**Fiona Ball:** With respect to Sky News, editorially it is independent and separate from what I do, but at Sky we see an opportunity to engage wider consumers with our 10.7 million consumers on issues of climate change. We look at ways in which we can engage people in a positive manner in the solutions to climate change, although we do not touch on the science itself.

In addition, we have joint venture partners that we carry on our channel and that go into the facts and science behind it, like National Geographic, the Discovery Channel and so on. Sky as a corporate takes the very strong opinion that we have an opportunity as a

broadcaster to engage the public on these issues of how, particularly, we can work around the solutions to climate change.

**Q81 Chair:** Mr Jordan, the BBC did not choose to submit written evidence. Was there a reason for that?

**David Jordan:** There is no reason not to submit written evidence, other than we hope that I will be able to help with as much as you need to be helped today. If there are any outstanding matters that I cannot help you with today, we are happy to address those in writing if you need it.

**Q82 Chair:** If, after the end of today, you feel there are things that you can add, it would be helpful to have a formal note from you.

**David Jordan:** Certainly, or if there are things that you require of us as well.

**Q83 David Morris:** Evidence to the Committee strongly suggests that the media, especially news broadcasters, are central to public understanding of climate science. Would you agree?

**Fiona Ball:** Obviously, I cannot speak on behalf of Sky News because of its independence. It is a 24/7 rolling news programme, so climate science issues or any story would be dealt with in the same manner, depending on the subject matter itself. I cannot comment, except that public understanding needs to focus on what the public can do. Climate science is a very complex issue, but as a wider, general proposition it is very good to focus on what individuals can do to make a difference and provide a solution.

**David Jordan:** The BBC believes that it has an important role to play in explaining climate science, climate change and global warming, if that is what is happening, to its audiences. All our evidence is that, although we do not have specific evidence of climate change itself, the BBC's audiences expect it to deliver high-quality programming that is informative and educational about science in general and, therefore, about climate change in particular. We would regard ourselves as having a duty to inform and educate our viewers and listeners on any major topic facing the world or country, or any major topic that is of great interest to the political leadership of the country, and to explain that in detail to our audiences so they can make up their mind what they think about it. That is what we endeavour to do in a variety of ways.

**Ralph Lee:** There is no doubt that broadcasting has a huge responsibility in helping inform the public. Ofcom data suggest that broadcasting has a far greater influence than newspapers, magazines or other media, so that is a responsibility we take very seriously. Channel 4 is always mindful of the fact that it is our job to do something different. There is a point of difference to Channel 4, which is written into our remit. Whereas the BBC will cover the waterfront of a subject like climate science, Channel 4 will always look at it for ways in which it can be new, different, alternative and diverse from new perspectives. Those are the kinds of principles with which we approach it.

**Q84 David Morris:** The Royal Statistical Society said last week that generally the media have to try to illuminate issues rather than use statistics to sensationalise. Do you accept that that statement often applies to media coverage of science issues?

**Fiona Ball:** When looking at climate change issues, it is important to put them in the perspective of stories and story-telling that people can better understand. Rather than cite facts and figures, you need to paint the whole picture for people in a story-telling way.

**David Jordan:** I do not think it is desirable to sensationalise the coverage of any subject. That does not mean to say there will not be times when there are controversies around

the politics or policy of particular issues, which, if I may put it this way, may give rise to some heat as well as light being cast on the subject. We should not shy away from that; indeed, we have programmes that do not shy away from that, and are very accessible to the public as a consequence. For example, “Question Time” gets large audiences, on the basis of sometimes fractious but always robust debate. I do not think we should shy away from that, but, on the other hand, we are not looking to sensationalise in those circumstances. The most important thing we need to do is make sure we can inform the largest number of people to the greatest possible extent. That means finding ways to report science in a manner that is accessible to large audiences as well as smaller audiences already interested in the subject. We take our responsibilities seriously in that way, but we are not seeking to sensationalise things.

**Ralph Lee:** To add a bit of context, as we are talking about this subject we should recognise that communicating science by broadcasting is tremendously difficult. One of my responsibilities is history programming. If I am working with Niall Ferguson, David Starkey or Andrew Roberts, translating what they write in a book or academic work into a piece of television is a relatively easy process, because there is narrative, a big picture and structures and theories that are not that difficult to reduce into the form of television. Science does not like to be reduced into the form of television. The detail of it is much more complex. If you simplify science, you often make it wrong, so the process of working with science is by degrees much more complex than the process of working with other subject areas. That is very true of climate science. For a broadcast medium that needs narrative, story and some form of revelation—you might call it sensationalism, but ultimately we market ourselves to our audience every day; we have to appeal to our viewers. Putting public information on every day would not do any of our organisations justice, so the process of trying to make climate science understandable to an audience and put it within the frame of television so it is attractive to them is really difficult.

**Q85 David Morris:** It would appear to us that the public see broadcast information as a trusted voice, and do you accept the responsibility that comes with that status?

**Fiona Ball:** I would hope they do see us a trusted voice, and we take very seriously the big responsibility around ensuring that all the information we put on air is factually correct. As a result of that, for all of our programming we use a range of expertise to ensure that any facts we have on are properly checked by both our compliance team and our expert panels. We use a number of different organisations, including the British Antarctic Survey and WWF. As part of Sky, we have very strong partnerships and relationships and ensure that we engage with them at every single step in the process.

**David Jordan:** We know that audience trust in our BBC news and factual programmes is incredibly high, even higher than that of my illustrious colleagues from Sky and Channel 4. That is critically important to the BBC, not least because it is the foundation on which the BBC rests. It is very important to us to make sure that we adhere to our core values of accuracy, impartiality and maintaining levels of trust in what we have to say on this and on many other subjects but across our science coverage in general. That is a key issue for us.

**Ralph Lee:** Trust is hugely important to us too, but I come back to the point that the audience expectation of Channel 4 is to provide something different. What they trust us to do is not just to be factually accurate and represent the facts but also to provide alternative points of view and make them think differently about subjects. When we do audience research, these are the metrics on which the audience judge Channel 4 most favourably. That is their expectation of us, and that is in line with our remit. We are there to provide an alternative often to the BBC and other broadcasters.

**Q86 Chair:** Mr Lee, can I pick up a comment you made about science programmes being hard to make? To take the opposition, Mr Jordan's corporation does fantastic work. Great pieces have been done by Brian Cox, Attenborough and so on, but clearly they are very expensive. By "difficult" do you mean "expensive," or is there something more to it?

**Ralph Lee:** It is both. If you look at the cost of making a natural history programme, it is almost as expensive as drama. To make the quality of programmes that the BBC offers in a genre like science is very expensive, but I also think that the quality of the programmes you point to with Brian Cox and the "Horizon" unit at the BBC is an exception globally. We should recognise that quality. The BBC is the exception, not the rule, because it is extraordinarily skilled and well resourced in making those programmes and finding and developing science communicators like Brian Cox and Alice Roberts.

Channel 4 as a publisher/broadcaster does not have any of the in-house production that the BBC has. When we talk about science at the BBC, we are talking about quite a large and well-resourced unit that makes programmes and provides radio and online material based in London and other parts of the BBC around the country. When we talk about science at Channel 4, it is me, one science commissioning editor and all the external suppliers that Channel 4 relies on for all its programmes, because we do not have any in-house productions. We rely on the independent production community to provide the kinds of resources that the BBC has in-house. The truth is that science programming is expensive and not a very commercial genre. In the last 10 to 20 years, the number of different science specialists in the independent sector that has got more commercial has reduced. Finding that expertise in our supply sector is not always easy.

**Q87 David Tredinnick:** Mr Lee, you said earlier that you had a responsibility to inform, but I put it to you that coverage in the media of climate change has gone down in recent years. Is that because audiences are just not interested in climate change any more and what scientists have to say about it?

**Ralph Lee:** There are two different streams here. One is the news, for which I should say from the outset I am not responsible, although I am aware of its work. Tom Clarke, our science editor, is very keyed into this issue and keen to get climate issues on to the news. He needs something to report. Often, there is not that much new to report, and that can be a problem.

In terms of general science programming, you cannot keep making the same programme over and over again, so I need new material and need things to happen, or to find new and creative approaches or editorial points of view to continue to inform. We cannot just keep informing the public in a straightforward way and say, "Here's an update on what's going on in climate science." Those updates are generally quite complex and do not always lead the public in the direction that a Committee like this might want them to be led. The current perspectives coming from the science community are revising a lot of the data around potential rises in global temperature in a way that is not going to pull the public necessarily in a way you always want to. It is not as simple as saying that every year we should have a certain number of programmes on this subject. We need something new, or a new creative approach, in order to drive it.

**Q88 David Tredinnick:** You are saying, in other words, that you can have only so many polar bears on a block of ice.

**Ralph Lee:** Yes, because there is a negative effect if you hit the public with the same information over and over again. We get climate themes into programmes that the public might come to thinking they are watching a programme about floods, weather or animal anatomy. There are lots of environmental and climate-related things we are able to put into

other programmes, but if a programme has “climate change” written over the door that is not necessarily a great audience draw.

**David Jordan:** It would be wrong to look at whether the amount of material done on climate change at the moment is about programmes purely to do with that subject. You will find that the notion of climate change infuses a whole range of programming that we do at the BBC and also our news coverage. I am talking of things like energy policy where it is very rare for us to do a piece about energy policy, nuclear policy, windmills, the closure of coal-fired power stations and the opening of gas-fired power stations. Almost always, those issues involve a reference to the overall policy framework in which those things are happening, and the overall policy framework is one of climate change.

Similarly, when we do natural history programmes, about which Ralph was being kind a moment ago, very often we are talking in programmes like “Springwatch” about the difference between this spring and spring 10 years ago. Is there any climate change involved? The other day I was reading an article in *The Economist* about wine producers in this country. It told me that it is now possible to grow grapes that could never be grown in southern England before and bring them to ripeness. Ten years ago, it was not possible. There are observable things happening in the natural world that get built into our coverage. It would be wrong to think that, unless the programme says on the tin it is about climate change, there is nothing going on about climate change.

Having said that, in news, clearly, what we follow are scientific, political and intergovernmental developments. News is about change and things being different. We pick up on those at a continuous rate. Even there, it is not always the case that you can judge whether or not a subject is at front of mind simply by the number of pieces about it, because it is question of what it is competing with. Did the amount of coverage of climate change go down when we were going through a major recession? It probably did because most of the big stories at the time were about that subject. There is always a context in which news decisions are being made. What else is on the agenda? What else is happening in the world? Generally speaking, we have been maintaining a pretty consistent level of coverage across our science programmes of issues to do with climate change, and we have been following developments pretty closely in our range of news coverage as well.

**Fiona Ball:** On our joint venture channels, the coverage has remained the same with respect to climate change or wider environmental issues. Over the last three or four years, we have tried predominantly to increase our programming that looks at environmental and climate change issues in a different and engaging way for a different audience to try to reach beyond those who are interested in it day to day. We have looked at opportunities using our talent to engage people in quite a different fun manner on Sky Arts, Sky1 and even Sky Movies to try to break into a difference audience.

**Q89 David Tredinnick:** To what extent do you think you are following or setting an agenda? Where is the balance here? You have just said that, in a recession, people are more interested in jobs than climate change. To what extent do you feel you are following the issue as it appears or trying to set the agenda by saying, “Our viewers feel strongly about this, or they ought to feel strongly about it, and it is going to be a priority. Channel 4 is going to drive this issue”?

**Ralph Lee:** There are a number of good examples of Channel 4 taking an issue and driving change within it. One of the things Channel 4 can do that the BBC cannot is campaign on issues and take polemical points of view.

**Q90 David Tredinnick:** Which ones?

**Ralph Lee:** For instance, Hugh Fearnley-Whittingstall's "Fish Fight." He took on a clear issue under the European fisheries policy about discards. He campaigned very hard against it and brought a huge amount of public will and campaigning with it. We changed people's behaviour in the supermarkets. You could see people at Waitrose buying different fish and that influenced fishing. In climate, it is difficult to do that, because what are we asking people to do? What behaviours are we asking people to change? What outcomes do we want to achieve, and who is going to take that on as an issue? There is a danger of it having a negative effect on the public if everything about climate is doom and gloom and the solutions are widely contested. One of the difficulties is what we should do about it and the degree to which we should respond to climate change. There are great degrees of contention around that, and some of it leads to a bit of confusion on the part of the public.

**David Jordan:** To us, what you refer to as agenda setting would be responding to audience needs. We follow the agenda—in the sense that we report it—the agenda set by government, scientists and others in this subject as in many others. Equally, we then look at what we think our audiences are interested in and where we think there may be a deficiency in their information about an issue. Where we think that is the case, we are quite prepared to do major events and programming around those issues, try to bring the audience up to speed, explain to them what the situation is and give them the information they need or require. I would not call that agenda setting in the sense of campaigning, because the BBC does not campaign—but agenda setting in the sense of making sure our audiences are up to speed with something if we feel they are not at the time. That might very well have occurred in the early stages of climate science, where people were not familiar with the notion that adding CO<sub>2</sub> to the atmosphere results in global warming. We felt we had a responsibility to make sure they were aware of the scientific views on that subject.

**Fiona Ball:** We have a very close relationship with our customers. The only reason we do rain forest programming and "Sky Rainforest Rescues" is that we asked them what they would like us to have a look at as an environmental issue.

**Q91 David Tredinnick:** That makes you different from Channel 4 and the BBC, in that you have a survey system and go out and talk to your audience.

**Fiona Ball:** Yes, and we do it on an annual basis. We want to understand what our customers want. We are a pay television service, so we want to engage with them and understand what they would like to see from us. As a result of that survey and the work we are doing—for example, around "Sky Rainforest Rescue" and WWF—we know from the start of it that 43% of our customer base of 10.7 million are engaged. They have seen our programming and initiatives around "Sky Rainforest Rescue," which is a considerable increase in awareness of what we are doing.

**Q92 David Tredinnick:** We have been told that politicians—us—are central to ensuring that a subject remains topical to broadcasters. Do you think that applies to climate change? To what extent are the issues driven by politicians? How important is political input and politicians raising the level of awareness? How do you see our role in climate change? Speak frankly. This is your chance to have a pop at us.

**David Jordan:** As a former editor of political programmes in the BBC—"On the Record", "The Westminster Hour" and so on—you might expect me to say this, but the fact that politicians, the Government and the Opposition take this seriously is very important. It is very important to the BBC to make sure people understand the preoccupations and priorities of politicians so that they can make up their own mind about things as well. It is a development in the sense of news. We have a lot of political correspondents, whom you all know, across the road, who will be interested in what politicians have to say. Politicians

driving an issue and talking about its importance and policy developments in relation to it will be clearly important to our news agenda, and we would always take that seriously.

**Q93 Graham Stringer:** What has changed in the BBC's coverage of climate science since the independent review of Professor Jones?

*David Jordan:* Professor Jones said that we should do a lot of process things. He said we should bring in a science editor. We brought in a science editor, David Shukman. He said we should get together some sort of forum that would be able to discuss science issues in general across the BBC, not just restricted to news but across all of our output. We put in place the science forum. He said we should generate more training in science and climate science for our journalists, and we have put that in place. It is a face-to-face course that so far over 300 journalists on band 10 and above in the BBC have taken.

He also made one recommendation that we did not take on board. He said we should regard climate science as settled in effect and, therefore, it should mean we should not hear from dissenting voices on the science of climate change. We did not agree with that because we think the BBC's role is to reflect all views and opinions in society in its output, and we have continued to do that. He also said that we should develop our links with scientists, and we have continued to do that in a number of ways. He had an important effect on the processes that we follow in trying to do the best we can in reflecting science to our audiences.

**Q94 Graham Stringer:** Who provides the courses for the BBC?

*David Jordan:* The College of Journalism.

**Q95 Graham Stringer:** On the science.

*David Jordan:* Yes.

**Q96 Graham Stringer:** Is that not a bit strange?

*David Jordan:* No more strange than that it should provide courses on economics, politics and a range of other subjects.

**Q97 Graham Stringer:** What I am obviously getting at is: should it not be done by scientists rather than journalists?

*David Jordan:* No, I do not think that is the point. The point is to make sure that people are aware of the ways in which we cover science, and the impartiality and accuracy of debates around science from a journalistic point of view. I do not think it is strange at all. One of the other things Professor Jones suggested—forgive me for forgetting it—was that we should set up a series of seminars with scientists. The College of Journalism also now runs seminars with scientists and other people with a clear interest in science for our journalists. I do not think it is strange that we should do it through journalists rather than scientists. The question would be: if you did it through scientists, which scientists should be the ones you do it through, and would you end up more with a debate rather than a course that is trying to set out some of the basic principles of how we approach these subjects?

**Q98 Graham Stringer:** One thing Professor Jones said—I think it is a fair point—is that you cannot balance fact with opinion. One thing that irritates me about climate science coverage on the BBC is that quite often lobbying groups like Friends of the Earth or Greenpeace are put forward as experts in the area. They may or may not have a scientific background, but they are clearly lobbyists. Why do you do that?

*David Jordan:* There are two reasons. First, those people often have something to say and have said it and put it into the public domain. It is part of the news agenda, and you want

to hear what they say and why, and hear them defend it against, hopefully, some robust questioning. It would be wrong to think that all people who work for lobby groups are not experts, although we would not treat them as experts in the same way we would treat scientists. Many people who work for lobby groups have considerable expertise in their subject matter, even though they may no longer be working in the field of science research or academic science. They have something valid to say. It is important how you contextualise that—who else you interview or talk to or debate with on the same subject and how you report on the subject so all of that is put into context. I do not think there should be some sort of ban on lobby groups on this or any other subject. I say that as someone who started his career in lobby groups, so I want to defend them.

**Q99 Graham Stringer:** I am all for freedom of speech, and Friends of the Earth, Greenpeace and other groups have a view of the world to which they are completely entitled. My point is that they come to these issues with a particular bias. I will give you examples if you want them. Often, journalists on the “Today” programme or other BBC programmes just ask them for their opinion, and they are posing as experts. They may or may not be, but they are certainly lobbyists.

**David Jordan:** I think you will find that, when we introduce various groups, we often describe them as having a particular viewpoint they are coming from before we start, and the viewpoint they are coming from is pretty obvious when they start. I would be sad if I thought there were times when their views were not properly challenged, but they should be on the air waves, just as other people who take different views—the Global Warming Foundation or others—should be on the air waves and should be appropriately challenged as well. I am sure there are times when we fall short of the best standards to which we aspire, but I hope people try to ensure that when they do interview people of that sort they are challenged appropriately.

**Q100 Graham Stringer:** What do your audience insights say about your coverage of climate science?

**David Jordan:** What they say about science in general is that audiences expect us to cover science; 70% of them say they are very interested in science and want us to cover it in a way that reveals information to them. The major interest is in health and medical developments, but there is substantial interest in climate science, climate change and global warming as well. They rate what we do on the subjects very highly and want to see us continue to do it. Broadly, that is what they say to us.

**Q101 Graham Stringer:** How do Channel 4 and Sky measure the effectiveness of their coverage of climate science?

**Ralph Lee:** It is quite difficult for us, without the huge resources of the BBC, to measure the effectiveness and outcomes of individual subject areas that we cover.

**Fiona Ball:** We do not look at the science itself, but we measure our programming on general environmental issues, as we measure all programming, and it matches with any other factual programming that we have on air. We also have a tracker. We ask our customers every year about our programming and issues that we are raising and whether it is something they are aware of and are interested in. That is on the increase, so we regularly engage with our customers on it.

**Q102 Stephen Metcalfe:** I want to focus particularly on the way the news covers climate science. I recognise that none of you is responsible for news directly, but I would be interested in your comments. News is a competitive environment now; it is seeking out market share and saying, “Look at me.” Is there a danger that, where the news reports

scientific uncertainty, it can portray it as controversy in an attempt to gather market, and is that helpful?

**David Jordan:** There is always a danger that you can portray things in that way. You are right to identify that as an issue. Broadcasters, and indeed the whole of the media, have to pull off a particular trick, which is to get audiences interested in something and willing to listen and to view before they are able to explain what it is about. In a very competitive media environment, sometimes there is a temptation to controversialise things in ways that, at first sight, do not necessarily help to provide the information required. Very often, that is a superficial view. Those sorts of techniques are used to pull people into the subject. You see that most obviously in the titles given to some factual documentaries on Channel 4, if I may say so, and on our own BBC3 and elsewhere. The titles might startle you, but, when you get into the subject matter of the programming, you find they are very informative, educational and balanced in their approach. It is a question of sucking people in. Sometimes, we can give the impression that we are generating controversy unnecessarily in an attempt to get people interested and pull them into the subject matter, and to discuss it in ways that convey lots of information and that mean our audiences are much better informed.

**Fiona Ball:** I am going to find it quite difficult to answer this question. Sky News has strong editorial guidelines that are in the public domain for anybody to look at. Their core values are around balanced, fair and accurate reflection of the story.

**Ralph Lee:** I cannot speak for news because it is independent of the part of commission that I am responsible for, but, watching the way they cover it, they take their responsibility incredibly seriously. David may be right that occasionally in factual programmes we might sensationalise with titles and the framing of programmes to compete in the marketplace for television, but that is very rarely the case in Channel 4 news, and the responsibility you describe is taken really seriously.

**Q103 Stephen Metcalfe:** I recognise that great titles drag people in. They watch the programme and it puts it all into context. I am a bit concerned about where it is headline news, particularly where it may be only the headlines—"The end of the world is nigh"—and people listen to that without waiting to the end of the programme where item No. 14 then puts it into some form of context. If you accept that can happen, is that just the nature of the way the market is and the way news is portrayed these days? Can more training or information be given to journalists and news editors to try to avoid doing that, or is it just the world in which we now live?

**David Jordan:** We do not want any of those headline sequences to be inaccurate, wrong or misleading but, clearly, as Ralph was saying earlier, when you are trying to encapsulate a difficult subject in very few words, which indicate we are going to tell you more later in a news bulletin, or something like that, inevitably, boiling it down in that way can sometimes seem a bit of an oversimplification and could be interpreted as controversial. That does not happen very often, but I do not think that is the inevitable nature of the media, in the same way newspaper headlines can sometimes not fully reflect the story that lies underneath them. I am sure most of my newspaper colleagues do not always do that deliberately. Inevitably, occasionally the headlines in a news bulletin are going to have the same effect, but we are not trying to do that, and we would be very concerned if it was inaccurate.

**Q104 Stephen Metcalfe:** So you think there is enough scientific literacy among journalists to avoid that happening too often.

**David Jordan:** We take a lot of trouble to try to increase the literacy of our journalists and the range of subjects. Obviously, we have specialists who I believe are of very high

quality in the BBC. Our science editor, other correspondents specifically charged with science and those who make our science programmes have a very high level of literacy on the issues. If you have general reporters reporting on such things, it is important that they understand their limitations. We do an awful lot of training to make sure that people are aware of their limitations and get the kind of training that we were talking about earlier, which is to bring people up to speed, should they be required to be involved in science issues. We try very hard to ensure that happens, but we are not perfect and I am sure we make mistakes from time to time.

**Q105 Stephen Metcalfe:** Do your science editors monitor that output and, where they do see it, correct it? Do the science editors also engage with the scientific community to try to get their sense of how science is being portrayed?

**David Jordan:** Absolutely, or at any rate within the BBC. We do not monitor any of our output specifically in terms of taking down the date and particulars of every story we do, simply because if we did so we would need to employ a vast army of bureaucrats to do it and we would lose out on the amount of money we can show on screen and on air. That would not be a very sensible thing to do, but the editors of bulletins, programmes and channels and the science editor, environment analysts and other people are constantly across what we are doing. If they see or hear something on the air or online that they regard as deficient, they will quickly move to rectify an inaccuracy, if they spot it, or make up a deficiency in coverage, saying, “We don’t seem to have done this subject and we think we should be.”

There are regular monthly meetings between the science editor and the editors of our radio and TV science programming in which they take a general overview of what has been happening and what will be coming up so they can plan what kind of programming might be appropriate for whatever is about to happen. A lot of liaison between them, partly as a result of the recommendations in the Jones report, is now going on across the science community to try to make sure we do not leave big gaps in our coverage and have not given people all the information they should be getting.

**Ralph Lee:** The matter you are pointing to is more of a problem in the press than in broadcasting. People browse headlines much more readily. For Channel 4 news in particular, which is an hour-long bulletin with a small but very dedicated audience, who generally consume news at quite a sophisticated and deep level, there is much less of a problem in the sense of a fracture between the headline and the piece itself. I do not think we would find any cases where the headline had oversimplified it to the point of being wrong and misleading.

**Q106 Stephen Metcalfe:** You said in earlier evidence that you cannot keep updating the public about the same thing. First, why not? Secondly, if it is not your responsibility to do that, whose is it, and how can you get that out?

**Ralph Lee:** There is a difference between informing the public and public information. Broadly, it is our job to inform the public and cover important items that are key to our times. Channel 4 is clued into the major issues of our time and we try to cover them, but just to report on the slow progress going on within a subject like this by way of public information would be counter-productive. A programme like “Grand Designs” and a television figure like Kevin McCloud, who ostensibly has absolutely no relationship with climate change, probably does more in informing the public than a bulletin about how climate change science is being progressed, because the messages you find within “Grand Designs” about how building and material design is changing to be more energy-efficient are seamlessly woven into an aspirational editorial about people’s hopes and dreams. If you are a consumer of that programme, over time the energy-saving messages are all there, and we hope that at some

level our viewers are making the underlying connection between that and the bigger picture within the news about climate change.

**Q107 Pamela Nash:** I would like to develop some of the questions raised by my colleague and concentrate particularly on balance in factual programming, both documentaries and news. We have repeatedly seen examples of commentators rather than scientists speaking and debating climate change. I am not talking about the programmes you have just referred to, but particularly news programmes. You might have a commentator arguing against the existence of climate change. Do you think this is responsible programming when the scientific consensus is that climate change exists?

**Ralph Lee:** I cannot think of a recent example where a spokesperson for the view that climate change, and anthropogenic climate change, is not true or real has not been balanced against the consensus view. There is a huge amount of contention as to what we should do about it, how long it will take and the projections for it. The fact that the public get confused and find it quite difficult to navigate around the very real and important debate about what the responses should be to climate change appears to suggest that there is an ongoing debate about whether climate change and man-made climate change is a real thing. It is not the case that the consensus is always found to be balanced against a minority of deniers or dismissers of climate change. I cannot think of examples of that.

**David Jordan:** The BBC has accepted that is a danger. A bit of our editorial guidelines talks about the importance of giving due weight to different viewpoints in relation to any controversy, debate or anything on which we are required to be impartial. One of your earlier witnesses, Professor Rapley, referred to the false balance between the vast majority of scientific opinion and a small minority of scientific opinion. A debate between the two as if it is a 50-50 split is something we seek to avoid. We may have done that early on, but we would now seek to avoid that. We want to reflect the minority view, which is now different from that, but in the right context, and having a 50-50 debate on it probably does not do that.

**Q108 Pamela Nash:** To be clear, you say “early on,” but the example we have is a year ago. A debate of the sort I described earlier happened in “Daily Politics” in 2012. Is that something that would not happen today?

**David Jordan:** It is difficult for me to comment on the precise example without knowing it. I am happy to look into it and come back to you. We have been saying for some time, since the Bridcut report in 2007, that the right way to do this is not to have equivalence between a small minority and a very large majority, but it is also right to continue to report the views of that small minority.

There are now very few people who say that no global warming is happening and it is not the result of man-made activity, but the debate has moved on to the precise ranges and all sorts of other questions. I would be disappointed if programmes were still having that false balance in discussing both the issue of climate science and some other issues too.

**Q109 Pamela Nash:** We can send you details of the programme we are talking about. Fiona, I am not sure what your involvement is in news programmes.

**Fiona Ball:** I do not have any involvement in news programmes; it is quite separate. Our programming within Sky does not really look at the science behind it; it looks at the solution. It tries to look at issues that come up time and time again in different and innovative ways that might engage different people. For example, as well as programming, as a broadcaster, we have a huge opportunity to engage our customers through lots of different media channels, whether that is social media—for example, Facebook and Twitter, which we do as part of it—or online blogs to support the programming and depth of information behind

a particular fact, or issue, or programme. It is continuously looking at how we can revitalise the issues and problems in different ways to engage different audiences.

**Q110 Pamela Nash:** What is the process? When you are producing any programme that covers climate change, does part of the planning involve consideration of balance, and how would you define balance?

**Fiona Ball:** The balance is really around the scientific facts and science rather than the issues and solutions that need to be addressed.

**Q111 Pamela Nash:** When you say you do not do the science but the solutions, do you mean it is assumed that the science is correct and climate change exists?

**Fiona Ball:** From the corporate perspective of Sky, we think climate change exists and is a serious issue that we all need to address, and that is a very strong opinion we hold.

**Q112 Pamela Nash:** So programming on this issue is based on that opinion and comes from the viewpoint that it already exists and now you are looking at the solutions.

**Fiona Ball:** We are looking at the solutions from a Sky corporate programming perspective, separate from the Sky News perspective, obviously.

**Q113 Pamela Nash:** Can I put that question to both of the other witnesses? I am not a broadcaster, but I imagine there will be two different processes for documentaries where there is long-term planning and for quick reactive news programming. Are there parts of that procedure where balance has to be considered? Is that in the guidelines, or how does it work?

**David Jordan:** I prefer to call it impartiality, only because the word “balance” tends to get you to the false balance we talked about earlier. We do not express our impartiality through strict balance, except at times when we are reporting elections when we make sure we have representatives from all the political parties. Impartiality is a more subtle concept than that. Of course, our editorial guidelines, which I am sure you are familiar with—they are online and available to anybody in the UK and abroad—stress the importance of impartiality in approaching any matters that are regarded as controversial. The phrase used is “due impartialities,” so it is the impartiality that is due in any particular circumstance, but in news and current affairs the highest level of impartiality would be required. Any programme maker in the BBC when looking at subject matter like this would be required to make sure that it was approached in an impartial way, either within a programme or report or a series of programmes or reports over time in which attention is drawn to the other episodes in the series at the time that you hear only one of them. There is a variety of approaches to that, but, we are absolutely committed to being impartial on any controversial subject. The subject of climate change has been controversial since the outset among a number of people, notwithstanding what I said about the majority of scientists being in agreement.

**Q114 Pamela Nash:** I am using “balance” rather than “impartiality” because I want to make sure we have got the same definition. It is not balance between two differing opinions; it is fact that is presented rather than opinion on something where there is scientific consensus.

**David Jordan:** There will be occasions on which you are reporting the science and it is about the facts. There will be occasions on which you are reporting the policy that deals with the science and it will be about fact and opinion. Clearly, there will be different debates that take place around this subject matter, so you look at each of those debates differently. All of them have to be done in an impartial way either specifically in the item or over a series or over time.

**Ralph Lee:** In the forward planning of documentaries, we are not looking at how we can tackle this subject directly but more how we can infuse various different programming with the main themes of this subject. For instance, last year we did a programme called “Is the Weather Getting Worse?”, which was about last year’s extraordinary weather, where we went from droughts one minute to flood the next to an extraordinarily wet summer. Weather is a very effective way of connecting the public to issues of climate and climate change, because it is something they relate to and feel very directly. There has been a change in the last few years. Climate scientists are sometimes more willing to make speculative links between climate and weather. Up until now, they have been very reluctant to link any individual weather event with climate change.

We take as our position that there is not an ongoing debate about whether or not climate change is happening. There is a lot of debate about the severity of it, the speed with which it is happening and the degree to which you can link it to different weather events. When we talk about debate, we are past the point where the debate is about whether or not climate change is happening. There is not a sense of balance there because there is massive scientific consensus on that, and the debate, taking that for granted, exists in a slightly different space.

**Q115 Pamela Nash:** You have done a really good job of plugging programmes on Channel 4.

**Ralph Lee:** They are all available on 4oD, if you get online.

**Q116 Pamela Nash:** And lots of people go online.

**David Jordan:** Don’t tempt me.

**Q117 Chair:** I have just been looking at a blog commenting on the Andrew Neil programme from last Sunday. There is a lengthy posting by two renowned experts correcting mistakes made. Maybe when you write to us you could comment on what you are doing to eradicate that kind of mistake. It is very difficult in that kind of rapid exchange programme, but it is critical that the lead journalist is properly briefed, is it not?

**David Jordan:** It is critical but also important that our presenters are able to put an alternative point of view to a Government Minister that has some support.

**Q118 Chair:** There is a difference between an alternative point of view and things that are factually wrong.

**David Jordan:** Yes. It goes without saying that we would not want factual errors in any of our output.

**Q119 Stephen Mosley:** The IPCC is producing its fifth report and will start to publish it at the end of September. When it did its previous report in 2007, it led to quite a frenzy of media coverage. When you have a big report like this coming out, what factors and considerations do you need to consider when talking about the coverage?

**Ralph Lee:** From speaking to Tom Clarke, I know that he is already working towards that as a news item, but what piece that will be, what place it will take, how big it will be and how prominent it will be will depend a lot on the report, what it says and how he can put that in the context of news. What is new in the report? It is very difficult to shape wider documentary output from a report like that. We will obviously look at it with interest and see where it leads us and whether it can inspire other factual programming, but principally it is an issue for news.

**David Jordan:** We would be only at the initial stages of planning for an event like that. Clearly, an IPCC report is a very big and important event in the history of this subject in terms of its findings and predictions and also its policy implications. I would expect the BBC to do extensive coverage, but we cannot always be absolutely certain because we do not know what else will be going on at the time we cover it. We will certainly be covering it, and there will be programming related to it on our Radio 4 science programmes, whether immediately at the time or soon afterwards reflecting its findings. To echo what has just been said, an awful lot depends on what the report says.

**Fiona Ball:** Our science correspondent, Thomas Moore, has got it on his radar. It will be very dependent on what is within the report, and it will be looked at on its merits, as every other story would be.

**Q120 Stephen Mosley:** Two of you at least have said that the science correspondents are looking at it and talking to scientists. With a big story like this, would you make sure that there is preparation and scientists are talked to in advance of the report? Is it really just a case of waiting to see what is in the report and whether it makes it on to the news on that particular night?

**David Jordan:** With a big planned event in news, it is never just a question of waiting and seeing what happens. Clearly, we have huge plans in place about how many people go to wherever the report is being delivered, who is going to report on it, what kind of resources we are going to put in and so on. All I can say is that already discussions are going on about how we will cover that report when it comes out. It is being taken very seriously within the BBC. Very often, in relation to these kinds of issues we hold meetings with all the interested parties to talk about what the coverage will be. What it says really does matter. If the Autumn Statement does not say very much, it gets less coverage; if it says a lot, it gets a lot of coverage. The same will apply. It clearly matters what the report says, particularly if it amounts to a major revision of its previous view, for example.

**Q121 Sarah Newton:** I would like to ask a question of the BBC specifically. You are such a trusted voice and have a unique position because of the licence fee and the Reithian principles. With such an important milestone coming up, I want to probe you a bit more about the period of preparation to make sure that, in addition to the scientists on that committee and the UK scientists who support the work of it, you are also talking to the scientists who feel they do not have a voice at the moment so that the public can be assured you are listening to all the voices on the issue, and that that has been properly thought through before the actual report on the day.

**David Jordan:** I can give you that assurance. I can also give you the assurance that we try our level best to talk to as many scientists as we possibly can in this field, as well as in others. We have programmes in place through which we try to make that happen. For example, our radio science units have been taking media fellows from the science community every summer for more than 20 years. That has not been dreamt up just recently. A more recent initiative is to try to improve the number of women experts on BBC output. That has been incredibly successful. I know that a number of women scientists have been part of a programme to help them to be more media-friendly so they get on our media more often. They have been successful. Sadly, some of them have been successful with our friends and rivals in Channel 4 and elsewhere, but they are doing very well. We are already seeing the beneficial effect in terms of the number of people coming on. Those are just two examples of the way in which we are constantly trying to make sure that we have close connections with the scientific community, that our programmes do and that we know what scientists think and want to talk about at any one moment.

**Q122 Sarah Newton:** For example, you would engage with scientists who believe there is climate change but not as a result of CO<sub>2</sub>, and you would give them the opportunity to make their case.

**David Jordan:** We are engaged with everybody. There are people in this room who know that only a few weeks ago I had a long meeting with Lord Lawson about his view of climate change. Not that very long ago, I had a long meeting with Peter Lilley about his view about of climate change. We have long meetings with scientists who take different views about climate change and what is going on in the world, and whether there is or is not a standstill in global temperatures. We are constantly monitoring all of that with politicians, scientists and everybody else who has a view.

**Chair:** I thank you very much for your attendance this morning. It has been very interesting.

### Examination of Witnesses

*Witnesses:* **Ros Donald**, Carbon Brief, **Andrew Montford**, Bishop Hill Blog, and **James Painter**, Head of the Journalism Fellowship Programme, Reuters Institute for the Study of Journalism, gave evidence.

**Q123 Chair:** Can I welcome the three of you to the session? I appreciate that we are running somewhat behind time. The House starts its business shortly, so I want to try to crack on. Perhaps the three of you would kindly introduce yourselves.

**James Painter:** My name is James Painter. I am head of the journalism programme at the Reuters Institute for the Study of Journalism at Oxford university, but, perhaps more relevant to this Committee, along with other authors I have written several studies on how climate change is reported in the media in the UK and around the world.

**Andrew Montford:** I am Andrew Montford, a writer and blogger on the subjects of energy and climate change.

**Ros Donald:** I am Ros Donald and I am a writer and researcher for a blog called Carbon Brief. I have a journalistic background on which I hope to draw a little in this session.

**Q124 Chair:** The three of you are involved in commenting on what gets reported about climate change in the media. Would you tell us briefly exactly what you do, why it is important and in a sense what makes you qualified to take part in the debates on climate change?

**Ros Donald:** Carbon Brief examines how climate and energy matters are reported in the media. When it comes to the science, a core job we do is fact check reporting and check it against what scientists have concluded through their own work, and how that fits in with the wider body of scientific literature. We also cover climate science ourselves. We ask a range of scientists to comment when reporting on new research. We try to contextualise it ourselves. One of my colleagues, Roz Pidcock, who is a scientist and understands the processes going on there, leads that work. For the past two and a half years, we have been covering how the media look at climate science. Although a lot of media coverage does a very good job of explaining climate science, showing the areas of disagreement as well as broad agreement, a significant minority of coverage does a bad job of informing people about climate science.

There are active debates in the scientific community, but there are things on which scientists basically agree. There are areas where the uncertainty is not accurately expressed. There is also the issue of coverage that represents a minority view as one half of the debate.

Part of that can be presenting climate science as a debate between believers and non-believers, so it is happening or not happening, or it has or has not stopped. One thing that could be done to improve this is to have better representation of scientists in the media to show where that range of opinion lies, as well as the wider body of evidence, and to situate dissenting opinions within that range.

**Andrew Montford:** In terms of what I do, my blog, Bishop Hill, is probably the biggest energy and climate blog in the UK and has the biggest readership. I am able to bring a lot of expertise to bear. Essentially, it has become a site for crowd sourcing. My readership tends to be very highly educated. We have a lot of people with scientific degrees and a lot of people with advanced scientific degrees, so if a story comes out in the media we are able to bring that expertise to bear on questions of global warming science, economics and policy. People go off and fact-check it and question it. This is popular because there is huge dissatisfaction out there with what we are getting from the mainstream media. There is a sense that the people whom newspapers and broadcast media get to cover global warming tend to be English literature or history graduates. They do not bring any particular expertise to bear, and they are not able to question what they are being told by the scientists in a meaningful way. There is a sense that what we are getting from the mainstream media is regurgitation of press releases. I think my site has become popular because it is able to question things.

**James Painter:** We come at it more from an academic background. In the first study, we looked at how climate science was reported during the Copenhagen summit in 2009, and we were particularly interested in who got quoted on the science. Was it university scientists? Was it NGOs? Was it politicians? Was it organisations? We were interested in who had credibility and who the media followed. In the second study, we looked at the presence of climate scepticism in all its various forms in the media across six countries. We looked at the UK in great detail as well. We were particularly interested in why it was that there was much more climate scepticism in the Anglo-Saxon print media, that is, the US and UK, compared with countries like France, Brazil, India and much of western Europe. In a third study, which is coming out in September, we are looking at the reporting of risk and uncertainty around climate science. We are examining whether risk language might be a better way of portraying some of the uncertainties around the science, but we are also looking at the dominant messages—what we call narratives—about climate science that people who consume media get. In other words, are there lots of messages about imminent disaster and uncertainty, or are there messages about risk or opportunity? We have done those three different types of study.

**Chair:** That is very helpful.

**Q125 Roger Williams:** Perhaps you could comment on the way in which scientists should communicate their findings. Should it just be filling a gap in knowledge, or should it be about the implications of those findings and the effects they may have on policy development?

**Andrew Montford:** Scientists need to be rather cautious about communicating their findings. There is a tendency among university press departments to try to make the findings as exciting as possible. I am thinking of one example a good few years back when there was a finding that climate sensitivity might be 5 degrees per doubling of CO<sub>2</sub> which is, top end, quite scary. It means that, a century down the line, we are 10 degrees hotter, in theory. That made for great headlines, but it fits into a bigger picture: climate sensitivity is hugely uncertain, and at the other end, at less than 1 degree, it is not scary at all and we can carry on as we are for ever, so scientists need to be very careful about what they communicate.

There is a big role for the media in trying to put an individual finding within context, which again is something we do not really get. We constantly hear about the scary scenarios; we do not hear about the non-scary ones, even though they are within the scientific

mainstream. The draft IPCC fifth assessment report shows climate sensitivity figures from less than one through to around four or five. If it is less than one, we do not have a problem. At the end of another century, we are not going to be much more than 1 degree warmer, which is not an issue.

We have heard from the previous panel about consensus and that 97% of scientists say climate change is real and is happening. I am a dreadful sceptic, but I agree that man has always changed the climate; carbon dioxide is a greenhouse gas; and we have got a little bit warmer. Is it a problem? I am not so sure.

**James Painter:** If I understand the question right, you are asking whether scientists should stick to the science or enter the policy field. Is that right?

**Q126 Roger Williams:** That is one aspect.

**James Painter:** On that particular one, you have had evidence from scientists. Different scientists have different views on that. If they are dealing with the media, I think they should make it very clear when they are talking just about their science and when they are entering into a policy area. Like Andrew, I think that they have to be very careful about showing ranges of possible outcomes and to be very clear about what they are very sure about and what they are not so sure about.

Perhaps we will talk about this later, but uncertainty is a real problem for climate scientists, and how you communicate uncertainty is desperately important. The problem is that many scientists have come up with some new research, which often has uncertainty, but fail to mention, rather as Andrew has said, that there are areas about which there is an awful lot of certainty and consensus. In every interview with the media it is extremely helpful if they say, "We are pretty sure and confident about this area, but that is an area of uncertainty." I think that would be very helpful when they deal with the media.

**Ros Donald:** One thing a lot of scientists say to us is that they are wary of getting drawn into policy debates. That is something to be aware of. There is also a big range of people who want to comment on policy, but science also has a role in deciding at which point making policy is sensible. There was a piece in *The Economist* recently that looked at climate sensitivity and atmospheric temperatures and came to the conclusion that, because we are now getting some lower-end readings, perhaps we have more time and do not need to make policy quite so quickly. After the article, Myles Allen, one of the scientists involved in sensitivity papers, commented that the slowing or pausing, if it is within the range he is talking about, gives us a difference of around 10 years. It is important to put the policy relevance of those areas of cutting-edge science in the context of the wider body of knowledge.

**Q127 Roger Williams:** About 20 years ago, climate science was probably a very worthwhile career to be in but not very dynamic or exciting. Do you think the change of public perception about these issues encourages different characters in science, or people who communicate in different ways, to get involved in particular sectors of science?

**James Painter:** I am not sure there is any evidence that changing public perceptions drives certain types of climate scientist to be more or less prominent in the media. There are all sorts of motivations for why climate scientists might decide to get involved in the media, or not. The really big issue, which you have discussed in your Committee, is: what are the obstacles for climate scientists to engage in a better and more productive way with the media where they do not feel frightened, will be given justice and be heard and are not involved in a false debate? That is much more the issue for climate scientists than whether somebody is jumping on the bandwagon to be a media star as a result of heightened public interest.

**Andrew Montford:** That is a very good point. There are lots of scientists who are trying to get themselves on the telly by saying outrageous things.

**Q128 Chair:** It happens in politics as well.

**Andrew Montford:** One thing I have tried to do on my blog is bring on board people from within the scientific mainstream, not sceptics, to talk to us. That has been successful up to a point. The perennial problem is that a lot of my readers are very angry about what they see in energy and climate policy and people misrepresenting our views. They tend to treat any climate scientist who comes on the blog as somebody they can shout at. It is a problem, but we have had conversations going. We have got together and met for beers and things, which has been very nice, and that has helped to develop a degree of trust between the non-activist half of the climate science community and the sceptic community. We are now able to talk and have a conversation, which has been helpful.

**Q129 Roger Williams:** At the centre of it all is: do the media make the best use of scientists in addressing these issues?

**Ros Donald:** There is a huge appetite among scientists that is very clear, for example, when you look at Twitter. After the Andrew Neil segment on “Sunday Politics,” where he was engaging with Ed Davey on a very technical aspect of climate science, which is atmospheric temperature readings, at least five scientists offered to go on that programme and talk to him about decadal forecasting. I do not know whether they got a response, but there is a big appetite to discuss science and to bring alive what could be quite a dry subject.

A very good example of where science was used to very good effect to discuss areas of a little more uncertainty is the question whether Arctic sea ice may or may not be affecting UK weather. “ITV News” did a very good segment on that and talked to a scientist who is looking at how ice melt might be changing temperatures and weather systems, and putting that into context by talking to Julia Slingo at the Met Office and showing there is still a great deal of uncertainty. There was a new development, but it was not being portrayed as evidence that we were all doomed, or that everything was fine and we needed to go back to square one on climate science; it was just put into its proper context by talking to two scientists. That was a really great example.

**James Painter:** I think that is right. When there are really important issues like climate sensitivity to be discussed, it is much better to have that discussion between climate scientists. The BBC, who generally does a very good job, had a discussion on the “Daily Politics” show between somebody from Greenpeace and James Delingpole, both of whom have an agenda. That did not seem to me to be very sensible. My understanding is that there are lots of climate scientists out there who are prepared to discuss climate sensitivity. Some people think it is a big problem and cannot explain it; others do not. To take your point, why have NGOs discussing that and not climate scientists? There are lots of good examples that the media use, but occasionally, there are examples where it would be much better to have a debate between climate scientists on those issues than people with a vested interest.

**Q130 Roger Williams:** Andrew, in your written evidence you referred to low-profile mainstream scientists who are honest brokers and perhaps do not get the coverage they should. Are they missing from the debate entirely, and are there any other scientific ideas missing as well?

**Andrew Montford:** The lower-profile scientists are missing from the mainstream media. They are out there, and I have tried to get them on to my blog. They come on and talk. Ros mentioned Twitter. They are out there a lot. We have a problem in the UK, in that a lot of people in the scientific community do not want to stick their heads above the parapet because, if you are outside the alarmist mainstream, you will get hammered. I have heard of scientists—I am not entirely surprised by this—involved in the IPCC process talking about

people who are worried about their families. I am not talking about attacks on them but how their career will go if they step out of line on this. That is pretty surprising for the UK.

We have a problem in the UK, in that science is moderately monolithic. There are some moderate voices out there. There are very few sceptics—none I am aware of—within mainstream university climate science. They are out there in other countries. There are sceptics working in universities in America, Scandinavia, Australia and places like that, but in the UK there is nobody. We lack those voices entirely, which I think is an indictment.

**Q131 Roger Williams:** Would the others like to comment on that?

**James Painter:** I am not sure there is huge evidence for the statement Andrew has just made.

**Andrew Montford:** I would agree with that; there is not a lot of evidence for it. I have heard people say it.

**James Painter:** We have done a study. It is right that there are very few climate sceptics within the university science community in the UK, but one surprising thing that came out of the study “Poles Apart” was that there were lots of voices quoting university scientists, Ian Plimer from Australia and Dick Lindzen from the US, so it is not as if the UK media are devoid of voices they can go to when they want sceptical voices. If you read the book, a lot of them are there and quoted an awful lot. I would disagree that from the evidence there is an absence of climate sceptic voices, although I agree there are very few UK university scientists who are climate sceptics and, therefore, they are not going to be in the UK media.

**Q132 David Tredinnick:** Some of us as politicians might be jealous of the fact that scientists usually come top of the professions most trusted by the general public. However, when we look at the climate debate, it seems to be different and there is not the same level of trust. Why do you think that is?

**Ros Donald:** When we conducted polling, the same thing happened; 69% of people who responded said that scientists were the people they trusted to tell them about climate science in particular, which also tallies with Ipsos MORI’s trust index. On the other side, in the media there is a steady stream of examples of coverage that tries to show climate scientists as being untrustworthy in some way. There was a piece in *The Spectator* recently talking about how the Met Office could not forecast its way out of a paper bag, and there were comment pieces by Boris Johnson suggesting that the Met Office was wrong to predict hot, dry summers. It shows that the public read the media at a great distance and do not believe everything they read.

Andrew was talking about the monolith of British science. That is perhaps perpetuated in the media by the fact that scientists are under-represented, so you do not get those personalities coming out. Everyone loves Brian Cox, but there are probably not a lot of other scientists in the media people could name. I think there are a lot of very interesting and savvy scientists who would be ready to talk to the media in a way that people would engage with, and that would increase trust in science.

**Q133 David Tredinnick:** How do you get these people whom you think are interesting into the public domain? Is it a media problem? Is it a problem of the general attitude to science? Why are these interesting, articulate people not available to contribute to the debate, or not available to the public to hear?

**Ros Donald:** I referred to the Andrew Neil interview. There is an appetite there and also a wariness to get trapped into a believers versus non-believers debate or end up talking about climate policy, which a lot of scientists would be pretty uncomfortable doing. If you

can increase the range of voices—essentially that is something for the media. The ITV example was a very good one and shows how you can increase the range of scientists who appear and talk about these areas of science, which makes much clearer what we are dealing with. It is not an area where people are disagreeing with one another the entire time on the fundamentals of climate science. If they were contradicting one another the whole time, we would have very good reason not to trust them. With that contextualisation and increase in range of voices, it is possible, and it is not difficult, to get more scientists on to discuss science.

**Andrew Montford:** The issue of trust in scientists—in particular climate scientists—is a major factor in the doubts that the public have about the line they are being given. We have had the hockey stick affair and climategate, both of which I have written about at length. They have affected public perceptions and, perhaps more importantly for you as a Committee, the issues arising from those matters, particularly climategate, have not been addressed. We have had lots of inquiries that have not been satisfactory and have not even addressed the major public policy issues.

We out there in the climate blogosphere can see that; we know that none of the inquiries looked at the question of whether scientific journals were being threatened or nobbled by people in British universities. From a public policy perspective, we therefore don't know whether the scientific literature is biased or whether we can trust the IPCC. That has to be addressed, or public trust will not come back. You can brush it away and say you do not care, in which case people will carry on not trusting what comes out of British science, and that is a shame for probably the majority of people working in climate science who are honest and are just trying to do a good day's work.

**James Painter:** I think your question was: why is there less trust in climate scientists than other scientists? First, I am not a pollster, but I have read a lot of it. There is some evidence that, as Andrew said, climategate probably did have an effect on levels of trust. My understanding from looking at Nick Pidgeon's latest work is that that trust is rising again. Secondly, it is much more to do with the nature of climate science as opposed to other forms of science. If someone like Brian Cox talks about the wonders of the universe, that is what some people call school science; it is the science of the known and what we understand very well. It is like Higgs boson, DNA or gravity, whereas a lot of climate science is about uncertainty, particularly in the future.

A lot of climate scientists come in and talk about that uncertainty, quite rightly, so it is partly to do with the nature of climate science versus the nature of other forms of science. You have also had evidence from Catherine Happer and others that media coverage of climate science often leaves the public very confused about what scientists do and do not know, and that also undermines climate science.

To answer your second question very quickly, I think you asked why more scientists do not go out into the media. Was that the question?

**David Tredinnick:** Yes, it was.

**James Painter:** We have done surveys with numbers of climate scientists and there are lots of reasons. A lot of them do not like, and do not feel comfortable with, the adversarial debate format that is very common at the BBC. A lot of them do not have sufficient training to be able to make little points quickly and still be respectful of the science. It is difficult for them. They are used to talking to other scientists; they are not used to talking to the general public. It is very difficult to summarise a scientific point in three minutes. What is the average soundbite on a news bulletin? Twenty seconds. There are all sorts of obstacles, but your Committee has heard that there are lots of really interesting initiatives about getting more training for climate scientists to go out there, but it is going to be a long task.

**Q134 David Tredinnick:** Thank you for that. Very briefly, what are your trusted information sources on climate?

**Ros Donald:** For us, peer review papers—we look at the peer review literature—and talking to the scientists themselves. That is our primary source, but that is our role as a blog.

**Andrew Montford:** It is probably nobody really. You have to verify everything. Peer review is completely overdone. I know this Committee has done its own inquiry into peer review, but there is a lot of empirical evidence out there that peer review does not do a lot for you. On the whole, it does not find fraud or error, so the only way of getting to the bottom of whether something is right is to verify it. One thing I keep banging on about is that policy makers need some way of verifying the science on which they are relying. In business you have what is called a red team, which goes out to throw stones at the official position. Nobody is really doing that for science. Back in the 1950s and 1960s, people would go out and try to replicate papers. PhD students would spend quite a lot of time replicating other people's work. That does not happen any more, so peer review with somebody reading through a paper and saying it is okay is not really proving the point for you. The foundations on which policy is being based are rather shaky, in my view.

**James Painter:** We as an institute do not have a policy on whom we trust or do not trust. At an individual level, there are scientists who have years of experience and have published lots of work. I disagree with Andrew. The peer review system does work pretty well. More than anything, there are scientists who are prepared to be honest and transparent about what they do and do not know. Those are the people I would trust on a personal level.

**Andrew Montford:** It is a good point. I agree that scientists need to be able to admit when they do not know things. One of the big warning signs that you are being spun a line is when they overstate their confidence.

**Ros Donald:** I do not think that happens very often. I do not have experience of that. Often, there are papers that do not fit with what has happened previously. I am quite excited about it because it is something new, but it then requires more investigation and discussion. Generally, people are excited when things do not match what happened before, because they think they might get to know more if either they cannot replicate what has happened or it leads them on to a new area.

**Q135 Stephen Mosley:** What is your view of the mass media coverage of climate change?

**James Painter:** Well, how long have you got? I will try to summarise it very quickly. We looked quite extensively at print media coverage from 2007 to 2009-10 and then did the later update. If I had to pick out one thing, what would worry me is the finding that there is an awful lot of uncontested sceptical opinion in the opinion pieces and editorials in much of the right-leaning press in that period. There is lots of evidence that people distinguish between news and opinion, but, if I was reading an opinion piece, I would like to know whether that had some reflection on mainstream consensus views. It is not like having an opinion on politics or on whether policy should be different. That is a problem that needs to be looked at, but, in general, the work that environment correspondents, editors and reporters do pretty much does reflect where the science is at. It is more of a problem in the opinion pieces, particularly those written by celebrity columnists, or people with no background in the science who very often are in-house columnists. How can a reader judge whether or not what they are saying does reflect the mainstream consensus? That is a problem. I can talk about many other issues, but that is one for the UK print media.

**Ros Donald:** Our bread and butter is looking at climate science in the media, and there is a great deal of very good coverage, and that shouldn't be forgotten. There are specialist editors who have a very good grasp of how to communicate science. There is a range of

different types of article that perhaps put forward sceptic opinions in an uncontested way. Two very good themes are the fact that global warming has stopped or climate sensitivity may be at the lower end of scientists' previous estimates. That has formed the backbone of a series of articles in the *Daily Mail*.

There is also a distinction to be made between perhaps journalists and the editorial conventions. David Fogarty, who was a reporter at Reuters until recently, wrote in *THE BARON*, which is Reuters' in-house blog, about the turn towards more sceptical coverage that Reuters had taken over the past year or so due to a change in the editorship. He was saying that, suddenly, climate change is not such a big issue on the agenda, or it needs to be reported in a more sceptical way. He ended up leaving because he was given the choice between writing about climate change or moving to shipping.

There is also the issue of editorial boards. There may be quite a straight-up report of a scientific paper, but it would be given an outrageous headline that suggests global warming has stopped. There was one recently on the aerosol effect of glacier melt in Bolivia that the *Daily Mail* wrote up as more evidence that carbon dioxide is not warming the planet, which did not reflect what the piece itself said.

**Andrew Montford:** It always worries me when people say they want to look at media coverage. We live in a free country and we cannot control the media. If the media want to have an uncontested sceptic opinion published, one would hope that is their right so to do. There are probably far more uncontested mainstream opinions in the media than there are sceptic opinions. I do not really see what the problem is. If you are going to allow dissenting views to be aired, which I hope everybody round this table would agree you should, I do not see why you automatically have to have them contested.

**Ros Donald:** From our point of view, it is providing a resource that allows people to situate what this news and opinion means in the context of the science. I do not think we have an agenda against free speech by any means, but it is just allowing for that context to be provided and, for example, when scientists say they have been misrepresented, for them to be able to say what they meant about their paper.

It is interesting talking about that sort of thing. For example, the Press Complaints Commission will not arbitrate on questions of science, but there is one example, which I have brought along—because we have a library of clippings—of a piece by David Rose that suggested that climate change had stopped 10 years ago. There were two complaints, one by James Annan, a climate scientist who was quoted in it. He received a partial correction of his quote through the PCC. Somebody else complained about the fact it showed too short a time line to be able to see the full trend of atmospheric warming. The PCC responded that they could not arbitrate on questions of science. We do not want to silence anybody. We think that dissenting views should at least be taken in context with a range of views, so that is why we publish our fact-checking blogs.

**Q136 Stephen Mosley:** One of the reasons I think there are quite a few dissenting or varying voices within the media is that scientists and politicians do not articulate what they want the end result to be. Do we want the end result to be no more climate change? Do we want it to be no more climate change, or no more man-made climate change, even though natural climate change might be happening, or are we trying to get to a situation where we attempt to negate various forms of climate change, whether it is man-made or natural? Until politicians and scientists give a firm position of where they want to be, there will be a vacuum where the press will have its own opinions and put forward different points of view. Do you think that is a valid argument?

**Andrew Montford:** That is a rather top-down view of the world. Politicians say where they want the world to end up and then the media move into action to persuade people that

that is the right way to go. I imagine the world works more the other way. The people who are wondering what they might want assess the problem and then tell you guys what to do about it. I am not sure I would agree with that.

**James Painter:** If you are asking why there is a certain amount of sceptical coverage in print media, it is not to do with a vacuum left by politicians and scientists not agreeing with what the end is. We have interviewed a lot of editors and environment correspondents, and there are all sorts of drivers for why a particular newspaper might want to put in sceptical coverage or opinion. It can be to do with the overall political ideology of the newspaper; it can be an editor or proprietor imposing his or her will; it may be that that type of sceptical column appeals particularly to the readership. For example, the *Express* has done lots of research into what sorts of articles appeal to its readership. If we are looking at drivers for why the press or media fill that gap, I do not think it is a large one where politicians and scientists cannot agree on what the end is.

**Q137 Chair:** You missed out the selling of newspapers.

**James Painter:** Selling newspapers is of course a major driver.

**Andrew Montford:** The undertone of some of these answers is that somehow sceptic views are not valid. Ros says they should be there in the context of what the real science is, and that any sceptic view should be put forward with somebody saying why it is wrong. It is a mad way of running things.

**Q138 Chair:** I have not heard anyone say that.

**Ros Donald:** I think that is a bit unfair.

**Andrew Montford:** You wanted the sceptic views put in context.

**Ros Donald:** That means putting them in context; it does not mean they are wrong. That is a big difference.

**Andrew Montford:** But if you are going to have somebody of the opposite opinion at all times, they are going to say, "He's wrong." I am not saying it is invalid to say that a sceptic view is wrong, but we do not apply that to the mainstream view. Every time there is a climate scientist on television I would love to be able to go on and put them in context, the context being my sceptic view. Views that people do not like need to be put out there and people can assess them on their own merits. They know what the context is; they know that a sceptic view is not a mainstream view, but they still want to hear what we have to say.

**Q139 Stephen Mosley:** Could Ros and James address that specific point?

**James Painter:** It is a very good point. To be absolutely clear, in certain circumstances sceptical voices should be there and it is extremely important that they are. I am a great fan of the BBC's due impartiality. It is the role of editors and journalists to go out there and investigate where the mainstream consensus on a particular issue lies. That should be the drive. It is not a false balance and the truth is somewhere in between. Good environment correspondents and editors go and talk to scientists who have spent years looking at a particular subject and publishing on it and say, "Look, where is the consensus on this issue?" That is not to say that sceptics on certain issues should not have a very loud voice, but at least it should be governed by the principle of trying to find out where mainstream consensus lies, and the concept of due impartiality is extremely germane to that debate.

**Ros Donald:** I agree. When I refer to putting something in context, it now sounds a bit draconian. For example, we have contacted Nick Lewis, who would probably describe himself as a climate sceptic and who has co-authored a paper on climate sensitivity. The two issues of temperature slow down and climate sensitivity are extremely good questions. We can thank sceptics for pushing them to the top of the agenda of the issues we are talking

about. Part of the problem at the moment is the adversarial system where we are pitting believers against non-believers, when it is a matter of allowing people to decide for themselves instead of being bombarded quite often by campaigners talking about areas in which they are not expert.

A good example of sceptic opinion being brought into a report was when Roger Harrobin covered temperature slow down and climate sensitivity. I believe you appeared on the segment. It was really interesting because it allowed people to see where that cutting-edge science fits in with the mainstream of climate science. That is what we would like to see in the media so that people are able to take all of these views in context.

**Q140 Stephen Mosley:** Do you think it is fair to label people as sceptics and believers?

*Ros Donald:* No.

**Q141 Stephen Mosley:** Ultimately, everyone believes that climate change is happening and the discussion is on the scale, causes and effects of it.

*Ros Donald:* I was trying to say that that was more the effect of the media coverage. James has done research into the different types of scepticism that we see. Andrew would probably disagree with a lot of people who look at his blog. There is a huge range, as there is in the scientific community at the moment. We are seeing a 2D debate with two sides bashing each other on the head. No wonder people feel mistrustful and confused, because that is what we see in the media, especially on flagship programmes. We had Andrew Pendleton against James Delingpole on “Daily Politics,” and Andrew Neil and Ed Davey discussing temperature slow down, which then segued into a discussion on politics. We are also mixing up political positions with positions on science. For example, one thing that comes out is that people who do not like wind farms are labelled as climate sceptics, which is probably unfair. There is a whole range of opinion we are not seeing. There is a 3D argument, yet we are seeing it only as if it was a cartoon. That is why I think people feel a bit put off by climate change.

*James Painter:* Very briefly—I could talk to you for 20 minutes on this—it is helpful to distinguish what are called trend sceptics, i.e. people who do not even think temperature is increasing; attribution sceptics, who think it is increasing but it could be natural variability or solar activity; and impact sceptics, who argue that we do not know enough about when it is going to happen, the scope and so on. It would be really good if, when the media have people like Andrew and others on their shows or in print, they make absolutely clear what sorts of sceptic they are. My understanding is that most people accept one and two but not three, so that would be helpful, and the media could do a good job. “Sceptic” is far too catch-all a word.

**Q142 Pamela Nash:** Andrew, you said earlier that the media had to be free to publish what they want. They have to have freedom to tell the truth. I do not think they have got freedom to mislead the public, which has been a problem in recent years on many topics. It is crucial to ensure that opinion is not seen as fact and that opinion is put into context or backed up. James, you said that the public did have the ability to distinguish between news and opinion in print media. How widespread do you think that sensitivity is, and does it matter what the medium is? Is that only the print media, or does it extend also to broadcast media?

*James Painter:* There is evidence that people do understand the difference between opinion and fact in a newspaper. The problem is: is that opinion representative of a mainstream point of view, or is there any context for that? If you have the headline “Rise in sea levels: greatest lie ever told,” which appeared in *The Daily Telegraph* a couple of years ago, is it right, fair and okay that someone reading that would think that sea level rise is not a

problem when there is a lot of other research that says it could be a problem? That is what worries me about it. If your question is whether people distinguish, they probably do.

As to broadcast media, people have explained previously that, because of the way they are regulated in the UK, there is a lot more trust in what the BBC does in its news reporting compared with newspapers. There is evidence for lots of trust in the BBC, but not so much for opinion pieces in newspapers.

**Andrew Montford:** Like James, I think people can distinguish. The issue that your opinion has to be supported by fact is right in principle but it is awfully difficult to police. We were talking earlier about the Andrew Neil programme the other day. The fact that a couple of scientists have put their heads above the parapet and said he was wrong scientifically on fact a and fact b does not necessarily mean that he was wrong on fact a and fact b. That may be just their opinion of a scientific fact. You may be able to read the science in a completely different way. What is a genuine fact and what is the current scientific consensus view may be two different things. This becomes a dynamic process in which people can, quite rightly, put their heads up and say he was wrong on that and that, and other people can throw more stones at the scientists and say they are not right. Eventually, out of that mess, eventually, with a bit of luck, the truth will emerge, but we must avoid saying that if the scientists say he is wrong, therefore he is wrong. That is not necessarily the case.

**Ros Donald:** The Andrew Neil case is interesting, because he also quoted a couple of scientists. Doug Smith was one of the Met Office scientists who was quoted. When we contacted him and asked him about that particular part, he said he had been taken out of context in suggesting that scientists are baffled about what is happening with climate change when they are trying to work out what is happening with surface temperatures, which is an important part of the climate system. Again, it is a matter of finding that context.

Talking about the responsibility of the print media, that is down to editors and their editorial line, but I do not think anyone can police that, and that would be wrong. It is important to have more scientists talking about science—I know I keep coming back to it. If people are able to see how that richness of debate is played out, they are less likely to take opinion pieces at their word. That has much more to do with people's own values and what chimes with them. Research done by James and others shows that people's views on climate change do reflect their values. It is a matter of giving people the ability to distinguish all of these things for themselves. For example, on the BBC, David Jordan said Professor Jones had said climate science should be sacred. I did not read that in the Jones review. I understood him to say that due weight should be given to the areas of agreement in climate science. That is a very different thing. At the moment, with the head-to-head model, we are not getting either the weight of agreement or the areas of disagreement and how they fit in with the mainstream.

**Q143 Pamela Nash:** Mr Painter, you said in your research that coverage of this had become much more polarised. Is that still the case? That was a couple of years ago. Is that improving or getting worse?

**James Painter:** I am not sure I said it was becoming polarised. We were looking at the presence of climate scepticism and whether it had increased or decreased in the UK and other media. The evidence was that, not surprisingly, because of climategate and other scandals around the IPCC reporting of the Himalayas possibly losing their ice, there had been an awful lot of climate sceptical voices in all the newspapers, but much more in some than in others.

It may be of interest to you that a lot of people argue that that is what you would expect and the climate sceptic voices were entirely legitimate. Therefore, we went back and looked a year later when climategate, Himalayagate and all the other gates had diminished, and the sceptic voices in all their diversity were still mentioned in about one in five articles,

but particularly in opinion pieces in the *Telegraph*, *Sun* and *Express*. There is a big distinction between the way it is reported in the news pages and the way it is reported in opinion pieces, and you still have a lot of uncontested sceptical opinion, even though climategate and Himalayagate have dropped. Is that what you were asking?

**Q144 Pamela Nash:** Yes. You think that trend is continuing.

**James Painter:** About one in five articles on climate change in general include mention of sceptics in some form or other. I did not take a view on whether this is good or bad, but we were mapping it.

**Pamela Nash:** That is more than I would have thought. That is quite helpful.

**Q145 Graham Stringer:** Are there facts that can be agreed on? Andrew, you mentioned that you accepted carbon dioxide was a greenhouse gas and that human beings affected the climate. Is there a range of facts that you think virtually everybody can agree on?

**Andrew Montford:** Beyond the two just mentioned, probably not a lot. I do not think we agree on very much at all in a system like climate about which we have such extraordinary levels of ignorance. It is very unlikely we will be able to agree very much on anything.

**Q146 Chair:** What about the retreat of Arctic glaciers, for example?

**Andrew Montford:** I think everybody would agree that the Arctic ice has gone down. There was a very big drop in 2012 and another big one in 2007, both of which have subsequently been attributed to changes in currents rather than melting. By looking only at the Arctic, you are missing half the story, because the Antarctic ice has increased. The focus on the Arctic is very good for alarmist propaganda, if you like, but, if you are to be scientific about it, you should look at the whole globe. The IPCC says in its fourth assessment report that we should expect big decreases in both Arctic and Antarctic ice. One has gone up and one has gone down. Does the IPCC really know what it is talking about? I would say not. The models are not working, so we will not get agreement there.

**Chair:** You won't agree with it.

**Q147 Graham Stringer:** Given that, rather than getting more scientists explaining more facts, would it be helpful to Mr Painter's view, to explain where the different uncertainties in the science are coming from? Would that be a better approach?

**James Painter:** It is a really complicated issue as to how you communicate effectively about the science. There is a lot of evidence that how you communicate that uncertainty effectively is really important. You heard in evidence from Dr Catherine Happer that people get very confused about uncertainty, partly because many members of the general public do not understand the difference between what some call school science, which I mentioned earlier—the science of facts—and all the uncertainty of research science where certainty is part of the game. There is also evidence from the United States that when people or scientists are uncertain it is called a gateway issue for public engagement.

The debate, which has begun to be reflected in some of your discussions and submissions, should turn much more towards: is it a better way of framing the debate to talk in terms of risk? People understand risk much better; it is part of everyday life. Again, I can talk about it for ages, but there is an interesting debate in the US, Australia and the UK about whether it is more helpful if scientists say there is a risk this might happen and there is a lot of uncertainty, but we have to take decisions in the context of uncertainty. It is certainly a much more helpful way for policy makers. The jury is out on whether it is a more helpful way for the general public. What we do know is that disaster narratives that are very common in the

media and lots of discussion about uncertainty are obstacles to public engagement, if that is your aim. Does that help?

**Q148 Graham Stringer:** I think so. It is also the case, and has been referred to previously in the oral and written evidence we have been given, that climate science is not just school science but it does not conform to Karl Popper’s test of what is science, because in most cases it is not verifiable or testable. Therefore, the media fall back on words like “consensus,” which are unusual in the context of science. Do you think that is one of the problems of communicating climate science?

**James Painter:** They use the word “consensus.”

**Graham Stringer:** Yes.

**James Painter:** I do not find a problem with the word “consensus.” It depends on what your aim is about communication. Do you want public understanding, public engagement or behaviour change? There is an awful lot of research out there that different types of messaging will have a different effect on understanding engagement and behaviour change. If you want behaviour change, there is evidence that, with lots of images of catastrophe and disaster, fear and guilt are not good motivators. If you want public engagement, there is a lot of evidence to support a dialogue-based approach with scientists, rather than yet more facts, data and information that there is consensus about the science, which is not a good way. You have heard several times that more and more information is not the best way for public engagement. It is about dialogue, for the reason—there is a lot of science out there to support it—that most people have formed their views on climate change not according to the science, although that is a factor, but according to their political, social and cultural values. I am sure you have heard all this, but that is really important if you are thinking of the effects on the public. I do not think that the use of the word “consensus,” or not, is the essence of the issue.

**Q149 Sarah Newton:** The reason we started this inquiry is the part we are not really talking about. Any Government are making huge policy decisions based on the assumption of man-made climate change and are deeply committed to reducing our carbon footprint, which is costing every consumer a lot of money. It is very important that we have, first, the evidence and, secondly, the trust of the public that we have the right evidence to be making such huge policy changes. Given all the things that you have said today, all our evidence and the very important moment in September when we get the IPCC report, how should we be advising both Ministers and, critically, the media—it is such a shame that the BBC and others have left and not heard this—to tackle communications in the run-up to that report, and how we can have a proper discussion about the science in the news when the report comes out, rather than a very sterile debate about believers and non-believers?

**Andrew Montford:** You are probably a bit short of time between now and the IPCC report coming out. I do not know what you can do in that space of time. You are right that we need to get away from the whole believer/unbeliever thing. There is a span of opinion: the 97% who recognise that there has been some global warming, that carbon dioxide is a greenhouse gas and that man can affect the climate. These are all relatively agreed, but people need to understand that there is a range of valid scientific opinion within that 97% between a position that is not alarmist at all, where basically we can pack up and go home, and one that is quite alarmist. Until the possibility that we are spending a lot of money to no useful end is recognised, we will not get anywhere.

**Ros Donald:** In the run-up to the IPCC, and once the report is published, there will be a great deal of interest in the media on areas that are different from the ones before, so it is important, as I keep saying, to situate it within what is already there in terms of agreement. From a leaked report, I believe there are now areas that are much more certain than in the

previous report. Therefore, it is a matter of contextualising the new evidence within what already exists to help people understand what the IPCC is doing and what the IPCC is and to be able to identify scientists who come and talk about areas of greater uncertainty versus areas of certainty. Part of the problem is that these new areas are discussed in the media as though they change everything that has happened, either in the sense that we are all doomed or everything is fine. We want to be able to see the train of science and know the story. People engage with stories, not bits of dry science, rather than being bombarded with information that seems to contradict everything that went before. It is the building a base of understanding about what the report actually does and what it means.

**James Painter:** The first question was: how do we make that report interesting to the media?

**Q150 Sarah Newton:** How do we approach the run-up and reporting of it and afterwards tackle some of the issues you have highlighted today, rather than have a sterile debate between believers and non-believers, and how do we have a proper discourse around the science, perhaps exploring some of your views or describing it as risk and managing risk?

**James Painter:** There is a real problem for the media with the IPCC report. I am in a very fortunate position in that I know a lot of the reporters, including those from the BBC. What is going to be new about it? Maybe you are right and there will be more certainty and more uncertainty about some things. To say that the IPCC is even more sure that we are causing these problems is not a massively interesting headline. There is an issue for the media. We are going to monitor it, and it will be fascinating to see how much they cover it. There really is climate fatigue both within the media and the general public. Even though you have these blockbuster reports, I wonder just how much reporting there will be.

I come to your second question: how do you make it interesting and relevant to the general public and the media? I am not sure. I would absolutely go down the path of trying to train up IPCC scientists to be media-friendly and talk about it in a way everybody understands, perhaps using the concept of risk, although that is my personal view. But more important than anything is to make it relevant. There is quite a lot of evidence out there that people engage in the issue of climate change when they think it means something to their lives. One of the top line results of Catherine Happer's work at the Glasgow Media Group is that people really engaged with the issue when they saw how it was affecting their lives. It is very difficult. You have to both report the IPCC and supplement it with colour pieces or background pieces on how this matters.

As to the issue of uncertainty and the ranges, that is much better portrayed on online sites with infographics. People can visualise it. There is an awful lot of fascinating work done by Professor Spiegelhalter at Cambridge on public understanding and how people absorb information about risk and uncertainty. In text, it is terribly difficult to explain, whereas if you have visual aids—the technology of infographics is now there—that really helps. You have other stories that make it relevant and important to their lives. That is what I would recommend.

**Chair:** Thank you very much indeed. I am sorry we have had to push a bit hard. It could have gone on a lot longer, but the weekly ritual of Prime Minister's Questions starts in four minutes' time.