MINUTES of the BBSRC/EPSRC Synthetic Biology Oversight Group Meeting held on 1 December 2009 at RIBA, London.

Those attending:-

Panel Members

Brian Johnson Chair

Katherine Bainbridge Defra (for Stuart Wainwright)
Jane Calvert University of Edinburgh

Jo Coleman EPSRC

John Connolly Department of Health

Janet Cotter Greenpeace

Ben Davis University of Oxford (after 2pm only)
Jackie Hag PEALS, University of Newcastle

Suzannah Lansdell Sciencewise

Emma Longridge BBSRC, Secretariat

Patrick Middleton BBSRC

Lesley Paterson Royal Academy of Engineering

Susan Soulsby EPSRC

Bella Williams Laura Grant Associates

Dawn Woodgate ESRC

Phillip Wright Sheffield University

Darren Bhattachary BMRB (after 2pm only)
Andy Hunter BMRB (after 2pm only)
Juliet Pascall BMRB (after 2pm only)

Apologies

Helena Paul Econexus Pete Ferris EPSRC

Emma Southern Society of Biology

Judith Petts University of Birmingham

James Wilsdon Royal Society

1. Introductions

Brian Johnson welcomed the group and noted the apologies for absence. He made known that Helena Paul had forwarded some comments and that he and Patrick Middleton would be feeding these in to the discussions. He also noted that there were a number of people attending who had not attended this group before and invited everyone to introduce themselves.

Brian Johnson went on to ask the group to use this first session, without the contractors, to consider the questions that they would like to ask BMRB when they arrive.

The group APPROVED the minutes of the meeting held on 22 September 2009 as a true record of the meeting. Several issues arising from the minutes were noted as requiring attention during this meeting. These were: payment of experts, criteria for

choosing experts and whether ethnicity is an important criterion for selecting participants for the workshops.

2. Update on progress so far

Emma Longridge introduced this paper. The group was aware of activities so far, having been heavily involved in the decision making thus far. A suggestion was made, to be raised with BMRB later, to include faith groups beyond those included in the stakeholder interviews, in the workshops. A question was raised as to whether the stakeholder interviews will be archived in any way, as it was recognised that these would represent an important resource that it would be useful to be able to access in the future. This was to be raised with BMRB

3. Draft communications plan

Patrick Middleton introduced this paper and noted that it was a not a media plan but a broader communications plan for the dialogue. Brian Johnson invited comments from the group.

The communication aims were considered first. There was some discussion of bullet point three around what effective dissemination would look like and whether it might include dissemination back to expert audiences. Brian Johnson raised a point from Helena Paul. She had noted that the plan focuses on perceptions of the dialogue and that it should focus in the fact that it is a genuine dialogue. Further, the group felt that communications will need to be open about what actually happens during the dialogue, including those parts which do not go as well as planned. The final bullet of this section was questioned because there was an understanding from the group that the dialogue is also about looking for innovation in the dialogue process and informing people about a dialogue approach. **ACTION: Brian Johnson requested the group email in suggested rewordings for this point after the meeting.**

The key messages were then considered. It was requested that it be minuted that some oversight group members felt the process by which BMRB had been commissioned was limited in its competitiveness. It was noted that the key messages of the dialogue will evolve as it progresses. It was suggested that the use of the word 'considering' is not strong enough and that 'taking account of' might be a suitable alternative, this was agreed by the group. The group also questioned whose policy would be influenced by the findings of the dialogue. This was clarified as the research councils being directly informed by the findings with the hope that it will influence policy more widely. It was also noted that the reasons for conducting a dialogue around synthetic biology should be noted in the communications plan.

It was noted that, despite it having been decided that it is not desirable to seek media attention at this stage, a plan should exist for what might happen if there is unexpected keen press interest at any point. It was noted that events linked to the current FSA dialogue around GM may coincide with events around this dialogue and there may be the potential for confusion between the two. Although procurement has not begun for the FSA project yet, the potential for confusion might be greater if BMRB were to be involved in both dialogues. **Brian Johnson asked that the secretariat ensure dovetailing of the two projects.**

Many suggestions were made for additional stakeholders to be included in the communications plan. **The group asked for full names, not acronyms to be used please.** These included the Bill and Melinda Gates Foundation, The Rockerfeller

Foundation, US Department of Energy, The Alfred P. Sloan Foundation and the Woodrow Wilson International Center for scholars as major US funders. The Society for Experimental Biology, British Ecological Society and MRC were also suggested as additional contacts. **ACTION: Lesley Paterson agreed to find the names of the Chinese and American National Academies working in this area.** A stakeholder newsletter was suggested as a possibility for keeping all of these different groups informed.

Brian Johnson asked the group whether they were happy not to be seeking media attention at this stage. It was suggested that dialogue may not be as uninteresting as assumed, the current Academy of Medical sciences call for evidence about animals containing human material being an example of dialogue that had had significant media attention. It was suggested that it might be useful to target specific publications, e.g. Times Higher Education or New Scientist to reach particular audiences.

Moving on to the timetable of events, Brian Johnson asked for clarification of what Flashlight funding is. It is a funding route for early career researchers. It was begun earlier this year with a call for expressions of interest. This was followed by a workshop and the submitting of proposals. Successful grants will be announced in February.

It was also noted that evidence will be heard in February for the House of Commons Bioengineering enquiry. There was clarification that the Parliamentary event planned for January will be for a small number of EPSRC SIP members and will not be focussed on the dialogue, although it is likely to be mentioned. It was suggested that the timetable would be clearer if the dialogue timetable is separated from activities happening around the dialogue and from other contextual events.

There was some discussion of the need to be precise about what we mean by 'stakeholder' when talking about who needs to be kept informed about the dialogue as it will be important to keep the public, as stakeholders, up-to-date too. There is a risk that the public will not be seen as stakeholders.

4. Planning for the dialogue workshops

Brian Johnson reiterated that this was an opportunity to identify questions to ask of BMRB without them present. He noted that his understanding was that BMRB are looking to agree criteria for selection of experts and that they suggest limiting the expertise of these individuals to scientists and social scientists with different viewponits. He noted that Helena Paul wanted to see care taken to use the word 'claims' when talking about the potential of synthetic biology.

The group discussed whose views might be missed out by only selecting scientists and social scientists as experts. They emphasised that they saw a need to include a range of views without making the arguments polarised. They also noted that optimism and scepticism are not mutually exclusive and that he issues are more complex than that. We should take care to include more of the environmental impacts of synthetic biology.

The group said that they want to understand from BMRB how the experts will be used. They wanted more information about potential experts and why they are being put forward. **ACTION: Brian Johnson pointed out that suggestions for experts will be welcomed from the oversight group.**

On the subject of video ethnography, after some clarification of what the method entails, the group wanted to know how this would be used for and what the footage will be used to show. They recognised that whilst this might be a useful stimulus material, there is also a wealth of similar material online already, for example on YouTube, so they asked where making new footage would add value? These sentiments were reiterated for the other potential methods. The group wanted to know what the methods are, what they bring to the process and what their added value is.

Brian Johnson then asked the group for some headline issues with the topic guide, These were highlighted as:

- Concerns around the timings of the first event. 2.5hrs is very short for what BMRB hope to achieve. There is a need to be realistic and realise that it will take time to engage the participants and they will need time to understand what they are a part of.
- Will there be support for people who are carers to enable them to be involved? Will venues be accessible to everyone?
- There was some concern that use of the Democs game could turn the dialogue into one big Democs game. This would especially be a problem if the questions in the game are allowed to shape the issues discussed in the later sessions of the dialogue. Why do the participants need to hone in on only one question?

BMRB join the group.

5. Emerging findings – In confidence, not to be released on the website

BMRB introduced some of the findings emerging from the telephone interviews that have been conducted so far. They emphasised that 15 interviews had been completed but that only 8 of these had been analysed. Therefore their comments on what seems to be emerging should not be taken at face value as some comments may only be backed up by one or two interviewees.

There seemed to be a feeling that the field is not revolutionary but more a continuation of what has gone before. Much of the work is curiosity driven. Scientists seem to disconnect their own work from the ultimate endeavour of the field which might pose issues around who takes responsibility for the research and its outcomes.

There were issues around control where it seems that industrial processing appears to be acceptable but controlled release of organisms raises more issues. It seems that some of the issues around regulation have not been fully thought through yet. An interesting thought about liability was that whilst the field is driven forward by the public sector the private sector may be expected to provide liability.

There are no big social and ethical issues emerging so far that differ from those raised by other emerging technologies. It has been identified that public engagement will be important for the field and parallels have been drawn with GM. Interestingly, an open source approach appears to be a double edged sword – on the one hand it is seen positively as democratising science, on the other is raises issues around intellectual property and garage biology. Intellectual property seems to be an area of interest and it was suggested that the word legal is included in social and ethical issues to reflect this. The issues for developing countries came up too, around how the technology can be used through charities and how local people around the world will get access to the technology.

The expected issue of scientists seen to be "playing God" has not come up yet. It seems that the capability to do the science that would really raise this issue is too far away to consider yet. Another view was that God made us capable and creative and so that when we create it just this running its course.

Brian Johnson asked for a timetable for hearing more definitive outcomes. BMRB hope to complete the interviews in December and to use the findings to inform workshops 2 and 3, possibly through building narratives from opinions voiced in the interviews. It was stressed that BMRB want to see the complexities of the issues reflected in these narratives.

BMRB confirmed that although the transcripts of the interviews could not be kept, the complete anonymised analysis would be retained.

6. Planning for the dialogue workshops

When questioned, BMRB clarified that they use the word stakeholder to mean a person with a professional interest in the area. The group made clear that they feel the public are also important stakeholders.

The group asked BMRB to provide, both for them and for workshop participants, biographies of the experts. BMRB agreed to this.

BMRB clarified that the experts should not be too influential in the dialogue. Although they are important, other methods will also be used. The experts will be there to provide some technical knowledge and to open up debate. They reiterated the need to avoid a polarised set of opinions being put forward. The group questioned how much the experts will be 'under the control' of BMRB. Once recruited it is anticipated that experts will discuss with BMRB the dialogue and the issues that are likely to arise. BMRB intend to impress upon experts the idea of listening being as important as speaking and the need for them to have a willingness to have discussions. There was agreement between the group and BMRB about the importance of nuance, the recognition of uncertainties and of the complexities of the issues. The group wanted to make sure that environmental issues raised by synthetic biology would be discussed. BMRB said that these were implicit under the agriculture section and will also be covered when talking about the control and regulation of the technology.

The group asked whether there was any possibility of allowing the public to influence which experts they spoke to and BMRB said that this was a possibility but may not be necessary as it was hoped that experts would be willing to discuss the issues fairly widely and BMRB are unwilling to compartmentalise the expertise.

Several issues were raised by Brian Johnson on behalf of Helena Paul, including using the word 'claims' when talking about synthetic biology. Helena also had questions about the resources that will be available to participants, including whether there will be experts present when synthetic biology is introduced in workshop one. BMRB said that they won't be giving the participants much information beyond a very brief introduction to synthetic biology in workshop one but they will get a list of resources if they want to explore further between workshops. **ACTION: The group were invited to send in suggestions for this library of resources.**

The group and BMRB discussed the use of Democs cards in the dialogue. BMRB clarified that they anticipated facilitating finding a date and venue for a game to take place but that beyond that, the group would organise themselves to go and play the game. They emphasised that they will be more interested in the process of people's

decision making rather than the final central question that they conclude with. In order to remove the concern that the questions contained in the Democs pack could push people down a particular route too early, BMRB proposed removing those questions from the pack and allowing participants to form their own questions

It was clarified that a research council and oversight group presence will be welcomed in workshops two and three.

There followed a discussion about some of the optional methodologies that could be employed in the dialogue. Video ethnography was discussed first. Brian Johnson summarised that the group had felt it hard to see the use and added value in this approach, particularly if similar information is already available elsewhere. BMRB insisted that this was something that they were very keen to see included. The method was explained in more depth to enable the group to understand how it goes beyond a video diary to prompt the diarist to look at particular topics. It can be used to form an effective narrative making information accessible and bringing the abstract to life. BMRB have used this very successfully in other projects. This would be outsourced. The group expressed concern that the ethnography approach could run away with itself. BMRB pointed out that camera would be sent out with instructions (that the oversight group can have input on) and resulting video would be moderated. BMRB reiterated that the ethnography is a very useful tool to hear people's reflections and to learn about the people rather than the nuts and bolts of what they do. Brian Johnson asked the group if they could agree to going ahead with the video ethnography on the basis of what they had heard and they agreed to this.

This led to a discussion of whether or not experts should be paid more that participants for their involvement in the dialogue. Some felt that doing this gave the impression that expert views are more valuable than those of the wider public. Others could see that, on a practical level, payment of experts could make recruiting experts easier. Some felt that since experts are being asked to allow themselves to be guided by BMRB there is not parity between the two groups and that payments should reflect this. It was noted that any payment is only token and often people will want to participate without it and will often donate the money to charity. **Brian Johnson asked the group for a decision and the consensus was to pay experts more than participants.**

BMRB gave a brief demonstration of 6DTV. It includes an array of functions including video streaming, slides, live discussion boards, questionnaires, and real time analysis of the generated data. BMRB suggested that it could be used in one of several ways: to link participants at all four locations, to broaden the dialogue to include more people (who are not involved in the workshops) or to use with experts to maintain a conversation after the dialogue.

The group questioned how robust the software is and BMRB said they felt it is robust. The main concern was over the demographics of the people who will be use the software. BMRB conceded that this was an issue but one that could be overcome if we chose to use the 6DTV with workshop participants. In this case, it will also be possible to be aware of who is not taking part. It was noted that this approach would expect a lot of participants outside the time they spend in workshops. It was suggested that 6DTV could be more useful later in the dialogue to engage with experts over emerging issues. It was noted that the 6DTV platform can be set up quickly if the participants would like to use it. The group questioned the value of this system over, for example, using a Facebook site. It was clarified that 6DTV allows the data generated to be analysed in real time. **ACTION: Brian Johnson requested**

that BMRB send a url to the oversight group so that they can try the system and decide via email whether they think it should be included in the dialogue.

BMRB also introduced electronic pad voting as a way to capture shifts in opinion over a workshop. It would be a costly option for something that would only be used briefly but people enjoy using it. **ACTION: BMRB agreed to see whether costs could be brought down and a decision will be deferred until a later date.**

Another option is looking to engaging business, from SME's to spinouts to large pharmaceutical companies as findings emerge from the dialogue, as making sure the dialogue is used is still part of the oversight group remit. It was agreed to defer decisions about this idea to allow time for the findings to emerge and for reflection on those findings before taking them further.

BMRB described meme tracking as a way to observe issues emerging online so that those emerging issues can be understood and better anticipated. **The group did not feel that this would be useful for the dialogue.**

BMRB pointed out that their final suggestion, action learning networks, would be more appropriate to consider for use after the dialogue itself as a way of keeping the agenda alive.

ACTION: Brian Johnson asked the group to feed back their views on the workshop one topic guide via email.

ACTION: He asked Juliet Pascall to let the group know what BMRB's timetable will be to finalise the workshop one topic guide.

7. Risks of a dialogue around synthetic biology

ACTION: Brian Johnson asked for risks to be discussed via email.

8. Evaluative reflection

Bella Williams took a few moments to describe the changes made to Laura Grant Associates plan for their evaluation of the project that have been made following their extensive discussions with Sciencewise. They will be adding an evaluation of the role of the oversight group, steering group and research councils in the process and some of the people involved early in the project have already interviewed for this. Most of the evaluation will now be happening as an impact study at the end of the project, at the launch event and 6 months later. Evaluation carried out concurrent with the dialogue will be via a census approach at the workshops in March. They will also be doing a cost-benefit analysis.

Brian Johnson asked BMRB whether they were comfortable with oversight group members attending workshops. BMRB agreed that this would be very useful as long as people were limited to one or two per workshop so as not to overcrowd participants. ACTION: The oversight group are invited to identify a workshop that they would like to attend.

BMRB left

9. Defining next steps

Brian Johnson apologised for the overambitious agenda and noted that we would need a longer meeting next time. He asked for final comments from the group.

During discussion, many members of the group had seen the value of the video ethnography and had been willing to endorse its use. Some were concerned that the public could disappear in the dialogue and that recruitment of the public is still a concern to them. Brian Johnson pointed out that the process for participant recruitment is in the revised tender from BMRB and was received ahead of the last meeting. The immediate concern for BMRB at this meeting is to get the right experts involved as a resource for the workshops to ensure they are effective. It was noted that there is now opportunity going forward to feedback about the topic guide and the detail of the participant experiences.

Some key next steps are:

ACTION: Secretariat to request the group to email in suggested rewordings for bullet point three of the aims of the communication plan after the meeting.

ACTION: Lesley Paterson agreed to find the names of the Chinese and American National Academies working in this area.

ACTION: Secretariat to request suggestions for experts from the oversight group.

ACTION: Secretariat to invite the group to send in suggestions for a library of resources.

ACTION: BMRB to send a url to the oversight group so that they can try the system and decide via email whether they think it should be included in the dialogue.

ACTION: BMRB agreed to see whether costs of electronic voting could be brought down and a decision will be deferred until a later date.

ACTION: BMRB to let the group know what their timetable will be to finalise the workshop one topic guide.

ACTION: Secretariat to ask the group to feed back their views on the workshop one topic guide via email.

ACTION: Secretariat to ask for risks to be discussed via email.

ACTION: The oversight group are invited to identify a workshop that they would like to attend.