UNIVERSITY OF NEWCASTLE UPON TYNE

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CENTRE FOR RURAL ECONOMY

DELIBERATING THE ENVIRONMENT

Derek Bell
Nicola Thompson
Jan Deckers
Mary Brennan
Tim Gray

Research Report

UNIVERSITY OF NEWCASTLE

Department of Agricultural Economics and Food Marketing

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CONTENTS

Abstract

What happens when you invite an academic scientist and a member of the public to talk to each other one-to-one about environmental issues? This project developed and piloted a new forum for facilitating and studying discussion between people from very different backgrounds. In this pilot study, we began the process of exploring the potential of the 'deliberative exchange': a facilitated one-to-one conversation between two persons from very different backgrounds, in which the participants discuss important scientific, ethical and policy issues. The two groups of participants were academic scientists and members of the public recruited from the local community in Newcastle upon Tyne. Each participant took part in a series of six exchanges in which he or she was invited to discuss environmental issues with a member of the other group. The project had two aims: to make an initial assessment of the potential of the deliberative exchange for facilitating and studying discussion between people from very different backgrounds and to study communication between scientists and citizens in a one-to-one conversation about environmental issues. In this research report we outline the deliberative exchange methodology before a discussion of selected findings from the project.

1. INTRODUCTION

This pilot study began the process of exploring the potential of the 'deliberative exchange' as a novel forum for mutual learning through communication. A 'deliberative exchange' is defined as a facilitated one-to-one conversation between two persons from disparate social groups, in which the participants discuss important ethical or policy issues. In this study, the two groups of participants were academic scientists and members of the public recruited from Newcastle upon Tyne. Each participant took part in a series of exchanges in which he or she was invited to discuss environmental issues with a member of the other group. The project had two related aims: (1) to explore the potential of the deliberative exchange as a forum for facilitating and studying mutual learning between individuals with different backgrounds and experience; (2) to study the process of discussion between academic scientists and members of the public and the effects of that discussion on the participants.

Our intention was to contribute in an original way to two major research agendas: (1) the study of new forms of deliberative democracy; (2) the analysis of the relationship between science and society.

Deliberative democracy has been a research agenda of increasing interest to political scientists particularly in the USA, Canada and western Europe in recent years. It concerns the potential for deliberation between citizens to contribute to the political process. To be deliberative involves a particular kind of participation: an

aspiration to be co-operative, open-minded, reflective, empathetic in contrast to the perceived ills of more traditional forms of political praxis. In short:

> "Democracy in this mode is to be deliberative in contradiction to many opposites: adversarial, ill-considered, individualistic, self-interested, aggregative" (Goodin 2003, pp.3-4).

Whilst at least rhetorically distinctive from the conventional political arena, deliberative democracy is usually conceived as a supplementary mechanism for debate and decision-making in representative democracies. The potentialities and problems of deliberation for liberal democracies have been extensively theorised (see Benhabib, 1996; Cohen, 1998; Dryzek, 2001; Elster, 1998; Fishkin, 1991; Gastil 1993; 2000; Goodin, 2003; Habermas, 1996 and Saunders, 1997). Drawing on this work political scientists have contributed to the development of a series of novel political institutions which place deliberation between citizens at their heart.

The one-to-one exchange was designed to contribute to the study of new forms of deliberative institutions in three ways. First, it was conceived as a novel deliberative forum that might complement other recent innovations, such as citizens' juries (see Barnes, 1999; Coote and Lenaghen, 1997, Crosby, 1999, Kenyon *et al.* 2001; 2003; Smith and Wales, 1999; 2000 and Ward *et al.* 2003), consensus conferences (see Einsiedel *et al.* 2001; Einsiedel and Eastlick, 2000; Joss and Durant, 1995), issues conventions (McCombs and Reynolds, 1999), deliberative mapping (Davies *et*

al. 2003) and deliberative polls (see Fishkin, 1995; 1991; Fishkin *et al.* 2000 and Luskin *et al.* 2002). We were interested in whether it might contribute to a democratic network of different deliberative forums, each with their own merits and defects (Parkinson, 2003). Second, we were keen to explore the potential of the exchange as a context in which features of the deliberative process and its effects could be studied. If deliberation is fundamentally a 'two-party process', i.e., involving two individuals, the exchange might be a useful format for studying deliberation (Gundersen, 1995, p.15). Third, we invited the participants to take part in a series of exchanges over several months so that we could find out more about the effects of participation in formal deliberation. In particular, did participation in formal deliberations with a scientist/citizen result in an increased tendency to deliberate informally with family, friends and colleagues? We were therefore interested in connections between formal and informal deliberative behaviour as well as effects on environmental beliefs, values and behaviour (Luskin *et al.* 2002).

The project was funded by the Economic and Social Research Council's 'Science in Society' programme. Science-society relations were therefore a central theme of the research. The very existence of this programme demonstrates the continued importance of the study of the social and political significance of science and its relationship to society as an academic research agenda, which builds on previous studies of the sociology of science and studies of the social role of science and technology (Collins and Evans, 2002; Irwin and Wynne, 1996; Latour and Woolgar, 1986). The project was designed to contribute to this

agenda in three ways. First, it provided a novel context for studying the potential of our scientists to act as 'intermediaries' between expert science and the public (Healey, 2004). We were interested in the extent to which scientists were able to successfully communicate scientific concepts, findings and methodologies and enter into a dialogue with citizens on scientific issues. Second, the exchange format allowed us to study the scientists' and the citizens' conceptions of the environment – how they talked and thought about environmental issues. We were keen to consider whether there were systematic differences in how the different groups thought about the environment in general or about particular issues. Third, we wondered whether the one-to-one format might help to break down stereotypes and promote trust between members of the public and scientists.

Research Objectives

Our five key objectives for this project were to:

1. compare the conceptions of the environment held by the scientist-citizens and the citizens, including the way that scientific ideas were related to philosophical, ethical, political, social and economic ideas;
2. understand the obstacles to effective two-way communication between scientist-citizens and citizens, identify the strategies used to overcome these obstacles and consider the wider relevance of those strategies for the promotion of effective public participation in environmental governance;

3. assess the effects of a series of one-to-one deliberations about environmental issues on the environmental beliefs, attitudes and behaviours of scientist-citizens and citizens;
4. investigate the effects of a series of formal one-to-one deliberations on participants' deliberative behaviour, including the connections between formal and informal deliberation;
5. assess the merits and defects of the deliberative exchange as a new deliberative institution.

2. METHODOLOGY

The study involved twelve participants. Six of the participants were academic scientists working at the University of Newcastle. The other six participants were citizens of Newcastle living in one of three wards within the city (Elswick, Fenham and Fawdon). The scientists were recruited using an e-mail to an existing university mailbase for academics with a research interest in the environment. The scientist cohort comprised of academics working in four different schools within the University (Agriculture, Food and Rural Development; Biology; Civil Engineering and Geosciences; Neurology, Neurobiology and Psychiatry). There was a spread of ages and positions within the institutional hierarchy (one research associate, two lecturers and three professors). The gender split was one female, five males.

The citizens were recruited through community groups and from a direct mailing to one hundred names randomly selected from the electoral register for the Elswick ward. Recruitment through community groups proved more difficult than we had expected due to the high levels of previous research activity in the selected areas of Newcastle. The citizen cohort comprised of four females and two males. The youngest was 32 and the oldest 82. All participants were briefed on the purpose of the research including details of the funder. Special care was taken with the citizens to explain that there would be no direct policy or political outcome from the research. All participants signed a consent form detailing how the research would be used both by the research team and in

any possible secondary analysis. They were guaranteed anonymity.

We began the data collection phase of the project by conducting semi-structured individual interviews with each of the participants. The interview schedule included questions about participants' background, expectations and previous experiences of scientists/science communication as well as questions about their environmental beliefs, values and behaviour. Following the interviews, each participant took part in six facilitated one-to-one conversations or 'exchanges' (of about an hour) over a period of six months. Each conversation was with a different member of the other group – so each member of the public met each scientist once. The six rounds of exchanges were on six different topics: local environment; genetic modification; climate change; energy; biodiversity and animals; and land use and the countryside. The conversations were not narrowly confined to the 'scientific' aspects of each topic but included such themes as individual action and behaviour, governmental intervention, justice, equality and ethics.

The facilitator's role in the exchanges was to promote conversation between the participants. The participants were encouraged at the beginning of the exchanges to talk to each other and ask each other questions. We were very happy to begin the session with a single question and allow the participants to set their own agenda for the remainder of the exchange. However, the facilitator had a schedule of questions and a selection of materials, such as short newspaper articles, maps, pictures and quotations, which she could use to prompt further discussion between participants. The stimulus

material was identified and developed by the research team through extensive discussion on suitability, variety and effectiveness. The exchanges varied between two extremes: participant controlled (unstructured by the facilitator) and facilitator controlled (participants acted more like respondents in a semi-structured interview). In most exchanges, the facilitator's prompts provided a loose framework for discussion between the participants. Each interview/exchange lasted between thirty minutes and one hour thirty minutes.

All participants were paid £10 for each interview/exchange and were provided with tea/coffee and biscuits at the beginning. Before each exchange commenced, the co-deliberators introduced themselves to each other and the facilitator explained what the topic would be. The participants were also told the topic of the exchange when the facilitator was making the arrangements for the exchange. The extent of preparation was therefore left to the participant. All the exchanges were conducted at the University. All except two of the exchanges were held in a small meeting room around an oval table. The feedback from the participants was that they were comfortable coming to the University (largely because the building was conveniently located near the city centre) but in the final interviews selected citizens and scientists advocated a more comfortable room arguing that armchairs and low tables would have made the conversations more relaxed. After each exchange the participants were provided with a one sided sheet of paper which asked them to reflect on the good and bad points of the exchange and how it could have been improved. In total, 29 of a possible 66 sheets were returned with the most for the first couple

of exchanges. In general, the same people made consistent efforts to return them while one of the scientists refused to fill any in. Most of the responses were positive, especially comments about having enjoyed the session.

After the participants had completed their six exchanges, we conducted a final round of individual semi-structured interviews. Selected interviews with the citizens were conducted in their homes and in one case at their place of work. All the scientist interviews were conducted in their own offices. The interview schedule re-visited topics from the first interview concerning environmental beliefs, values and behaviour. In addition, we asked participants for their reflections on the whole experience, their perceptions of the people they had met and their views on public-science relations. This proved a more fruitful method of evaluating the exchange from the participant perspective than written questionnaires. In total twenty four interviews and thirty three exchanges were conducted in the ten month period between December 2003 and September 2004.

We 'closed' the data collection phase of the project by inviting all of the participants to an end of project workshop. At this event, we gave some preliminary results from the project, explained more about how the material would be analysed and gave the participants an opportunity to socialise and give the research team more feedback on the experience.

3. CONCEPTIONS OF THE ENVIRONMENT

Each of our participants had their own distinct conception of the environment. The scientists knew more about the science of the environmental issues discussed, yet their knowledge varied considerably, and they frequently emphasised their lack of knowledge. They also avoided some of the more naïve worries of the citizens (e.g., the bird that develops shark-like teeth from eating genetically modified plants with a fish gene).

Ontologically, most scientists explicitly understood 'environment' in terms of different media (e.g., soil, air, water) that were parts of an interconnected system. The citizens were more likely to describe the 'environment' as 'everything' and to elaborate with reference to local issues (e.g., air pollution, building works, derelict areas, squirrels). However, all participants had some understanding of the complex systemic character of the environment. While both scientists and citizens associated 'nature' with parts of the world that were perceived to be relatively free from human interference, scientists seemed more aware about the extent of human interference and/or reserved the word 'natural' for a smaller range of areas and things. For example, while one of our citizens described the Town Moor in Newcastle as being 'pretty natural' and another described 'pheasants' as 'wild animals', a scientist associated the concept of 'wilderness' with nature and said that there was 'hardly any', adding that Tasmania may be one of the few natural places that are left.

Ethically, most statements made by all participants were strongly anthropocentric, but their more detailed views differed significantly (without reflecting any systematic scientist/citizen patterns). Strong anthropocentrism is an approach which values the environment primarily in terms of its instrumental value for humans, ignoring, neglecting, or rejecting the existence of intrinsic values within the nonhuman world (see Deckers, 2004). Scientists made more attempts at justifying strong anthropocentrism. For example, one scientist associated such a view with the idea that humans are 'always going to be the fittest', while another said that 'evolution has put us at the top of the tree … of the pecking order'. The most anthropocentric statements came from a scientist who negatively associated the concept of 'nature' with 'activism', 'Greens', 'Mother Earth' and the 'non-scientific'. He explicitly conceived of the environment as a resource for the benefit of humans and endorsed the approach of (weak) 'ecological modernisation' (see Hajer, 1995). Others associated more positive ideas with the concept of 'nature', for example, speaking of nature's 'wisdom'. For these participants, humanity's interference with nature was a significant concern. One scientist in particular questioned our ability to manage the natural environment, expressing repeatedly the view that humans do not know enough about nature's complexity, and that 'high tech' approaches involve risks.

What emerged from the Genetic Modification (GM) discussions in particular was a contrast between two approaches. While both compared GM with established technologies and practices, in the 'scientific' approach, which was more prominent amongst our

scientists, GM was perceived as an unproblematic extension of other technologies and practices. In the other approach, articulated more frequently by the citizens, but also advocated strongly by one of the scientists, GM was construed as 'unnatural' and 'qualitatively different'. In the latter approach, the instrumentalisation of nature was questioned to a greater degree. Some scientists felt torn between these approaches, and seemed to repress their appreciation for the latter approach. For example, whilst one scientist said that he did 'not really' have specific concerns about GM, he also said that he was against it:

> "I think as a scientist … to say OK I'm against it because I don't like it … is very difficult."

Whilst participants' focus was on the impact of human activities on humans, most also recognised the non-instrumental value of other species, and expressed concerns with the negative impact of a range of human activities on them. For example, three scientists expressed the need for the human population to be curtailed or to reduce our standard of living to allow other species to flourish. One scientist expressed that we have a stewardship role (which was defined first in terms of an obligation to future generations of humans and dissociated from obligations we might have towards nonhuman animals, and then expressed in terms of our 'role for animals'). This contrasted somewhat with the views of the particular citizen he interacted with, who was concerned that the numbers of birds of prey and seagulls might be too large, and described mink as 'ferocious little devils' and foxes as 'vicious killer(s)', adding that fox hunting was the best way to kill foxes.

Many participants felt that they held contradictory or, as one expressed it, 'hypocritical', views about nonhuman animals, for example, not liking to see animals in cages, yet going to zoos, and eating animals but feeling revulsion at the idea of killing them. This perception was shared by many participants in eight structured focus groups with a selection of population groups in the UK, held in 2001, on the genetic modification of animals (Macnaghten, 2004). None of our participants were vegetarians or vegans, although one of our citizens had been a vegetarian for some time. Their evaluations of vegetarianism varied between strong approval (e.g., one scientist said: 'veganism is admirable', while one non-scientist said that he wished he could become a vegetarian), incomprehension (e.g., one scientist said that he did not 'understand the foundation of veganism') and hostility (e.g., one scientist said vegetarianism was a 'fad … and goes against evolution … and it's a middle class thing'). None of the participants thought that all experimentation on animals was justifiable, and all expressed the need for a line to be drawn between acceptable and unacceptable experiments, most frequently understood in terms of a line between medical and cosmetic purposes. Participants were more uneasy with experiments on primates as they were perceived to be closely related to humans. However, special concern for 'higher' animals did not extend to all the ways in which humans interact with the nonhuman world. One non-scientist and one scientist reacted against groups that were perceived as drawing too much attention to 'higher' animals and expressed the view that micro-organisms like plankton could be more important for maintaining healthy ecosystems.

People's attitudes towards pets varied. Again, no significant differences between groups were apparent. Whilst one scientist said he could not live with pets in his house, two citizens said they had pets, and saw them as companions and even 'part of the family'. One citizen said she liked to see animals in their 'proper natural environment' which was not managed by humans, yet also that she had two cats. She said we should care for some dogs and cats as they could not live in the wild anymore. She also mentioned that some breeding programmes had been bad and should be 'discouraged strongly', providing the example of bulldogs that could not breathe properly anymore because of their wrinkled noses. One scientist expressed the view that pets should not be kept unless they serve a purpose, providing the example of guard dogs. This seemed to be motivated by a concern for allowing animals to live in free nature, and by an unease with the money spent on pet foods. Another scientist said he would rather spend money on poor people than on pets.

Politically, our scientists knew more than the citizens did about environmental policies and initiatives. However, more information typically meant only more precise criticisms. Moreover, all participants recognised the same barriers to effective political action (e.g., 'increasing road tax' or 'increasing petrol prices') on environmental issues, namely, the mismatch between political and environmental timescales, the politician's overriding concern for re-election and economic growth, and the short-term economic self-interest of the voters. Socially, the problem of other people's self-interest also contributed to participants' ambivalence about

making personal sacrifices, such as taking the time to recycle, reducing car use, or flying less often. Only one participant (a scientist) was unequivocal in his commitment to personal environmental responsibility. He suggested that many people were 'hypocritical' in failing to match their actions to their words and he expressed the hope that he might lead by example and persuade others to 'do their bit'. Many participants related the perceived lack of people's willingness to engage in environmentally responsible behaviour to selfishness, greed, and laziness. One citizen also acknowledged that more complex social and psychological processes might be involved, providing comparative examples of people still smoking and eating junk food in spite of health warnings.

4. COMMUNICATION BETWEEN SCIENTISTS AND CITIZENS

The one-to-one exchange provided an unusual context to study communication between scientists and citizens. In general our citizens had not previously had the opportunity to talk at any length to an academic scientist about science-related issues (although two had met and conversed with academic scientists at some point). All of our scientists had some previous experience of public engagement but a detailed discussion with a single individual was quite different. In this structured yet relatively informal context where they were being asked to talk about subjects on which they were often not experts with citizens that they had not met before, the scientists had to construct their own role. It is the construction of this role on which we focus in this section.

Three of the six scientists, at least part of the time, took on the role of 'science communicator' – they were consistently willing and able to 'talk science' and to engage in science explanation across a range of issues, for example, discussing alternative hypothesis concerning the cause and consequences of global warming. These scientists drew extensively on their own research and teaching experience supplemented by broad knowledge of environmental science and policy. In contrast, the other three scientists deliberately avoided talking science. They restricted themselves to discussing 'the issues' with the citizens and did not draw on their own research experience or engage in detailed science explanation. In part, their approach might have reflected their lack of confidence in their own knowledge – two of the three were especially critical

of their own levels of knowledge about the issues discussed in the exchanges. However, all three offered similar reasons for their approach: (1) they didn't want to set themselves up as an academic expert; (2) they wanted to avoid technical language that their partner would find alienating and impenetrable; and (3) they wanted their partner to see them as an equal, not as dominant or patronising.

Interestingly, all of the 'science communicators' also endorsed (2) and (3) but, for them, being seen as an 'expert' in the context of the exchange did not have the same negative connotations. Moreover, they were more confident about talking science without being patronising or using impenetrable language. There were many reasons for these differences in attitude (and they varied among the scientists) but one striking difference between the 'science communicators' and the 'issues only' scientists was their conception of the difficulty of science. For the 'science communicators', science – or, at least, relevant environmental science – was not that special: it was more systematic than lay knowledge but, as this quote from the final interview with one of the scientists articulates, was not that difficult to understand:

> "Climatic change is something which its not like erm thermodynamics, … or erm relativity where it very quickly has to start … you know, we'll be getting a piece of chalk out, and we write on the board … These are things which are, in the common world, and which you don't need to express with special knowledge … It is the fact that you have knowledge and you have it in organised fashion … But that doesn't stop other people having a similar knowledge or at least a part of the knowledge … It

> may not be as well organised, … but they have a great deal of it, it's easy to obtain, it isn't like if I was talking about statistics … Well it's a very, very special knowledge … But then I wouldn't even talk to my colleagues about that, because they wouldn't understand me, either."

In contrast, the 'issues only' scientists had a more esoteric conception of science, which may have discouraged them from trying to talk science to the citizens. For these scientists, science could not be understood purely by being part of the 'common world':

> "I mean I deliberately tried when I was doing this not to come over as a professor 'cause I think that would … As I said yesterday I don't want to give a lecture on … biological diversity … I was always very aware of sort of not going into the science. I thought people understood the issues … er we didn't really explore whether or not they actually understood the science underpinning those issues … And I think that would have been, that would have been a totally different sort of exercise to actually find out whether or not they really understood about nuclear energy."

The citizens responded quite positively to all of the scientists irrespective of their approach. They did not feel that any of the scientists had either patronised them or been too technical. Indeed, they enjoyed learning from the exchanges. However, they did not distinguish learning about science from learning about the issues. Their most positive reactions were to those two scientists (one from each group of scientists) who made the most effort to find and develop common interests (not only during the exchange but also

while the facilitator made them a cup of tea before the tape was switched on). Both of these scientists had considerable experience of public engagement but (perhaps) more importantly, they identified with their exchange partners. They were willing and able to draw very effectively on their own lives outside science (e.g., their experiences as fathers, husbands, working class men, concerned citizens, confused 'green' consumers) to make a connection with their exchange partner and promote conversation. Interestingly, they also talked more enthusiastically in their final interviews than the other scientists did about the exchanges and particularly about their exchange partners.

The combination of a willingness and ability to talk science (on our topics) with a willingness and ability to draw very effectively on common roles and experiences was uncommon in our study, occurring in only one scientist instance. However, all of the scientists did enough in the exchanges to help break down some of the citizens' preconceptions of 'the scientist'. In sum, the one-to-one exchange provides a context in which mutual trust can be promoted quite quickly and scientists have the opportunity to encourage two-way communication by being 'people' as well as 'scientists'.

5. EFFECTS ON BELIEFS, VALUES AND BEHAVIOUR

We designed the project so that we could explore the effects of participating in a series of exchanges. We did not expect to find that the participants' beliefs, attitudes or behaviours changed radically as a result of one hour of activity per month for eight months but we were keen to look for minor changes and for possible examples of learning. The scientists (with one exception) did not report learning about the substantive topics discussed in the exchanges from the citizens. They found it interesting to hear people's opinions about these topics but they did not hear things that were new to them or that changed their own opinions. The one case in which a scientist did report being prompted to think about things differently by their exchange partner was in a relatively non-technical exchange (land use and the countryside). The citizens reported learning about the substantive topics discussed and several demonstrated learning by referring in later exchanges to what they had been told in previous exchanges (e.g., the citizen who gave a clear account of the operation of the gulf stream in the third exchange after having it explained to her in the first exchange). Generally, they were very enthusiastic about how much they had learned from participating in the exchanges.

Two of the scientists did report that the experience of participating in the exchanges had affected their behaviour in small ways. One reported taking more trouble to recycle waste paper and the other reported recycling more conscientiously and buying a packet of wildflower seeds (shortly after the exchange on biodiversity). The first of these scientists had shown an ambivalent attitude

throughout the exchanges to the effectiveness of individual environmental action but in his final interview he explained why he was making more of an effort: 'if there are … people out there … routinely making an effort … I should be making more of an effort'. Interestingly, the two scientists reporting behavioural change in the final interview had in the initial interview been the most aware of a gap between what they should be doing and what they were doing. Therefore, they may have been more susceptible to the effects of talking about environmental issues (or they may have been more willing to construct themselves as having 'improved' their behaviour). The other four scientists, all of whom already displayed quite 'high' levels of pro-environmental behaviour (e.g., recycling, using low energy light bulbs, using public transport, buying locally grown food, etc.), did not report any changes in their behaviour.

Two of the citizens reported having changed their behaviour. One listed several things that she had started doing, including composting and saving energy, after being convinced by one of the scientists that what she did individually was important. She commented that 'he was the first one that said my contribution was important … where I felt the other ones were sort of saying 'well what can we do about it?''. This appears to be a striking example of a convinced environmentalist influencing one (out of six) of his exchange partners. However, he did not achieve this by providing information about environmental issues or the seriousness of environmental problems. Instead, his emphasis on the importance of very minor things that she could do (e.g., switching lights off or turning radiators off) appears to have enabled her to think

differently about her environmental obligations. Previously, she had seen her own behaviour as 'insignificant' – there was a huge gap between what she should do and what she could do. She emerged from the exchange with a different moral perspective, which demanded less from her and which she felt able to live up to. The result was a modest increase in her pro-environmental behaviour.

Most of the citizens did not report changing their behaviour. In some cases, they appeared to find it difficult to imagine doing anything more to protect the environment. For example, when asked if taking part in the exchanges had prompted him to change his behaviour, one participant replied:

> "Not really, we recycle enough anyway, we recycle all the garden rubbish, we recycle all the neighbour's rubbish, we've got a box we put out for tins which we separate now from the garbage for the bin men ... No I don't think, I don't think I could do any more actually."

The focus on recycling and car use (this particular participant was no longer able to drive so had given up his car) was characteristic of the citizens. In this sense, their understanding of pro-environmental behaviour (or damaging environmental behaviour) may have been 'narrower' than that of the scientists. However, we should also note that the citizens probably all had smaller 'ecological footprints' than any of the scientists did because most of the scientists travelled far more regularly by air for work or holidays.

6. EFFECTS ON DELIBERATIVE BEHAVIOUR

We were also interested in the effects of participation in a series of one-to-one exchanges on 'deliberative' behaviour – in the exchanges and outside of them. The scientists and citizens approached the early exchanges with quite different attitudes. The scientists (with one exception) reported that they had been quite confident about participating. For them, this was just a (slightly unusual) variant of a common experience – namely, maintaining a discussion or conversation about a topic that they were reasonably well informed about. For the citizens (again with one exception), it was a more daunting experience. They were unsure about how well they would be able to talk to the scientists and lacked confidence in their own capacity to talk about the issues. The citizens reported that they grew in confidence over the series of exchanges as they became more familiar with the format and learned that the scientists were generally friendly, talkative and willing to listen. In general, the citizens talked slightly more in their later exchanges than they had in their earlier ones. However, there was relatively little change in the willingness of either group to ask questions of, to challenge, or to disagree with their exchange partners.

We did not ask the participants to do any preparatory work for the exchanges but we did wonder whether they would. In the final interviews, none of the scientists reported doing any preparation but three citizens reported minimal preparation (e.g., reading a newspaper article on GM, looking 'biodiversity' up in the

dictionary). All of the participants said that they would have been willing to read some material in advance if we had prepared it for them but usually with conditions attached. For example, the scientists tended to emphasise the limited time that they had available, indicating that they would not have been willing to read much and may not have done it regularly for a one-hour exchange. The citizens tended to be more concerned about how much they would learn (or be able to understand) from preparatory material. (This provides an interesting contrast with their positive assessment of how much they learned from talking to the scientists.)

All but one of the participants (a scientist) reported being prompted by the exchanges to think about the exchange topics after the exchanges (although, for some of the scientists this was prompted by the facilitator's questions rather than what their exchange partner had said). One scientist even reported that the 'energy' exchange had encouraged him to seek further information and had played a (small?) part in his thinking about his own future research trajectory. The scientists may not have heard much new from their exchange partners but taking time out of their everyday routine may have provided a 'space' for some of them to gain a different perspective on certain issues or to re-evaluate their own levels of knowledge and understanding of environmental issues. All participants reported talking about the exchanges to family, friends or colleagues but relatively few (four citizens and one scientist) reported talking about the topics as a direct result of the exchanges. All of the citizens and one of the scientists also reported being more aware of environmental issues on television or in the

newspapers. The experience of participating in the exchanges had a more significant effect on the citizens, prompting them to listen, reflect and talk more about environmental issues.

7. MERITS AND DEFECTS OF THE 'EXCHANGE' FORMAT

The one-to-one exchange was conceived as a technique for studying and facilitating 'deliberation' between people from different backgrounds and with different knowledge. We found that the exchanges raised difficult questions about the nature of deliberation. Most of the participants agreed that there had been an 'exchange of views' in the exchanges. However, many participants correctly pointed out that there had been little disagreement. Very often participants (especially, citizens) would simply agree with their deliberative partner. Insofar as deliberation is understood to be the product of disagreement (Gutmann and Thompson, 1996), this kind of 'easy agreement' suggests that many of our exchanges were not genuinely deliberative.

Our own view is that the line between 'deliberation' and 'talk' is more 'fuzzy'. Our participants may not have been required by disagreement to reflect more deeply on their views. However, they frequently elaborated on each other's views and developed positions in an exploratory and collaborative manner. The detail or complexity (or even the 'sophistication') of the positions they developed in conversation may have been greater than they would have articulated on their own. Many of the citizens, in particular, appeared to refine their positions without radically changing them during the exchanges. Moreover, all participants offered reasons for their views and their reasons were generally public-spirited rather than self-interested. The participants were reflecting as

'citizens' but they were not deliberating 'socratically' (Gundersen, 1995, p.101).

There were several features of the exchange context that mitigated against 'socratic' deliberation: (1) the participants were meeting for the first time and for most people there was insufficient time to reach a point where they felt it was polite to disagree; (2) for most of the citizens and some of the scientists the idea of non-confrontational disagreement or 'benign argument' was unfamiliar; (3) the exchange did not produce an action or an output so there was no cost in not pursuing a disagreement. Our own view is that while 'socratic' deliberation has clear value, it would be a mistake to think that political or democratic deliberation must begin from expressed disagreement. The exchanges might play an important role in an ideal deliberative democracy as a 'safe' forum that promotes trust, facilitates co-operative reflection and encourages a citizenly orientation to issues. Of course, exchanges would be only one type of forum in a network of inter-connected deliberative arenas, which would serve different purposes.

One scientist provided a notable (even if partial) exception to the self-imposed 'no disagreement' rule. For him, polite but explicit disagreement was a legitimate form of behaviour in the exchanges. Generally, the citizens did not seem to respond too negatively – they did not become defensive or withdrawn (although one of the quieter citizens was especially quiet in his exchange with this scientist). However, it is also unclear whether the citizens were provoked to think more deeply about their own views by disagreement. Instead, they were, perhaps, more likely to defer to

the scientist's 'expertise'. For example, in one exchange the citizen said she was sure that the weather had changed in recent years but when she was challenged she deferred to the scientist's 'expertise' despite his protestation that he wasn't an 'expert'. In another case, the citizen's desire not to disagree 'too much' with the scientist's defence of GM crops led not to a more clearly thought out position but rather to him adopting an unclear compromise. In sum, we would suggest that disagreement is possible in the exchange context – for those with particular dispositions and/or between people from particular (social) groups. However, it is less clear to us that it will always produce more reflective judgements than collaborative discussion.

A potential criticism of the deliberative exchange is the limited direct impact that at least in the case of this project it is likely to have on policy or politics more widely. It did not have the sort of wider impacts now expected of other deliberative forums such as citizens groups or consensus conferences. Interestingly, this lack of a wider utility or exposure did not pose any problem in recruitment or retention of participants. This was largely because there was never an expectation of 'impact'. The final interviews indicate that the participants understood that the project was an 'academic exercise' and had no wider expectations of the research. The nature of the research also meant that, as a project team, we were not concerned with reporting substantive 'outcomes' or policy recommendations. We have not totalled up deliberators for or against a particular policy or technology but have focused on the deliberative exchange as a means of facilitating discussion. Just as focus groups are used in social science research to understand the

opinions of a usually homogenous social group (Bloor et al, 2001; Morgan, 1996; Stewart and Shamdasani, 1990), so the deliberative exchange is a tool for eliciting the values and judgements of two people with different backgrounds and experiences and for understanding how they communicate with each other.

The issue of communication strategies and behaviours in the deliberative context also requires careful critical consideration. In particular it is worthwhile considering the extent to which communication in the deliberative exchange relies on rationality and ideas of the 'rational' or 'reasoned' argument. Certain definitions identify 'reasoned discussion' as the central component of deliberative democracy (Cooke, 2000, p.947). However, other theorists such as Iris Marion Young (1996) have developed arguments in defence of 'communicative democracy' that include other forms of communication. For Young, the challenge for communicative democracy is to include those voices that do not speak the language of 'Enlightenment rationality' but express themselves through narratives, stories and through relaying emotive experience. The deliberative exchange did not overcome a reliance on 'rationality' in deliberation but it allowed the parallel inclusion of what we might term emotive or 'experiential' argumentation. An example of experiential argumentation included a citizen relaying a close friends' experience of hereditary disease as a way of expressing a sense of competing moralities in debates about animal experimentation. However, perhaps most interesting was the way in which scientist participants constructed arguments. In large part, they relied on combining arguments based on scientific evidence, a 'rational' line deriving from

understandings of issues such as complex systems and risk, with stories about their professional and personal experience. Any distinction between what we could crudely describe as rationality and storytelling breaks down in analysing the way in which our individual scientists communicated with the citizen participants. They frequently adopted a hybrid form, explaining what they thought from a scientific perspective using notions of scientific method, but essentially telling a story:

> "The basic thing is that lab cultured microbes are softies, and I think that's as true whether they're genetically modified or not…you could say 'well look at this person, really fit and healthy'… imagine if you lived in this space all the time, and it was fitted out like a gym, you might have fantastic physique, you know, and they've got purified air, and as soon as you go out, of course you're going to get a cold and you're going to get all the rest of it, and that's what happens."

We were also concerned about the inequalities between the participants in our analysis of the deliberative exchange. In many common deliberative forums, such as citizens' juries, expert scientists are expert witnesses rather than co-deliberators. In the exchanges, our scientists were co-deliberators but often not experts. We were not surprised to find that in most exchanges the scientist did talk more than the citizen did. Similarly, we were not surprised to find many examples of citizens deferring to scientists' expertise irrespective of the scientist's actual (or declared) level of expertise on the topic. There is no doubt that inequalities of knowledge and status affected the exchanges. However, the

citizens were rarely silenced or completely overawed by the scientists. Moreover, most of the citizens reported growing in confidence during the series of exchanges.

Our research suggests that while inequalities shape deliberation they need not prevent it. Furthermore, scientists who are willing to talk science can bring new and important information to the deliberative forum and can help citizens to interpret information that is provided by the facilitator. The role of the scientist in the deliberative forum – like the role of the scientist in public life – is an important one that needs further clarification. If we restrict scientists to the role of expert witnesses we may make two important mistakes. First, we give too much credence to the distinction between the technical and the ethical. As our scientists demonstrated (and some recognised), neither the doing nor the presentation of science is value-neutral. Second, we make insufficient use of the non-expert scientists' ability to act as an intermediary between science and the public. Scientists are citizens too. If they have many of the same values and concerns as their fellow citizens, they might play a very positive role as informed co-deliberators.

8. CONCLUSIONS

In its current guise, the deliberative exchange is most useful as a research technique for the analysis of deliberation between two people. In particular, it can be used to examine the moral, ethical, political, social and cultural dimensions to communication between two disparate individuals. The differences between these individuals can stimulate interesting discussion but, if the deliberative exchange is to be taken forward, it requires a clear rationale for what this methodological arrangement could achieve in comparison to focus group and interview techniques. In this research report, we have focused on two such research contexts: the study of the role of the scientist as an intermediary and an expert; and the analysis of the process of deliberation between two people.

In its present form, the deliberative exchange is not immediately transferable into a public policy context. Two particular issues would require much closer scrutiny. *First*, there is the issue of representation and representativeness. Our participants were representative only of themselves; it can not be claimed that they spoke for a wider community. Issues of recruitment and selection would therefore have to be considered more closely. Given the intensity and purpose of the research, the deliberative exchange could never be used to model public opinion or be claimed to be statistically significant. *Second*, the deliberative exchange does not result in the agreement of policy recommendations and shies away from demands for consensus. It is designed to examine the opinions and values of co-deliberators and not to reach an end

point or an outcome. It could conceivably be used to understand how people react to particular arguments being put to them but this would require particular methodological developments.

In certain respects, the deliberative exchange serves the same sort of purpose as a focus group in that the content of discussion and communication are used as the basis of understanding values, opinions, behaviours and knowledges. However, it is distinct from this now well established social science methodology in two important respects. First, discussion with only two people involved in the deliberation as opposed to a group of at least four is generally more intensive. The deliberative exchange could reasonably be claimed to achieve more depth in understanding the perspective of any one person. Second, it necessarily involves two people who are in some respects very different from each other. This difference is not only social or economic but also pertains to life experience and expertise. In contrast, focus groups are usually used to ascertain the opinions of people in particular groups, brought into discussion on the basis of shared characteristics.

In the longer term, we believe that our study suggests that the facilitated one-to-one exchange format might be developed into a useful technique for social researchers and policy-makers interested in dialogue between disparate groups. Our current view is that the most fruitful route for a larger scale study would be to include multiple groups of participants (more narrowly defined than our two groups) and to focus all of the exchanges on a single (more narrowly defined) topic. Each participant would have the opportunity to take part in a series of one-to-one exchanges about

the same topic with members of different groups. We would suggest that this might make maximum use of the exchange as a format for promoting democratic deliberation.

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