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The Environment in the Public Sphere

Democracy and discourse in the genetically modified organism debate in Ireland

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A thesis submitted for the degree of PhD

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2002

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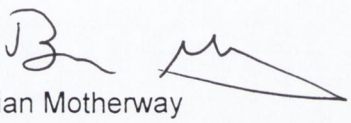

Brian Motherway

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Summary

This thesis is an exploration of the possibilities of democratising environmental decision-making in Ireland. A specific attempt at enhancing democratic involvement in policy decision-making is analysed. The case study for this analysis is the debate over genetically modified crops and foods.

Ideal models of democracy postulate broad involvement in open debate and opinion formation on the basis of argument, persuasion and consensus. Most discussion on democratic practice addresses the question of translating ideals into practicable systems in 'real world' contexts. These contexts include issues of scale and complexity in modern societies. In addition, environmental issues are among those that are strongly knowledge-oriented, so particular complications of stratified knowledge and the role of expertise pertain.

This thesis examines ideal models of democracy based on Jürgen Habermas' theory of the ideal public sphere and the related concept of deliberative democracy. Deliberative democracy postulates free and open communication across a network of public sphere elements, and a parallel set of legal and state institutions that are responsive to the pressures of democratic will-formation in the public sphere. The theory is based on an ideal model of communication in which actors are oriented towards mutual understanding and collective opinion formation is based on process of argument and persuasion. In this model all action of power is a corruption of the ideal.

This thesis uses a discourse analysis perspective and argues, after Michel Foucault, that power is a fundamental component of discourse and communication. It argues that systems of knowledge and expertise, and the domination of certain discourses over others in debate and decision making, are all constructed through normalising processes of discourse, structures and action. These processes can be analysed.

The case study presented in this thesis is the debate that took place in Ireland over 1997 to 1999 on the introduction of genetically modified crops and foods. This debate took place across a number of public sphere elements, including the media,

public seminars and debate events, leaflets and other texts and an official national consultation process undertaken by the state. These elements add together to comprise the public debate on the issue. This thesis is a discourse analysis of these elements. The nature of the debate recommends an approach of analytic cuts at the data set, and this thesis concentrates on four such cuts. These are: a focus on some of the key actors in the debate; an investigation of the role of the media and the content of the media element of the debate; an analysis of a number of public seminars and debate events at which the issue was discussed; and a particular case study of the national consultation process undertaken by the government on the issue.

The data set comprises a number of interviews with relevant actors, a large set of media texts, observation notes from several debate events, including the national consultation debates, and a range of official documents, press releases, leaflets and other texts. Data analysis aims to consider how close the debate was to a ideal public sphere debate process and to identify the key issues that influenced this. The stance of the thesis is to address the objective of enhancing democratic participation in such a debate.

The data reveals a range of discursive and power processes influencing the debate. Certain knowledges and discourses exhibit more power to dominate and to influence outcomes than others. In particular, scientific expertise occupies an elevated position, despite attempts by many actors to widen the range of the debate to social, economic and other factors. Importantly, beyond establishing the inevitability of power factors in the discourse, the analysis highlights the role of the state in guiding the shape of such power patterns. Either directly, through setting the agenda of the consultation process for example, or indirectly, through promoting or favouring systems of expertise in say, education or policy making practices, the state strongly influences the patterns of power in the discourse of the debate.

It is concluded that attempts to enhance democratic participation in debates on environmental issues such as this should recognise the inevitability of power factors in the discourse and should strive to address these rather than ignore them. Potential solutions could include resourcing counter-expertise or attempting to diminish power imbalances among knowledge systems through state structures and practices.

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CHAPTER 1 INTRODUCTION

This thesis is about democratic participation in environmental decision making in Ireland, with a particular focus on how democratic goals fit with systems of expertise, especially scientific expertise.

The origins of this thesis lie in my own career as an environmentalist working in social and policy areas but coming from a technical (engineering) background. My original thesis idea was to pursue the theme of how expertise-based systems seemed to disempower non-experts, something I had observed myself frequently. The corollary of a special role for experts was that those without expert status could not access a debate to the full extent.

My case study is the debate over genetically modified organisms (GMOs)[1] that took place in Ireland over the approximate time frame of 1996 to 1999. When I sought to choose a specific case study for my thesis from among the range of current environmental debates taking place in Ireland, the GMO issue recommended itself for several reasons. Among these were the particular mixture of issues involved in the controversy, which ranged from scientific questions on safety and environmental impact to ethical, political and economic elements of the technology and its use. In particular, the issues of scientific certainty, faith in experts and bases for decision-making were involved. As it turns out, it was a very apposite case study to choose, if only because it became such a large controversy and therefore generated so much debate, media coverage and government activity. In addition, the fact that it inspired a fairly unique experiment in public participation through a national consultation process made it ideal for an analysis of my interests.

The subject proved to be a rich source of data on my themes of interest—to the extent that containment of the data complement to a manageable size and dealing with the associated problems of selection and representivity have been major issues. The range of theoretical concerns touched upon by the data has also been very wide, and achieving a narrow focus for this thesis has proved difficult. In the

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[1] Terminology is difficult, but I will use abbreviations such as GMO (genetically modified organism), GM (genetically modified) and GE (genetic engineering) in largely interchangeable ways, on the basis that the debate itself did not generally differentiate such terms.

end, my central interest goes beyond much of the core content of the debate itself, with my focus instead on the process of the debate: how it was conducted and how 'successful' it was.

The basic assertion of expertise based systems standing to some degree in opposition to fully democratic systems turned out to be pedestrian in itself; the more interesting questions involved accommodating the undoubtedly valuable role of experts and specialist knowledge in broader democratic objectives. My interest in these questions related to the specific topic of participation in debates about environmental issues in Ireland.

The starting point for this analysis is the constructed nature of knowledge and discourse, and then the objective is to identify the power dynamics in this construction, and in the employment of knowledge and the operation of the discourses. An interesting element for me is that, within sociology and related disciplines, the constructivist position is so well established as to be quite trite at this stage, yet outside these communities the rhetoric of certainty and transcendental truth is as strong as ever. I am thinking here of science and other expert knowledges and their ongoing role in policy making, or at least policy justification. I find that even a mild version of the constructivism thesis is taken as a radical proposition by many scientists and policy makers, and strong defensiveness is not at all an uncommon reaction.

However, I am convinced of the value of analysing the discourse in such a debate to examine the operation of power, the role of language and the processes of reproducing institutions and assumptions. The project has taught me a lot about debates, democracy, politics and power. It has shown, to me at least, the value of opening to scrutiny assumptions about knowledge, decision making and democratic access and the importance of fully examining what may often be taken for granted in these areas. Hopefully this project contributes to this process of opening up and possibly even convinces others of the value of the approach.

Overview of the Debate

The GMO story is a story of both public controversy and debate and regulatory problems and solutions. While the main focus of this thesis will be the public

debates that took place, some context of the parallel processes in the regulation of GMOs is necessary.

The regulatory side

The history of the Irish treatment of GMOs to date reveals a de facto political acceptance of GM technology, long predating the outcome of the consultation process. Practices reveal that current regulatory approaches have invariably been considered adequate to protect safety and environmental interests . This is not to say that the regime is lax, but rather that the regulators consider current procedures capable of dealing with any issues raised by GMOs regarding safety, health and environmental protection. Practice to date suggests that commercialisation is seen as compatible with current definitions of precaution.

Ireland's opportunity to state its position on GMOs existed historically through procedures set out in EU Directive 90/220, by which applicants could obtain permission to grow or market GM products in Europe. This Directive included a procedure for addressing disagreements among member states on whether a release should be permitted, known as the Article 21 committee. Applications would be submitted to the regulatory authority in one member state, who would then circulate it to all member states with a recommendation for or against approval, seeking agreement. Only when agreement could not be achieved through this procedure would it be put to a vote at the Article 21 committee. In practice, every single one of these early applications ended up being dealt with by the Article 21 voting procedure.

Thus Ireland had to express opinion on every single application. The body responsible for this is the Environmental Protection Agency (EPA). Interestingly, responsibility for participation in the Article 21 committee has been retained by the Minister for the Environment and Local Government. Opinions expressed by the EPA with regard to the early applications were invariably positive or neutral, and the EPA did not oppose any applications. Ireland did vote against some applications at the Article 21 stage, usually to express concern about labelling or other related issues, not pure 'technical' concerns as such. Once the consultation process had been initiated, Ireland adopted a general stance of abstention on applications, to reflect an open-minded stance until the consultation process had resulted in a formal new position.

The notion of the separation between technical and political aspects is most interesting; current practice and institutional arrangements are based on a very simplified separation between technical elements, such as safety assurance, and political elements, such as labelling and choice objectives. Even the practitioners within this system admit that this separation does not work in practice and the boundaries are blurred.

In commentary on the GM issue in Ireland, much has been made of the application of the precautionary principle. For example, the Minster for Environment and Local Government has stated in parliament 'I have always underlined [the precautionary principle's] application in this area and the importance of strong, effective, precautionary legislation' (Dáil Eireann Transcript, March 25, 1999). However, definitions of precaution vary. The state and its institutions have exhibited an acceptance of the science and technology of genetic modification, a faith in the current safety regulation system to properly manage potential risk and a strong trust in the industry to provide truthful and complete information. Thus the implicit assumption is one of safety in the absence of evidence to the contrary. This is an interesting mixture of precautionary standards, given that the problematisation of GMOs from the outset can be seen as quite strongly precautionary, and yet once this initial problematisation is established it is effectively ignored. In other words, the regulatory structure in place effectively starts with the recognition that a problem may exist, but then proceeds on the assumption of safety in the absence of information to the contrary. This might be seen as a proportional response (see, for example Hill, 1994), but this is of course difficult to judge since the potential benefits are as hard to quantify as the potential risks.

A tendency to consider legislation and extant procedures adequate characterised the Government's position on the labelling aspect of the debate also. All actors in the debate, including government ministers, civil servants and industry representatives, have professed support for 'full' labelling of foods containing GM ingredients.

The public side

The Irish public controversy and debate started in parallel with other countries, as information trickled in through environmental networks, individuals and the media.

But it was an application by Monsanto for a licence for a sugar beet trial that really started the debate in Ireland. Media attention grew rapidly and spokespersons emerged, with various environmental and consumer activists on one side and industry and academic representatives on the other.

It is hard to know how the debate would have proceeded in Ireland had the anti-GMO camp stayed fragmented, with no clear campaign focus or recognisable spokespersons. In fact, the camp became anything but fragmented, with the formation of Genetic Concern. This group, in particular the two people at its core, embarked on a concerted and strategic campaign to raise the profile of the issue, principally through generating media coverage. In order to do this they deliberately tailored their messages and approaches to gain media access, coming across as informed and reasonable (i.e. using the language of science and facts about safety and environmental impact, avoiding radical politics or fundamental challenges) and keeping messages simple.

At least partly due to the efforts of Genetic Concern, the GMO issue received extensive media coverage and attracted the interest of many groups, including activists, academics, consumer groups, politicians, supermarkets and, presumably, many members of the general public. Many debates were held, many stories appeared in the media and the debate became in the minds of everyone watching a 'controversy'.

The emergence of this state of controversy prompted the Minister of the Environment and Local Government to initiate the consultation process. It is to be presumed that the tacit acceptance at policy level discussed above would have continued, and so it can be said that the public debate forced a publicly aired discussion of official policy. It is much harder to say, however, that public policy was ever seriously open to significant influence from the process. As it turned out, the consultation process came to all the conclusions that anyone would have predicted, advocating a business as usual approach with very little precautionary content. This does make it difficult to see how the consultation discussions contributed anything. In fact, as I will discuss, the whole process was characterised by debates that seemed to be entirely routinised and participants that seemed to be entrenched and not at all open to persuasion. In this light it is hard to see how the process represents a good model of ideal democratic practice.

To close this brief overview of the history of the debate, the following timeline gives some of the key events and milestones chronologically and describes their relationships with the story as a whole. Most of the events mentioned in the timeline are presented in more detail in the main data chapters of this thesis.

January 1997	Debate starts in Ireland with the first application by Monsanto for a licence to grow GM beet.
April 1997	Genetic Concern founded. Fianna Fáil, (at this point in opposition, but soon to become the main party in government for most of the GMO debate) issues a press release supporting a moratorium on GMOs on the basis of the precautionary principle, since they argue that far too little research is available to guarantee safety (Fianna Fáil Press Release, 26 April, 1997).
May 1997	Clare Watson of Genetic Concern gets a temporary injunction against beet plantings, but it is removed by end of month. Court proceedings for judicial review of EPA's licence decision commence.
June 1997	Fianna Fáil take office. Genetic Concern develops its campaign with a lecture tour by a US expert.
August 1997	Stronger labelling regulations are introduced in Ireland, but are criticised by opposition actors.
September 1997	Sabotage of a beet crop in Oakpark, Carlow, by 'Gaelic Earth Liberation Front'.
October 1997	Ongoing coverage of the issue in the media, becoming more and more frequent.
January 1998	Monsanto applies for ten more test sites licences.
February 1998	Well known food writer Darina Allen joins the debate with an *Irish Times* article entitled 'The Food We Eat' (*Irish Times*, 11 February 1998). EPA announces it has received over 3400 objections to Monsanto's application (Irish Times, 21 February 1998). Monsanto reduces its number of proposed test sites from ten to five. The Food Safety Authority of Ireland (FSAI) asks its scientific committee to look into the GMO issue.
March 98	The business lobby group IBEC (Irish Business and Employers' Confederation) proposes a labelling scheme, but it is criticised by

	opponents. In the UK the Iceland supermarket chain goes GM free in its own brand products
June 98	Sabotage of a test crop in New Ross (see Chapter 5). Leading Irish supermarket chain Superquinn publishes a leaflet for consumers giving assurances that GM food is safe
July 1998	Clare Watson's high court case takes place
August 98	The first phase of the Puzstai controversy takes place (see Chapter 5). The Irish Government's consultation paper is issued
September 98	Centra supermarket chain launches a leaflet in support of GM foods
October 1998	Clare Watson loses her high court action
January 99	The format of the national consultation process is announced
February 99	Genetic Concern announces the results of its survey on public attitudes to GMOs. The *Irish Times* calls it the 'first independent survey of Irish consumer attitudes to genetic engineering' ('High level of concern about GM foods – survey', *Irish Times*, 5 February 1999)
March 99	Marks & Spencer grocery shops pledge to remove GMOs from their own brand products
March/April 99	The court case of those accused of the New Ross sabotage takes place
May 1999	FSAI publishes a leaflet saying GM foods currently on the market are safe
May/June 1999	The national public consultation debates take place
August 1999	Genetic Concern shoppers' tours take place
September 1999	Accusations surface of lobbying of senior Irish government officials by the US on behalf of Monsanto
October 1999	The result of the consultation process is published
April 2000	Genetic Concern disbands

My Aims and Questions

As I have discussed in the previous section, one can look at the parallel histories of this issue in the domains of government and policy and of public discussion and debate. In my thesis, the latter is very much my focus, but of course not in isolation from the former. As I will set out below, my interest is in the possibilities of participating in the democratic process by debating an issue and reaching

conclusions about society's desires on the topic. This can only be considered in the context of political outcomes, since a comparison of a debate and its 'conclusions' with policy outcomes must be a central component of the evaluation the quality of democracy involved.

In simplest terms I can say that the overall public debate does not seem to have influenced policy outcomes in this case. But obviously to simply claim that the quality of democracy involved was poor is somewhat simplistic and incomplete. Questions obviously arise as to why this was so and in what particular ways, and indeed as to how one may attempt to improve future participation. In this context I want to set out exactly what my thesis aims and questions are.

The principal aim for democratic ideals is to enhance the opportunities for participation in terms of both depth and breadth. This means creating and assuring the quality of a public sphere that, among other things, allows access to the debate and connects this debate to the policy making process. This case serves as an excellent opportunity to look at a public sphere in action and assess it on a range of criteria.

Ireland declares itself to be a democratic republic and thus espouses maximal political participation by all citizens. On the other hand, a system of representative democracy is used to balance the ideal with the practical, especially in the face of modern societal complexity. The employment of expert knowledge is part of this. Needless to say, the process of balancing the ideal with the practical is a difficult and contentious one.

A particularly important concern in an analysis of the employment of knowledge is the context of uncertainty and risk in late modernity. In this context, the question moves from how does one value alternative knowledges to how does one deal with absence of knowledge. If one accepts that certain knowledges have had power in the past one may inquire about how this has changed or how it will change due to uncertainty and the increasingly perceived limitations to the Enlightenment model of knowledge employment and problem solving.

Some of the questions then for the data analysis will be:

- What patterns of relative values given to different knowledges can be perceived in this debate?
- What are the means by which such relativities are transmitted?
- What are the characteristics of the public spheres for this debate in terms of access and connection to policy making?
- How does the state currently employ expert and scientific knowledge in a debate such as this?

In evaluative terms, key questions will be:

- How does the actuality of this debate compare with ideal models of democratic participation?
- What are the key influences and points of action that seem to cause a distortion from the ideal?
- How would one attempt to reconcile the value of specialist knowledge with democratic objectives?
- Can one intervene to correct perceived power imbalances in debates and policy making processes?

Theoretical and Methodological Approaches

In terms of sociological theory, the questions and themes above suggest an analysis that considers the contexts of knowledge, certainty and uncertainty and communication and debate in late modernity. These means firstly a characterisation of late modernity in terms of knowledge and communication, and this is to be found in the *theory of communicative action* developed by Jürgen Habermas. Habermas' theory posits ideal versions of communication, the deviation from which can be used to trace the development of the practices of late modernity. These practices also require the contextual considerations of environmental hazards and environmental concern. Ulrich Beck's *risk society* thesis offers an analysis of knowledge, communication and politics in the context of environmental uncertainty and the failure of traditional political processes to either prevent or eliminate modern environmental hazards. In Beck's view, the possibility of fundamental political change brought about through growing environmental concern, and the associated questioning of modernity is essentially limitless.

The central aim of this thesis is to consider the democratic quality of environmental debates, so an understanding of basic theories of democracy is necessary. In particular, Habermas offers an ideal model of democracy through the operation of the public sphere—the set of spaces where people come to debate, argue, and listen and where public opinion can be seen to take form. A system of institutions oriented towards transparent democratic accountability underpin the transformation of this public will into policy and practices.

However, as with his theory of communicative action, the model is very much an ideal: it is founded on intersubjective communication that is free from all strategy and manipulation and views all operation of power as a distortion of the ideal. This weakens the usefulness of the theory by placing a seemingly insurmountable gap between the ideal and any observable actualities. In particular, Michel Foucault's theories of discourse and power and the role of discourse in transmitting power through norms and practices reveal that power must be treated as an integral element of all communication and a theory that seeks to eliminate power from the ideal will always be inadequate. However, by recognising the inevitability of power and distinguishing power in traditional resources and structural forms from power in discourse as revealed by Foucault, opportunities for active intervention into public sphere practices to seek to minimise the distorting effects of the deployment of power can be exploited.

The method of discourse analysis recommends itself most strongly for a thesis that seeks to examine the practices and content of public spheres. Discourse analysis, in the tradition of Foucault and in the particular application to environmental debates as developed by Maarten Hajer, allows for an examination of not only texts but also their historical and institutional contexts. Discourse is defined in the widest possible sense, and the analysis approach I take recognises that the processes of problematisation and determination of the rules, language and range of debates are as important as the textual content of the debates themselves. For the GMO debate, which involved so many languages, so many actors and such a range of public sphere elements, this discourse analysis approach seems to offer the only possible method of capturing the overall picture in a meaningful way while still allowing sufficiently close scrutiny to reveal the key processes that shaped the debate and its outcomes.

Overview of the Data Set

The following sections discuss the data set as structured in the data chapters of the thesis. In order to examine the public debate as a whole, my approach is to take different cuts at elements of the public sphere for the GMO issue. I think that the four following cuts capture the main parts of the public sphere, certainly the most public parts.

The four cuts are the actors themselves, the media, public debates and seminars, and the national consultation process. The aim is to try to capture some of the more significant components of the many types of public space that add together into the whole public sphere for this debate. Obviously this set does not capture elements of discussions in situations like private talk in pubs or workplaces or the process of message reception when say someone reads media coverage of the debate. In addition, it does not provide data on internal policy making processes, for example, the private talk of civil servants and government ministers. However, I think I have looked at the main elements of what is generally described as the public sphere, i.e. formal and semi-formal opportunities to talk, listen, argue and form opinions about an issue. In this way I can analyse these elements as case studies in themselves: each case study offers an important element worthy of a detailed analysis to reveal the discourses and interactions at work. Together the elements form a reasonable overview of the whole debate that allows me to take a multi-angled perspective on the debate.

The data set is as multi-faceted as the range of the cuts would suggest. I interviewed many of the key actors, and I also make occasional references to additional interviews carried out by another researcher investigating similar themes. Some of my interviews informing the regulatory overview above were carried out as part of a European project called *Safety Regulation of Transgenic Crops: Completing the Internal Market?*[2], which was a cross-country comparison of the implementation of the Directive 90/220 and the related issues that emerged. These interviews also inform my thesis in many places, but are not used as fully as other interviews carried out specifically for the thesis project. The data set also includes a very large media file, with many articles from many newspapers and several radio clips. The third main strand of the data set is my observation notes from debate

[2] DGXII RTD (ELSA) Contract no. BIO4-CT97-2215

events, including the national consultation debates. Overall, these main strands are supplemented by various official documents, advertisements and educational materials, observations, and informal interviews. Managing such a data set has been an issue in itself, and I will discuss this in Chapter 3. For now, I want to present a short overview of the data set by presenting summaries of the cuts discussed in the data chapters.

Activism and Activists

In Chapter 4 I look at some of the more prominent actors, how they acted, what influenced their strategies, what effect their actions had and their backgrounds, motivations and interests. This focus allows the story of the debate to be told as a somewhat more coherent whole than can be achieved using other data cuts. It also allows me to investigate questions about what key actors or actions influenced the debate and how external factors shaped them. To some degree this is about how the public sphere was created and shaped.

A principal focus has been the activists of Genetic Concern itself. From the beginning this organisation was led by two very strong core actors, with about a dozen committee members behind them in support. These people came to the issue and the organisation for many different reasons, such as interests in environmental, food safety or global justice issues, and with connections to each other through past experiences, common contacts or simply due to their common interest in this issue. Every activist I spoke to was very clear that they had had an instant strong reaction of rejection of GM technology in foods and crops as soon as they learned about it. They also found it very hard to understand any other perspective, unless it was motivated by either money or a dogmatic faith in science. In fact, all actors on all sides of the debate were convinced that opposition to their point of view was simple ignorance of the 'facts' and once people were appraised of these facts they would certainly agree with their point of view.

My interviewees spoke in very strategic ways about gaining access to the media, and about 'marketing' their messages for both maximum exposure and maximum receptivity. Several were seasoned campaigners who knew the 'tricks' involved in getting media attention, and also knew what messages went down well with people—avoiding complex or radical arguments and sticking to simple

catchphrases on tangible topics like 'is this safe to eat'. In private, they were aware that their own concerns were much deeper than simply guaranteeing the safety of a particular set of foods and then closing the debate: they were subscribers to movements such as anti-capitalism, environmentalism, anti-globalisation and many others, and they saw the GM issues as a strong emblem of what they stood against.

A leading journalist on the issue spoke very directly about his newspaper's rules for access in terms of credibility, which means a solid (scientific) basis for claims and a clear avoidance of any impression of 'scaremongering', which can mean any type of radical claim. This newspaper also has policies on balance, which tend to mean that every claim or press release covered must include a response from the 'other side'. In practice I found this tended to have two effects. One was the polarisation of the debate since every claimant and claim was categorised as one side or the other and the other was the promotion of certain actors into strong spokesperson roles, since the media needed respondents to claims from others.

This chapter also discusses the roles of some of the other key actors in the debate, including academic scientists and food writers. Many academic scientists took part in the debate, usually, to my mind, in the spirit of a defence of science generally. Many speakers giving their expert opinion were not even 'experts' in this area, but came from other genetics or bioscience disciplines. This was another interesting aspect of the expert debate: once a person was defined an expert they seemed to be able to speak on any aspect of the debate, far beyond their own expertise. Thus we had genetic scientists speaking about ethics, economics, public concerns and many other topics. Similarly, a number of food writers, those promoting quality foods, organics and so forth, entered the debate and again spoke on very wide aspects of the debate. These people had considerable power in terms of media access, some had their own newspaper columns for instance and some were prominent in the public debate. Overall then, complex categorisations of 'expert' or 'spokesperson' were in evidence.

An interesting element of the debate from the activism perspective is the centrality of the media as constituting a major part of the public sphere. Most activists on all sides of the debate were focussed on media coverage for their messages (and they were usually messages more than arguments, reflecting the marketing orientation of the activity). In this the GMO issue is probably not at all unique among modern

environmental and other debates. Activists, politicians, supermarkets and many others seemed to treat the media debate as the public debate: extensive coverage meant the public were concerned about the issue and the content of the media coverage was the substance of these concerns. This is all the more interesting in the light of the failure of other dimensions of the supposed public sphere to function effectively (see below on the debate events for example).

The Debate in the Media

If only because the media is seen by many as the central element of the public sphere in a debate like this, it is worthy of particular attention in this project. Certainly the media was the most obviously voluminous of the public spaces in this debate; coverage was extensive and indeed defined the dynamic of the debate: cycles of 'interest', 'public concern' and 'controversy' were all generally thought of in terms of media activity at any given time.

I have chosen a case study approach in order to manage the size and heterogeneity of the media coverage data complement, selecting cases that I believe capture the core issues and represent the broader data set well. Absolute representivity is of course difficult to assert, but this has never been my intention. I do claim, however, that the topics covered by the articles were central and significant, the reach of the articles was extensive and the articles represent the broader set well in terms of theme and language.

The three case studies I present are:

- Coverage in the Irish (and to a lesser extent UK) media of a controversy in the UK surrounding claims of evidence against the safety of GM foods made by a researcher, Dr Arpad Pustzai, and the subsequent reactions and debates. This was a story about a researcher in Scotland who claimed to have produced strong evidence against the safety of GM foods; this evidence was quickly challenged and the researcher himself removed from his position. It then became a political story since there was a hint of 'cover up' in the researcher's removal, coupled with the concurrent controversy of the commercial interests of the UK science minister in GMO-related companies. The story attracted considerable coverage in the Irish media,

revealing much about the role of scientific evidence in the debate, trust in experts and in regulators and many other themes. It is interesting to see speakers defending or challenging the importance of individual scientific studies before and after this particular study lost its legitimacy. The coverage also included some interesting radio debates that provide an opportunity for looking at language and argumentation processes with regard to the issue.

- Coverage in Irish national and local newspapers of the trial of seven people charged with sabotaging a GM sugar beet test crop in New Ross, Co. Wexford. The seven did not deny damaging the crop but entered a defence of justification on the basis that the crop was dangerous and they were acting for the public good. Thus they wanted to use the trial to discuss the wider issues of GM crops and food by having this defence and this justification tested. The court case did allow for some of this debate to take place over its two days duration, although the depth of the discussion in media coverage was not particularly impressive. In the end the defendants were found guilty, but the judge stated that since they were acting on 'honestly held beliefs' their sentences should be minimal, and they were bound over to keep the peace. By comparing many different articles on the same story, some interesting effects of language emphasis and structure can be seen, as can the role of the media in deciding what gets covered and how this coverage is shaped.

- Consumer information leaflets issued by supermarkets and by the Food Safety Authority of Ireland aimed at informing the general public about GM food issues. A number of supermarket chains produced their own leaflets to 'inform their customers of the facts'. I look at one that supports GMOs and one that opposes them. I also look at an FSAI leaflet, which is also effectively supportive of GM technology. I decided to include these leaflets because they represented an important additional component of the public sphere for the debate: they were a medium by which people received information and arguments and made decisions about content and, importantly, about source credibility.

These case studies were chosen to represent different elements of the debate in terms of both content and medium. The first captures the essence of the

international and political dimension of the debate: a story taking place in the UK but receiving extensive coverage in Ireland, with plenty of involvement from interest groups and politicians. The second case study is much more local, and much of the coverage I look at is from small local newspapers in the area where the court case took place. There is much less (party) political content and much less science. But, as with the first case, the story represented a focus around which a lot of coverage was framed, and this is why it is a rich data source. The third case study may seem an odd choice, but I think it plays a very valuable role in extending my reach into the myriad elements of the public sphere. These leaflets represent another interesting medium through which people learn about the issues in their debate and through which their opinions are shaped. They also demonstrate some very illuminating points about how language is used in the debate, particularly with regard to credibility and certainty.

The Debate Events

This chapter looks at debate events—meeting and seminars where people come together in a room to debate the issue in front of an audience. There were many such events during the course of the GMO debate at the height of its attention cycle. These included meetings of existing groups (the Irish Countrywomen's Association for example) who invited speakers to present their case to an existing membership community and specially organised events hosted by NGOs, politicians or others. In many ways, such events should in theory be the ideal model of democratic debate and persuasion, and so an evaluation of their success should prove very valuable in terms of the wider thesis goals.

My data set is based on detailed observation notes from four such events, with additional insights from the national consultation debates themselves (discussed more fully in the next chapter). The observation notes were also supplemented in some cases by interviews with participants, discussions with audience members or analysis of the media coverage of the events.

Growing Awareness Conference

This event was a weekend conference in Skibbereen, Co. Cork, that attracted a large audience from all over the country, due partly to the high currency of the

issue at the time and also due to the strong set of speakers taking part. The event was organised by some locally active environmentalists and organic farmers and was very much an anti-GMO event. Most speakers and the vast majority of the audience were strongly against the technology. The event generated a lot of interesting data and themes, including many language and argumentation issues. Debates were organised around themes such as the science and safety issues, animal welfare issues and trade and development concerns. In each case I found the tone tended to be one of faith in systems against lack of faith. One interesting observation was that academic lecturers speaking on both sides of the issue tended to be very poor communicators and left the audience confused. This is not a trite observation, as I think it connects with the issue of system world voices used to presenting data in a certain, fact-based manner and not being used to or comfortable with stepping back and opening more assumptions to scrutiny.

Stillorgan Parish Debate

A much smaller event than the previous debate, this meeting was organised by a small Church of Ireland parish in the south suburbs of Dublin as part of an ongoing programme of occasional debates and discussion of issues of current interest. Speakers included an academic from a genetics department, a consultant speaking on behalf of Monsanto, a teacher with a specialisation in ethics and Quentin Gargan of Genetic Concern. Speeches given at this talk were very similar to those at other events: in fact two of the speakers used overhead presentations given by themselves or colleagues on other occasions. Although the audience was somewhat unusual in that it seemed to have a higher proportion of less-involved people (due to the local parish format), many people seemed to come with pre-formed views, with the majority against the technology.

Joe Cummins Debate

Around the time of the national consultation debates, Genetic Concern hosted a visit by Professor Joe Cummins, a genetics professor from Canada who was an active and prominent opponent of GM technology. Genetic Concern made it clear that they found him valuable because he was a high profile scientist but he was on their side. The seminar could have proved rather mundane were it not for the presence in the audience of a couple of genetics students who had clearly come with the intention of causing 'a drama' and were strongly argumentative and

disruptive. Their behaviour allowed a much more interesting debate to emerge, particularly in terms of the dynamic between these scientists and a mostly anti-GM audience. Their arguments were based on citations of various scientific evidence and direct challenges to Professor Cummins' credentials. Many in the audience became agitated and accused the scientists of being arrogant and rude.

Bernie Malone Debate

This was a seminar convened by the Labour MEP Bernie Malone in front of an invited audience of the usual range of people, such as industry, supermarket and NGO representatives, plus a number of political people. Again a strong theme among the speakers was faith in systems or otherwise, with regulations and scientific certainty (regarding safety) being the systems defended or challenged.

As I said at the beginning, these debate events could seem to represent the purest manifestation of the idea of the bourgeois public sphere, with people coming together and debating different points of view, convincing each other and the observers on the basis of the best arguments. However, the reality was far from this ideal. To a great extent, the argumentation was routinised and formulaic. As I mentioned, many speeches were simple repeats of those given elsewhere. Clearly, representatives of industry or NGOs were not open to persuasion by the other side: they were there to talk more than to listen. I also found that this applied to most audience members: very few people seemed to be open to being convinced about anything but were instead already sure of their own position.

In terms of the content of the arguments, once again system and life world voices were clearly identifiable. The most common (almost exclusive) defences of GMOs on safety or environmental performance was either 'the scientists say it is ok' or 'it has passed the regulations therefore it must be ok'. Issues such as consumer information, choice and awareness were also amenable to categorisation in this way. System voice speakers tended to argue that once products were labelled then consumer freedom was assured; life world voices challenged the practical realities of this kind of argument.

The National Consultation Process

The ultimate public debates were those imbued with the official status of a national consultation on the GMO issue. They embodied, in theory, the qualities of argumentation and access to deliberation represented in the other debate events and additionally held the value of a direct connection to a policy outcome. This was in many ways quite a unique event in Irish policy making. There had been various exercises in consultation before, but such a direct question and such clear connection to the policy decisions was very rare.

The process evolved from the pressure on the Minister for the Environment caused by the extent of the controversy over the issue. In particular, a pre-election commitment to introduce a moratorium on GMOs when in office was coming back to haunt the minister. The consultation process was a way of gaining democratic legitimacy for the government's position and hopefully closure for the debate.

The process started with a long consultation document issued by the Department of the Environment and Local Government (DELG), intended to inform the public on the range of issues encompassed by the process and set out the key issues and questions. Submissions on this document were invited from the general public, and several thousand were received. After some delays, two one-day public debates were convened and all those who had made submissions to the process were invited. The format of these events proved contentious, but eventually agreement was reached on a format of eight speakers representing particular interests: industry, academia and NGOs. The events would be chaired by a four person panel, appointed by the Minister, who would then consider the arguments and draw up a report and recommendations to the Minister.

About 120 people attended the first day, which commenced with some official speeches and then continued with the presentations of the eight appointed speakers. The afternoon then was taken up with a discussion in which the chair attempted to narrow down the range of topics for the discussion into an agenda of four key themes for the second day.

A few days later, this agenda was posted out to all participants, and it quickly became clear that the NGO group was unhappy with the process. Their participation had been somewhat conditional from the start, and the procedures

had already been amended in consultations with the group after their earlier reservations about participating in the first instance. However, the group now made the decision to withdraw from the process, citing the fact that the debate had become broader than expected, extending far beyond the remit of the environmentally focused original discussion document. This was quite ironic, as one of their earlier complaints had been that the process was too narrow in its original focus.

The second day's debate proceeded without the NGOs present, except for two small NGOs interested in animal welfare issues, who decided to remain in the process in order to state their case, which had thus far had difficulty receiving attention. The debate agenda focused on the four topics of environment, economy, procedures and processes and information and education. The range was indeed broad, and the NGOs pointed to the fact that each speaker was to have five minutes to present on each topic as evidence that the process was not being taken seriously.

The principal outcome of the consultation process was the chairing panel's report, which came out about four months after the debate days. This report was strongly pro-GMO, and also addressed a much wider range of topics than had been aired during the debates themselves. The language of commercialisation in the context of precaution was very similar to the de facto position that existed before the whole process began. It will never be possible to fully determine how 'genuine' the Minister was in undertaking this consultation process. What is clear is that the outcome of the debate was exactly what one would have predicted had there been no consultation at all and if one just observed the Minister enshrining current practice and expected positions in an explicit policy position. Reactions to the final report and to the process as a whole fell very much along partisan lines: those who had been arguing for the achieved outcome praised the process, those on the other side criticised it.

The Minister had several key intervention points to shape the debate: the content of the initial document and the terms of reference for the process, the appointment of the panel, the setting of the days' agenda (which didn't work) and the acceptance or otherwise of the panel's recommendations. In the end it seems that it was the appointment of the panel that was the most influential of these. The debates had allowed a very wide range of views on many topics to be aired, but the panel in

preparing their report had closed the discussion right back down to a narrower agenda and seemed to represent the pro-GMO arguments much more frequently and prominently than arguments that had been made for the other side.

Conclusions

In this chapter I have tried to give an overview of the case study that is the focus of this thesis and attempted to show how the themes of interest to me can be examined through this case study. These themes are the analysis of attempts to democratise environmental decision making, both by citizens who wish to gain access to the debate and influence it and by the state itself through its attempt to create an official process of debate and discussion. By taking a somewhat evaluative approach to the examination of these processes I can attempt to identify the factors limiting the success of such a democracy experiment and thus consider how greater democratisation may be attained in future experiments.

While one can easily develop a concept of ideal democracy in the abstract, there are a number of complicating factors that interfere with the actuality of such approaches. The particular complications I am most interested in are those relating to specialised knowledge and expertise, which are particularly important contextual factors in modern environmental issues. In the next chapter I will attempt to discuss this context and then merge it with some ideal theories of democracy to find key issues that separate the ideal from the actual. The contextual analysis will be based principally on the work of the theorists Jürgen Habermas and Ulrich Beck, which provide an overview of the place of knowledge, communication and expertise in modern societies, particularly relating to environmental concerns. Habermas will also provide my starting point for a look at democratic debate in the ideal, but I will try to develop a stronger discourse component in the analysis using ideas from theorists such as Foucault in the first instance and Maarten Hajer in the specific context of environmental discourse. This theoretical platform will allow me to approach the data with key questions in mind (see the discussions of the data set I have presented in this chapter). By examining these four particular cuts at the data set I will then hopefully be able to bring together the key moments, processes and patterns that reveal how democratic the debate was and the factors that stopped it from being more democratic. This is the core issue of this thesis.

CHAPTER 2 ENVIRONMENT, DEMOCRACY AND DISCOURSE—THEORETICAL APPROACHES

Introduction

This thesis is about environmental debates and their democratic quality. In particular, it is about the debate in Ireland over genetically modified food and crops. This debate is strongly oriented towards knowledge issues—science, uncertainty, alternative world views and the relative strengths of competing voices and discourses. The objective—maximising participation in the decision-making process relating to this issue—raises the question of how models of ideal democratic involvement can be adapted to the particular context of these knowledge components. In particular, I wish to examine ideal models of deliberation for democratic decision-making and ask how they fit with current discourses and practices of specialised knowledge and scientific expertise. I start by examining these ideal models and considering what ideal democracy is.

Democracy

Very many definitions of democracy exist. A reasonable overview definition is 'a political system in which the opportunity to participate in decisions is widely shared among all adult citizens' (Mason, 2000: 21 after Dahl, 1991). Most definitions share this objective of maximising participation in decision making, in terms of both the number of people participating and the meaningfulness of their participation. An ideal definition is relatively simple to achieve, but democracy in action necessarily involves reconciling the ideal with the complexities associated with the practice. Virtually all writing on the subject is concerned with bringing practical possibilities and implications forward for this relatively understandable overall goal (Held, 1993). This is also my interest.

Under the heading of democracy, two broad strands exist: direct democracy (broadly after the original Athenian model) and representative democracy (broadly after the renaissance republican model) (Held, 1993: 15). Within the category of

representative democracy, one can further subdivide into liberal and republican models.

Republicanism is about participation: it requires a public space where people debate and form collective opinions and make decisions (Held 1993: 17; Garvin, 1999). The government is made up of law abiding citizens, assigned the managerial task of implementing these decisions. In liberal representative democracy, however, states have sovereign power. This model is well defined as 'a cluster of rules and institutions permitting the broadest participation of the majority of citizens in the selection of representatives who alone can make political decisions' (Held, 1993: 20,21).

These are the theoretical definitions, but Ireland is a perfect example of the mismatch between the official categorisations and most people's observations of the actual practices. Ireland is a republic in name, but in practice comes much closer to the liberal representative model (Garvin, 1999). Participation is principally through the electoral system on a national level, though various experiments in furthering participation have taken place over the years (see Broderick, 2000).

Accepting the difficulties of translating ideals into actualities, the consensual goal seems to be that of allowing for maximum participation in terms of both quantity and quality (Broderick, 2000; Mason, 2000; Held, 1993). Broderick cites Dryzek's typology for evaluating participation: the definition of good participation covers franchise, scope and authenticity. Franchise is the extent to which participation is allowed among the population, scope is the range of issues open to participatory decision making and authenticity is the extent to which the participatory processes genuinely influence the decision outcomes (Broderick, 2000). I consider this a useful disaggregation of the overall goal of 'democracy', and I will return to these headings again.

The reason for going towards a representative model is almost entirely motivated by practicality. Bertolo reduces it to a very concrete level when he points out the sheer difficulty of holding a democratic meeting with a large number of people (Bertolo, 1999: 317). He argues that all democracy in practice is representative democracy (Bertolo, 1999: 319).

Mason points out that while much of the discourse of democracy is concerned with 'widening and deepening' democracy, liberal democracies continue to defend and indeed strengthen the differentiation between the polity and the economy (Mason 2000: 21). In other words, they widen and deepen but only in certain areas. Pierson (1993), for example, discusses the growing tendency to exclude economic elements from the democratic sphere. The discussion about how wide a democratic debate should be will be very relevant in this thesis, as the boundary of what should be open for discussion was a common point of disagreement.

However, as stated, when democracy in theory becomes democracy in practice, it becomes subject to the context of complexity and size. The challenge becomes whether democracy is even possible in this context:

> the functional need for effective political decision-making—achieved in increasingly complex societies through representative, often remote, structures—threatens to undermine the accepted conditions for democratic justification
> (Mason, 2000: 22)

The end result is that :

> we have all become democrats in theory just at that stage in history at which it has become impossible for us in practice to organise our social life in a democratic fashion any longer
> (Dunn, 1993: 29 quoted in Mason, 2000: 22).

What are these complexities that make simplified models of democracy so difficult to put into practice? Certainly size is an obvious issue, but size, especially in an age of information technology, does not present itself as a fundamental barrier. More fundamental concerns are the issues relating to knowledge and communication. As I will discuss, ideal democratic models are invariably based on assumptions of some form of universal reason, the 'right' outcome or the existence of the 'common good'. I will argue in this chapter that theoretical analyses of knowledge and communication have convincingly established that such assumptions do not stand up to scrutiny. I argue that it is the gap between the idealist assumptions of how argument, persuasion and debate take place and the

actualities of these processes that is the fundamental issue in enhancing democracy.

These discussions will focus on the particular case of democracy in environmental decision making, for which a number of particular contexts are especially relevant. The most important context is that of knowledge and communication in late modernity. Environmental concerns and associated risks and uncertainty have a special place in this context. The social theorists Jürgen Habermas and Ulrich Beck have the most interesting insights into these areas, and I will structure my contextual discussions around their ideas. Habermas also provides a starting point for a discussion of ideal models of democratic communication and deliberation, though further theoretical discussions will be required to develop his ideals into a more complete understanding of the challenges of democratic decision-making. I will look at, among other things, the influence of power on discourse, normalising processes and the notion of system and life world voices as a discourse categorisation related to power.

My ultimate aim is to consider how idealised models of participation might work in 'real world' contexts. In a knowledge oriented debate, the 'real world' context incorporates unequal access to knowledge, unequal valuation of knowledges and deviations from idealised communication on the basis of power. All of these issues make the widely understood democratic ideal of maximum participation immensely complicated in terms of scope and authenticity of involvement and influence. It is these differences between ideals and actualities that are of particular interest to me.

The Modernity Context

Many social theorists have identified the key place of knowledge in characterising modernity. Giddens argues that modernity is characterised by the reflexive use of knowledge, in particular by the fact that this reflexivity is applied in every sphere of knowledge. This, however, does not equate to certainty in knowledge:

> Modernity is constituted in and through reflexively applied knowledge, but the equation of knowledge with certitude has turned out to be misconceived.
> (Giddens, 1990: 39)

Importantly then, all knowledge effectively becomes 'claims to knowledge' (Giddens, 1990: 54), and so communication, i.e. discourse, is the sphere of action. In this context, modernity can be characterised in terms of its communication and knowledge processes, and this theoretical context will be my starting point. Much of the most illuminating work in this field stems from the foundations laid by Jürgen Habermas in his writings on modernity and communicative action, and I will begin with his work.

Habermas' analysis of communication processes and modernity starts from a focus on an individual speaker (communicator) in a social or intersubjective context and on their aims and motivations. The way speakers try to communicate, inform or persuade can be characterised as *communicative* action, *instrumental* action or *strategic* action.

Communicative action is oriented towards mutual understanding and consensus, instrumental action is oriented towards success in the external world and strategic action is oriented towards success in the social world (Outhwaite, 1994: 114). Communicative action is about the type of communication process rather than outcomes; it is the deployment of rationality to achieve the 'best' outcome, whatever that may be, through consensus. Instrumental rationality is very much a means–end process: the end is determined first and decisions then made about the best means to get there. Strategic action is characterised by a deliberate deployment of power to achieve a particular outcome.

In Habermas' model of communicative action, discourse consists of speech acts that are based on validity claims, which may be based on appeals to truth, correctness or sincerity (Outhwaite, 1994: 114). In other words, listeners make judgements about arguments based on their content and on their proposer. Thus one may posit a particular kind of rationality—communicative rationality—that is aimed at mutual consensus and understanding, with persuasion and decision making based on open and rational assessments of various validity claims. In particular, the essence of the 'ideal speech situation' is communication based on

people trying to convince each other of their versions of reality through validity claims:

> rationality is understood as openness to objective appraisal, and argumentation is deemed valid under the conditions of the ideal speech situation
> (Outhwaite, 1994: 114)

Power is absent from the ideal speech situation. The presence of power signifies the operation of strategic action attempting to manipulate the process towards instrumental ends. The ideal speech situation thus becomes an ideal norm by which actual communication processes can be assessed. This ideal of communication also forms the basis for Habermas' ideal models of democracy (see below).

The distinction between communicative and instrumental action is the starting point for Habermas' description of how rationality and communication function in modernity. The divergence of these fundamental rationalities is associated with a parallel divergence in the way society functions. From a starting point of general and uncontrolled communication in society, modernity has created a number of *system worlds* to deal with complexity in the operations of society. These systems are fundamentally different to *life world* processes since they are based, not on communication, but on the steering media that guide their operations, which are free of values and free of communication. Specifically, Habermas talks about the system worlds of economics and bureaucracy, with the associated steering media of money and power respectively.

Fundamentally, 'systems are norm-free regulators of co-operation' (Layder, 1997: 100). While the life world is communication based and transactions are constantly open to negotiation and communication, the system world is communication free, guided instead by instrumentally rational steering media that enshrine values and norms for the transactions. And so the system and life worlds are separated and, in Habermas' view, are quite distinct and separate. In the life world, social integration is achieved 'through consensus, whether normatively guaranteed or communicatively achieved' (Habermas, 1987: 150). Any operation of power in the life world is a corruption of the ideal.

The process of the separation of system and life worlds in societal development Habermas calls the *rationalisation of the life world*. Certain societal functions can proceed in the system world without a constant need for renegotiation through communication, but instead are guided by the steering media. The societal functions of 'success in material reproduction, and advances in moral development' (Outhwaite, 1994: 115) are thus decoupled.

The separation of the system and life worlds, however, is the arena of conflict for late modernity, which is characterised by what Habermas terms the *colonisation of the life world*. This, Habermas' fundamental theory of modernity, refers to the process of the system world 'reinvading' the life world and taking over more functions and transactions. Instrumental rationality and strategic action spread their influence over more and more of society. In the economic sphere, people become consumers rather than employees. In the administrative world, people become clients rather than citizens. In all cases there is a loss of sovereignty and freedom, but this is compensated for through gains in welfare and comfort.

The spread of systems specifically curtails communication and mutual decision-making about society, what Taylor calls 'system theory's intellectual repression of the discursive structure of social life....[and] real repression of processes of reaching understanding in favour of systemic forms of integration such as the market or the bureaucratic state' (Taylor, 1991: 29). While people are compensated for their loss of control, this trend towards system control explains the processes of loss of freedom and loss of meaning in late modernity:

> It is the domination of meaningless mechanisms which therefore creates the experience of meaninglessness.
> (Taylor, 1991: 29)

However, it would incomplete to suggest that modern pathologies of meaningless and consequent patterns of social change, in particular resistance and new social movements, stem simply from the colonisation of the life world process. This is a significant debate in itself (see Goldblatt, 1996: 132), but from my perspective the important contextual element that is absent from the discussion so far is that of uncertainty, environmental hazards and the changing roles of specialised knowledge and of politics itself. These are the elements addressed in the risk society thesis of Ulrich Beck. Beck argues that it is the changing patterns of

knowledge, in particular risk and uncertainty regarding environmental degradation and hazards, that are the key characteristics of late modernity. The new knowledge and risk context influences politics, business, civil society and social movements and thus puts global environmental concerns at the centre of politics and social change. This theme, then, is obviously relevant to a discussion of democracy and environmental concerns.

The Risk Society Context

The basic premise of the risk society thesis is that (Western) society is moving from a characterisation of distribution of wealth to one of distribution of risk (Beck, 1992). Global environmental hazards are causing a fundamental shift in thinking in late modernity regarding the role of modernity itself in creating these hazards, the role of science as both possible cause and possible solution and the role of knowledge and awareness as many such problems exist only when people become aware of them.

I do not wish to embark on a lengthy discussion of the basic elements of this well known and highly influential thesis. The risk society idea has been a major influence on environmental sociology over the past decade. Many parts of the thesis are certainly open to criticism, for example the extent of the shift from wealth distribution to risk distribution (e.g. Eder, 1996: 211), the conflation of global and local environmental hazards in the analysis (see below) and the (sometimes curious) mixture of constructivism and realism in the consideration of exposure to hazards (see Goldblatt, 1996: 158). However, it is Beck's analysis of the changing patterns of politics and knowledge in the risk society context that is of most relevance to my thesis.

Beck points out the central importance of knowledge in current issues surrounding risks and environmental hazards, and this importance could be extended to environmental issues in the broader sense beyond risk. Many hazards only exist through knowledge because they cannot be directly perceived or cannot be emphatically proven. This has many consequences: matters can change overnight with the emergence of new knowledge; whole communities, countries even, can be thrown into anxiety by a newspaper headline about a new scientific report. Risk analysis in this context cannot be merely a technical project, it must have a

substantial social element, addressing issues of perceptions, acceptability, remedies and so on (Beck, 1992: 24–26). Indeed, Beck discusses at length (1992: 64–71) the unreliability of scientific approaches to risk and to matters such as acceptable levels of pollution and reveals just how value-laden these areas are. Risk is all about probabilities and possibilities, not certainties, and thus requires interpretation. Cognitive sciences must be central to these debates.

But the arguments of Beck often come across as a strange mixture of realism and constructivism. As discussed above, Beck stresses the role of knowledge and perception in the development of new environmental hazards, but at the same time he warns of the danger of inaction, stating that risks grow while they're ignored (Beck, 1992: 45). When he discusses the phenomenon of people refusing to accept the existence of particular hazards, Beck certainly suggests that these hazards have a reality independent of people's attitudes towards them (Beck, 1995).

Beck also points out the increasing importance of expertise in this knowledge-centred arena. The 'bureaucracy of knowledge' (Beck, 1992:54) serves to take power out of the hands of people, who are then forced to rely on the judgements and interpretations of the 'experts'. This is an important point for my thesis, and I am particularly interested in the degree to which people can participate in a debate that many argue is centred on highly technical questions of science and regulation. The ways in which a debate such as the GMO controversy gets defined as a technical issue as opposed to a political issue, and whether this is accepted or challenged, are a key concern.

A basic question in the context of heightened environmental concern is whether discussions of these concerns stand alone as direct cause–effect analyses or whether they represent another, deeper debate on society, focused on the more fundamental question of 'how do we wish to live?' (Beck, 1992: 28). The ecological modernity model described by Hajer, among others, which I discuss later in the chapter, largely removes such societal questions from the debate, effectively arguing that environmental issues can be addressed for the most part in isolation through the prevalent paradigms. Beck's *organisational irresponsibility* thesis (see below) states that this is not the case, that 'modern' political, knowledge and societal structures simply cannot deal with the environmental crisis.

Societal Response to Risk Society

Beck argues that the reason why the structures and institutions of modern society cannot cope with environmental questions is that there is a fundamental flaw in the way in which political society approaches these questions. Goldblatt (1996: 167 ff.) condenses the levels of 'relations' that fail in the environmental debate, as presented by Beck, into questions such as who is to determine the harmfulness or risk in a particular scenario and who is to accept blame or take responsibility, what constitutes sufficient proof and who makes these judgements, and who decides appropriate compensation for losses or exposure and to whom is this compensation paid.

The difficulties in addressing these questions reveal the gap between traditional approaches to problem solving and the challenges posed by new global environmental hazards. The current system cannot cope with the new situation it is facing, and this allows pollution and risk proliferation to occur unchecked. Practices such as the scientific tendency to treat each pollutant independently rather than examining their combined effects or the failure of the 'acceptable level' approach to regulating pollution exemplify the challenge. To denote the overall systemic failure in this context, Beck coins the term *organisational irresponsibility*. Once the failure to cope with environmental challenges is acknowledged, the key question is obviously one of how society reacts to this failure.

There are two directions in which society might go in response to the environmental challenge: one is to recognise the fundamental weaknesses of societal structures and to commence a process of reconsideration and reform, the other is to push to assimilate the environmental crisis into existing structures and seek solutions without basic change. These are the two poles. The second pole is very close to what many writers term ecological modernity, as mentioned earlier (see Hajer, 1995; Gouldson and Murphy, 1996). This concept suggests that politics and institutional structures have moved to subsume the environmental debate within the modern capitalist state paradigm.

On the other hand, Beck argues that the first pole is the direction in which things are going, or at least *might* go. This is argued out more fully in the next section, where I will explore Beck's concept of subpolitics and the development of new environmental movements. This theme is important here because of its relevance

to the possible future directions of environmental politics and their democratic quality.

Subpolitics and New Environmental Movements

A major theoretical element of Beck's risk society thesis is the development of the concept of subpolitics as a mechanism for political action in late modernity. The basic concept of subpolitics is fairly easily explained. On the one hand, conventional politics loses some of its sovereignty. This is due to expansion of rights and other formal structures that limit the scope for action in politics. Also, the success of the welfare state eventually undermines itself in that it eliminates the need for its own services. In these ways, the perceived need for parliament and institutional politics wanes.

On the other hand, the legitimacy and domain of influence of 'techno-economic development', i.e. the spheres of business, industry and technology, 'increase in scope of its potentials for change and endangerment' (Beck, 1992: 186). Arenas such as businesses, factories and laboratories are determining our lives and our worlds through their activities. An interesting example of this is the field of human genetics. Developments in human genetics have huge potential, and already realised, impacts on society. The field, which Beck likens to a modern techno-version of eugenics, promises to eliminate many hereditary diseases and other 'imperfections', essentially through selective elimination of targeted genotypes. This brings with it the prospect of a move away from social and political solutions to humanity's problems, opting instead for technical solutions. Research is already taking place on searching for the 'violence gene'. This is the ultimate technocracy (Beck, 1995: Ch. 1).

When actors start to have a significant influence on society, this puts them in the business of politics. But businesses or research facilities are not nominally political: they are not publicly accountable and their activities are not subject to discussion and ethical review, at least not until after they have taken place. This is Beck's subpolitics: politics in terms of impact and relevance, private sphere in terms of interaction and accountability.

So people are seeing an 'unbinding of politics'—the decreasing impact and potency of parliament and an increasing impact and potency of other agencies, such as business. Of course, it could be argued that this is not a new phenomenon, that business and economics have been shaping society certainly since the coming of the industrial age and that conventional politics have always come second to this particular influence. Beck argues that people also see politics getting into the private sphere due to the personal impact of the risks (Beck, 1992: 24). In other words, the impacts of political processes are felt in the private sphere. Again, it would be difficult to argue that this is an entirely new pattern, and I don't think this is as strong a claim as Habermas' colonisation of the life world thesis. In fact, I would see subpolitics as very much a life world idea. Subpolitics implies that humans (i.e. in the life world), are seeking ways to conduct politics despite attempts to enshrine the processes in system world domains. Later in this chapter I will discuss relationships between people and structures through political participation, in particular through the idea of a public sphere for democratic debate and will formation. In this context the subpolitics idea is central, and the claim that subpolitics is a life world concept connects it back to Habermas' colonisation of the life world thesis. If people want to find ways to influence political outcomes then perceptions of where political decision are actually being made are clearly crucially important. Also, as we will see, claims of instrumental rationality for regulatory and scientific systems are the cornerstone of these systems' power claims, and if politics and decision making are becoming more 'life world', then the value of these claims changes.

Beck discusses the consequences of society's increased recognition of the subpolitics phenomenon and the consequent sense of disenfranchisement. He argues that 'subpolitics is not open to only one side' (Beck, 1997: 101) and that the general societal response to the expansion of subpolitics is the development of new social movements, which represent people taking their share of the politics as it is stolen from the traditional political arena. Increased individualisation plays an important part in this process because people see themselves as freer to make decisions about themselves, and this fosters subcultures and greater awareness about lifestyle choices.

Beck argues that people are very good at rationalising, denying or relativising their own interactions with environmental risks[3]. He looks at people's reaction to a particular hazard on three levels: the extent of the hazard, public knowledge of it and people's evaluation of this knowledge through 'symbolic mediation' (Beck, 1995: 48). In this he is talking specifically about disasters, but seems to want to imply that the arguments extend to less acute hazards and risks. As pointed out earlier, this mixes realism and constructivism in an unclear way. However, the point he makes is that no hazard or risk is so severe that it cannot be culturally spirited away through denial, relativising or some other mechanism.

Yet despite this ability to effectively ignore hazards, Beck points out that there is a large degree of protest and unrest about environmental issues in Germany. Beck describes this as the 'German "anxiety" miracle' (Beck, 1995: 53) saying that, given people's ability to effectively ignore great hazards, it is a miracle that there is any protest about these matters at all. The solution to this conundrum is to think of these environmental protests as essentially a discourse for broader disquiet towards politics and the state. The failure of the body politic to protect the environment comes to represent the broader perception of its failure in all areas. Of course, the irony of this is that the state sanctions environmental destruction in order to maintain growth and economic output at levels that avoid protest about shortages, prices or other matters. However, the protests come nonetheless, through the environmental route.

So Beck argues, much along the same lines as Habermas, that these environmental protests are signs of unrest and dissatisfaction at a much deeper level, a more basic protest about morality and society. In particular, Beck relates the protests about environmental destruction to people's perceptions of nature, particularly in the case of modern Germany. Beck argues that people, in fighting for nature conservation, are essentially looking for the conservation of stress-free idylls and images of unspoilt nature that represent the rewards for success and hard work for the middle classes. In other words, environmental destruction represents the state's unkept promises for a generation that has worked hard and loyally and now question why. This is part of the argument that growth in environmentalism represents a very deep and fundamental change in society, one that has huge

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[3] As supported for example by Zonabend (1993) in her illuminating research on inhabitants of a French village in which a nuclear power plant is situated

potential impact. And thus this point is also the link back to Habermas and the perception of new social movements as a reaction to the colonisation of the life world. In my discussions of environmental politics it is important to note that argument that the issue is much more than politics responding to environmental challenges, but rather is one of the deep changes to politics prompted by these environmental challenges. In the GMO debate, for example, the discourse was very often not only about whether we want to accept GMOs but also whether we should be allowed to make this decision, and if not why not. If the Government argues that it does not have the power to impose a ban on GMOs due to the rules of the EU, the WTO or whoever else, people will inevitably question the changing patterns of sovereignty and power that this reveals.

A major problem with Beck's analysis relates to one of the criticisms I mentioned earlier, his tendency to blur the distinctions between different types of environmental problems. Often, his arguments are based on examples and elaborations relating to nuclear uncertainty, acid rain, or global pesticide pollution. At the same time, it seems that Beck wishes to present these as typical examples from the environmental debate in general. Of course they are not. There is no solid reason to suggest that societal anxiety about nuclear holocaust can be analysed in the same way as local debates over waste disposal, fish kills, odours or many other types of environmental issue.

A future where new environmental movements continue to grow in response to environmental destruction at the hands of unaccountable actors is one of three possible scenarios presented by Beck. He calls this scenario *Differential Politics* (the other two scenarios are *Back to Industrial Society* and the *Democratisation of Techno-Economic Development*) (Beck, 1992: 224 ff.). In the *Democratisation of Techno-Economic Development* scenario actors in subpolitics, science and business are brought together more under the influence of parliamentary politics: in other words a type of democratisation of technical expertise is proposed, but in the formal, parliamentary sense. Certainly this increased power would please the parliamentarians, but probably few others. In fact, there is an extreme case of environmental concerns justifying the retention and indeed expansion of traditional power politics, where an environmental imperative becomes an 'emergency' that justifies an emergency response from a state. This environmental imperative might mean transgression of national borders to intervene in nuclear accidents or pollution threats or transgression of personal boundaries to enforce particular

behaviour 'for the sake of the environment'. In this way, the environmental issue could become a very powerful negative political tool, what Beck calls 'eco-dictatorship' (Beck, 1997: 90).

It is the two other scenarios that represent the two poles I referred to in the previous section. Beck's concept of *Back to Industrial Society* would be quite similar to the concept of ecological modernity described by Hajer (1995) and others. Beck, rightly I think, suggests that this route is the option 'being pursued today by the overwhelming majority in politics, the sciences and the public sphere' (Beck, 1992: 224). He feels that this is unfortunate, and that the *Differential Politics* option is to be preferred. Certainly, the decentralisation of democracy and involvement in knowledge that this scenario represents would seem desirable, even if Beck's faith in institutions such as the courts and the media may be a little unquestioning. The main question then is whether or not the scenario is realistically possible.

This is very much a central issue in my thesis, and the role of institutions is also a crucial question for Habermas. The question is how one may envisage a democratisation process in the context of current institutions, structures and practices. I want to move on to this question shortly, but I first I need to explore this complicating context a little further. In most environmental debates, and certainly in the GMO debate under analysis here, there is a strong science component to the arguments. Discussions of democratic participation in such debates needs to take account of the specific challenges presented by current practices of strong reliance on scientific expertise and the relationships between science and practices of decision making and governance.

Expertise, Science and Governance

One of the most important complicating factors in extending an ideal model of democracy to actual practices is the prevalence of specialised and stratified knowledge in society. Stratified knowledge and the associated evolution of expertise are central elements of modernity, even if seen as nothing more than an unavoidable reaction to complexity and volumes of information. Giddens partly characterises this process as disembedding—the removal of social elements from localised space–time contexts to more abstract positions. He argues that expert

systems are part of this phenomenon because 'they remove social relations from the immediacies of context' (Giddens, 1990: 28). This kind of separation process obviously fits well with Habermas' concept of the rationalisation of the life world.

This disconnection from space and time is partly why trust is such an important concept in modernity:

> There would be no need to trust anyone whose activities were constantly visible and whose thought processes were transparent, or to trust any system whose workings were wholly known and understood.
> (Giddens, 1990: 33)

In an ideal participatory democracy, everyone would be interacting, communicating and forming the public will, and trust in delegation would be irrelevant. The underlying assurance for participants is the process of validity testing. But in the context of disembedding, like rationalisation of the life world, people must be willing to allow others to make decisions for society without constant communication and negotiation: they must assign tasks to experts. How is this done, and how is trust in expertise and experts achieved?

Socialisation is certainly very important in this process, in formal education for example. Giddens gives the example of the teaching of science: only very advanced science education addresses the notion of controversies in science or even admits that such controversies exist. More general science teaching, with its concentration on 'first principles', tends to deal in immutable facts, and the idea of alternative perspectives completely absent (Giddens, 1990:89). This is very interesting, and I think it applies to more than science education. People who learn about a discipline through education only see certainty; one has to study a discipline to almost the highest level to see alternative versions and debates. It is almost as if discovering uncertainty and controversy in a knowledge discipline is positioned as a kind of initiation rite into the category of expert.

But still there is always ambivalence in trust relations; trust is only demanded where there is ignorance, and ignorance 'always provides grounds for scepticism or at least caution' (Giddens, 1990: 89). The balance between scepticism and trust based on experiences will mean that an element of faith is as unavoidable as the concept of expertise itself (Giddens, 1990: 29). The quid pro quo for this faith and

this implicitly accepted disempowerment is, according to the colonisation thesis, the rewards of the modern consumer and welfare client.

As well as socialisation in education, a person's perceptions will obviously be informed by their previous experiences of experts. An important concept here is Giddens idea of access points, where people meet experts. Trust in an expert (a person) also entails trust in the system they represent. Access points are where experts can engage in frontstage discourse with people to encourage trust. In other words; 'faceless commitments are sustained or transformed by facework' (Giddens, 1990: 88), and so experts can attempt to minimise people's perception of the difference between expertise (the knowledge) and experts (fallible humans). Here we are talking about things such as professionalism in the frontstage, and keeping controversy and uncertainty to backstage discussions (Giddens, 1990: 86).

Access points are where people acquire their experiences of expertise and experts:

> Attitudes of trust, or lack of trust, towards specific abstract systems are liable to be strongly influenced by experiences at access points.
> (Giddens, 1990: 90)

It is very difficult to capture in data any complete historical picture of people's interactions with experts that have resulted in the current form of their relationships, but it will be possible to look at specific, current interactions. It is also possible to analyse how successful various arguments and arguers are in accessing the debate and to examine the reactions they receive there. This certainly offers insights into relative valuations of knowledges.

A second key issue for expertise is the relationship between experts and policy makers. Habermas offers three theoretical models for this relationship:

Decisionistic model—experts and politicians are clearly separated, and political decisions are made on the basis of interests and value judgements, so cannot be legitimised through objective knowledge claims. Instead, decisions are legitimised on the basis of 'the ideologically supported exercise of power' (Habermas, 1992: 46).

Technocratic model—the politician 'becomes the mere agent of a scientific intelligentsia' (Habermas, 1992: 45) and the state becomes rational by ceding power to rational experts, but democracy is weak and the system 'presupposes a continuum of rationality in the treatment of technical and practical problems' (Habermas, 1992: 46).

Pragmatistic model—a critical interaction takes place between the expert and the politician, 'scientific experts advise the decision-makers and politicians consult scientists in accordance with practical needs' (Habermas, 1992: 46). In addition, science and society inform each other; new techniques are developed in accordance with value systems and value systems are informed by technical possibility. This is the only one of the three models that Habermas sees as possessing democratic elements. The pragmatistic model allows for mediation of expert knowledge by the public, and decisions are made on the basis of 'communication between experts and the agencies of political decision making' (Habermas, 1992: 47).

These are somewhat abstract models, and it is Beck who proceeds to look at stratified knowledge and expertise and politics in a more specific context, that of the risk society. Expertise is constructed, and science in particular has a complex and ambivalent relationship with environmental politics. Beck talks of 'monopolies of knowledge', where expert communities cast problems as highly technical and in need of their specialist input, and Beck sees this as the employment of power and imperialism (Beck, 2000: 25). Environmental issues are a key arena for this phenomenon.

In Habermas' favoured pragmatistic model, experts are essentially servants of the deliberative process, providing specialist input for the general deliberators to incorporate into their wider considerations. But this ignores the constructed nature of expertise, as alluded to by Beck. There are power issues in expertise, and these are the issues of interest to me.

Science and society

In the light of these models of expertise, I would like to discuss some elements of current practice in the use of expertise in policy decision-making. This is important context for examining a case study that utilises existing practices of debate and

decision making *and* attempts to innovate through a relatively experimental national consultation process. Both existing and innovative practices will be informed by established practices and actors experiences of these practices. Also, existing practices will reveal what basis exists for democratic approaches to decision making and what scope, or requirement, exists in these practices for democratic enhancement.

An appropriate starting point for this discussion is the relationship between science as an institution and knowledge system and society generally. As I have mentioned, science has a complicated role in environmental debates, often being seen as both the cause of the problem and the potential source of a solution. For Beck, the changing role of science in society is a central element of the risk society thesis. Beck argues that because science is revealed to be 'the cause' of so many hazards and risks and yet does not offer definitive solutions to the problems, its exalted position in society is undermined. People are starting to be less accepting of science's claim to represent truth and objectivity. As hazards grow, 'science is more and more *necessary*, but at the same time, *less and less sufficient*' (Beck, 1992: 156). Thus, in many people's eyes, 'science's monopoly on rationality is broken' (Beck, 1992: p. 29). On the other hand, Eder (1996) argues that science is actually re-legitimised by the environmental crisis because of the clear role for science in it. These different interpretations of the effects on science of environmental issues reveals the complexity and ambivalence of the relationships. As I will discuss at several points in this thesis, my data suggest that science is as secure as ever in its decision-making role on a political level but the faith in science among the public does seem to have been eroded in recent years. To pursue this debate a little further, I want to discuss the relationship between science and decision-making and look at some evidence from recent attempts to develop and democratise this relationship.

Science and politics

Irwin categorises the possible relationships between science and public policy for environmental issues under three broad headings: expert, democratic and pragmatic. The *expert* model enshrines the role of the scientific expert in making rational decisions based on the 'facts'. Experts are qualified because of their specialist knowledge. This model is based on the assumption that judgement is not involved, other knowledges are excluded, and the contingent nature of much of

what is claimed to be scientific fact is denied. Also, the use of science as the legitimator of decisions excludes other factors, such as the social and economic elements of a debate (Irwin, 1995: 66-68). Clearly, this is the system world model of science and of expertise.

The *democratic* model is based on the general principle of trying to enhance participation in decision-making, particularly in the light of the failings of the expert approach discussed above. Experiments with public participation in this regard have included various types of consultation and discussion forum. Many have been no more than participation by consultation, one-way information flows. Of those experiments that have gone beyond this, most have been along the lines of Habermas' idea of people listening to experts and deciding among their recommendations (see below). Irwin notes that whatever effort is made to broaden participation, experts still dominate the process of identifying, constructing and framing the issues and the discourse generally remains highly technical (Irwin: 1995: 72) American models tend to be more adversarial, litigation-based approaches for example. In some ways these might be more successful in allowing debate to flourish, except that the scientists tend to become 'guns for hire' in the process. All in all the *democratic* model's potential for improvement of the *expert* model is constrained by its firm rooting in modernist thinking (Irwin, 1995).

The third of Irwin's categories he calls *pragmatic* approaches to policy. Most discussions focus on the contrast between expert and democratic models, but Irwin argues for the value of this third category. He sees the pragmatic model as a less formalised and more practically oriented approach, which has self-regulation and flexible and negotiated controls on pollution as its general principles and prefers practical rather than exact solutions (Irwin, 1995: 74). It is a model that grows out of earlier experiments in democratising science but is distinguished by its attempts to move beyond certainty models of modernity and allow a more flexible and informal mix of influences on outcomes. There are few experiments in this category to date, but those that have taken place seem to show considerable potential.

It is interesting to compare Irwin's three categories of science-policy approaches with the expertise models of Habermas. While Habermas' analysis is concerned with the relationship between a pre-defined expert and a pre-defined decision maker, Irwin is looking at how science and broader knowledges interact together in

becoming the informing set for decision making. Both the democratic and the pragmatic categories in Irwin's typology both fall under Habermas' pragmatistic heading in that they involve interactions and mutual informing. Science, society and decision makers all communicate and inform. Irwin's analysis shows that this categorisation allows further subdivision and that a wide range of informing and communication processes are possible. Only a further analysis of these processes will reveal the true nature of the expert-society-decision-making interrelationship.

Is a democratic science possible?

Irwin's analysis suggests that there have been very few experiments in democratising scientific expertise in decision making that go as far as his pragmatic model of flexibility and practical orientation. The key barrier, unsurprisingly, is the dominant paradigm of scientific certainty and access to 'truth'.

The supposed value of science lies in its independence and autonomy; 'the authority and status of science very much hinges on its disengagement and autonomy vis-à-vis government and social interest groups' (Andersen et al. 2000: 7). The autonomy claim is a common one for science and is at the centre of the system world notion. However Fuller argues that, in practice, the concept of autonomy can mean asymmetric relations, where the public are expected to react to science but science is not expected to react to the public (Fuller, 2000: 30). And if we take the problem of asymmetry together with the modernist paradigm that still dominates, then we identify the core problem with the current science–politics relationship. If we accept the problems of asymmetry, lack of openness, lack of participation and excessive direct influence, how can science change without letting go of the modernist attributes of truth and objectivity? And if it lets go of these, what is left? What is its special role then? Most prescriptions for opening up science to democracy involve the surrendering of its special claims to autonomy and fact, i.e. a negation of its position of special value. No wonder scientists are defensive.

Various discussions of 'participatory science' exist (e.g. Joss and Durant, 1995; Irwin and Wynne, 1996), but as I have said, few attempts to date have addressed this problem of overcoming the barrier to participation imposed by the certainty paradigm. As Irwin says 'the strength of the modernist framework lies in this conjunction of science with instrumental rationality. No conspiracy theory seems necessary to explain why dominant social institutions should be reluctant to move

outside the powerful cognitive framework on which modernity was built' (Irwin, 1995: 63).

The risk society context may offer opportunities to develop new practices. Beck, as I said earlier, argues that reproduction of systems relies on consent: if they are opened up to scrutiny they may collapse. Ecological modernisation for example, while being quite a conservative paradigm in many ways (see later in this chapter), could lead to major change because any opening up of the dominant paradigm allows more scrutiny and questioning. Also, when people see factions of experts arguing, they see that what is claimed to be an instrumentally rational system is open to politics after all (Beck, 2000: 98–101). This kind of opening up may be the beginning of a much larger process.

Experiments to date in 'participatory science' offer some insights as to what the key elements of such a concept might be. Irwin argues that access to setting the agenda is very important—who gets to say what is the problem and what is to be discussed. To date, most science–society interactions have been mostly on the basis of experts defining the problem (and deciding what qualifies as a problem) and then opening it at this point to discussion (Irwin, 1995: 79). So an important and valuable step would be a science process based on answering questions set by the concerned community. One experiment in this regard is the idea of the science shop, as reviewed by Irwin (1995). The science shop idea originated in the Netherlands and has since been piloted in several countries. Irwin looks at its implementation in Northern Ireland. The aim is to offer the services of science to citizens in situations where they do not have the money to commission research or employ expert advice. Academic scientists volunteer to give time to enquiries that come in to the shop. Services usually go well beyond natural science, into other disciplines such as economics and social issues. Inquiries to science shops have often come from community groups worried about local pollution or development. The experience seems to be that the scientists involved quickly realise the political complexity of what they are doing and tend to become more reflexive as a result.

The science shop model is important for two reasons: it allows some access to agenda setting (limited to date, but with potential), allowing expertise to become something much more useful and tangible for 'non-expert' groups, and it offers a model of resource sharing and counter-expertise support that may point a way out of the imbalance problem of specialised knowledge (see Chapter 8).

It is interesting that use of the science shops shows that community groups' need for expertise is usually to defend themselves from an attack of some kind by other experts (e.g. opposing a development, challenging a report that says something is clean or safe, etc.). Cozzens and Woodhouse (1995: 546,547) talk about what they call *proknowledge movements*, where groups of citizens that become active over a specific issue gain an awareness of their knowledge on the issue, prompting a political battle over whose knowledge counts, the locals or the experts. Here we see the application of Beck's concept of the development of subpolitics in risk society, where an environmental issue might spark a wider social movement in which the original issue becomes emblematic of much broader concerns. We see this in the science shops experiments: citizens get involved in knowledge disputes because of their relevance to issues of local and direct concern. Although this is not entirely agenda-setting by the communities (they are usually forced into action), it does indicate the employment of expertise according to their priorities. Thus the science shop model appears to be working more to correct to the imbalances of the current expert-policy making model rather than as a stand alone model of expertise and decision making it itself.

Irwin does see characteristics of deliberative democracy in some experiments in consultation that have taken place in the UK around the bioscience issue. In particular, he discusses a *Citizen Foresight* exercise, similar to models such as the consensus conference. This took place in Britain in 1998, with a small panel of selected 'citizens' appointed to analyse evidence put before them by 'witnesses'. This panel selected the topics for discussion, directed and questioned the witnesses and drew their own conclusions. The conclusions they drew were that GM crops were unnecessary, all foods should be labelled as containing GM materials or as GM-free, agriculture in general should move away from intensive chemical-based models and a worryingly small number of large supermarket chains monopolised food distribution at that time (Irwin, 2001: 6). These are more radical conclusions than any more 'conservative' experiment in consultation on this issue has produced. Again agenda setting, and discourse shaping, seem to be key.

To date, participatory science has largely been a pragmatic response to the dominant role of science and expertise that seeks to re-balance the knowledge–power effects of this role. Thus it is to a degree an attempt by an institution to open

itself to better democratic responsiveness. Such institutional responses may well be the way forward for the democratisation process, and this is the idea at the centre of Habermas' more recent writings on deliberative democracy and mediation (see *Habermas and Deliberation*, below). However, tweaking at the edges of science in this regard avoids the fundamental paradox: one cannot democratise knowledge creation and deployment very far while the knowledge-creation domain—the institutions of science—retains a claim to objective truth at the heart of its philosophy. A more fundamental debate remains to be resolved if the signs of opening up in science are to lead much further.

Having looked at current practices of expertise in decision making, particularly from the expertise point of view, I will now consider possible practices of democratic participation. I introduced my earlier discussion on democracy with the observation that most discussion in this field is concerned with applying relatively simple ideals to the immensely complex actualities of modern societies. I have outlined some of these complicating factors most relevant to the environmental field, so I will now analyse some of the ideal versions of democracy and the theoretical challenges that make it difficult to apply them in practice. I will then consider how the ideals and the challenges interact in the specific case of environmental debate in order to try to resolve the various components into a fuller understanding of the question of environmental democracy.

Habermas' Theory of the Public Sphere

Habermas' theory of the transformation of the public sphere is an investigation into how ideal, communicatively rational, opinion formation could take place in practice. Habermas developed it as an ideal model of democratic debate: a historical notion of people meeting in a public space to debate issues and reach some form of consensus—'a realm of our social life in which something approaching public opinion can be formed' (Habermas 1974:49).

The public sphere, 'the sphere of private people come together as a public' (Habermas, 1991: 27), is the process of public debate and the creation of public opinion. Its existence is institutional in that it is the mechanisms of the communication events that constitute it. But for Habermas the original Bourgeois ideal of a process-created sphere in which access was universal and the notion of

genuine public opinion could exist became institutionalised in the capitalist state. The notion of Bourgeois democracy as an ideal fell away, but the public sphere was not successfully translated into a universalist equivalent. In particular, ownerships of media institutions left power with the elites, the state effectively invaded civil society through the media and the notion of public relations was born. This process is the transformation of the public sphere.

While the transformation of the public sphere forms part of the description of modernity and the colonisation of the life world, the public sphere concept itself represents the core of the ideal model of deliberation and democracy. Habermas says that in ideal deliberation 'no force except that of the better argument is exercised' (Habermas, 1975: 108). So while consideration is given to the institutional actualities and where communication takes place, the model remains rooted in the ideal of communicative rationality. The important elements of the ideal are that access is free and open, information is fully available, the discussion is not mediated, there is no influence of power and the 'best' arguments win. The process is very close to Habermas' notion of the ideal speech situation, where people meet and try to persuade each other without the influence of power and the best argument wins. This largely addresses the franchise and, in particular, the authenticity elements of Dryzek's typology. Although the focus is on the process more than the relationship to outcomes per se (an element that will form an important part of my analysis), this could be seen as an attempt to disaggregate one step further by unpicking what we mean by authenticity.

The intrusion of power on this scenario is the corruption of the ideal. Fitting this in with the broader theories of Habermas, the public sphere theory is the triumph of communicative rationality over instrumental rationality:

> The theory of communicative action intends to bring into the open the rational potential intrinsic in everyday communicative practices (Habermas, 1992: 442)

As with all of Habermas' theories of communication, there is a significant normative element to his idea of a public sphere. But beyond that, it is important to remember that Habermas is claiming that communicative rationality is intrinsic (at least in potential terms) to observed practices. The clear implication is that power is not a 'natural' part of communication, but a corruption of the (achievable) ideal. As

mentioned earlier, the only role Habermas sees for power is when the state 'interferes' with the ideal processes to impose its will. I will return to this issue later when I address Foucault's criticisms of Habermas.

In his useful analysis of Habermas' theory of the transformation of the public sphere and the debate it has generated, Garnham (1992) sets out the range of criticisms levelled at the theory by commentators:

—Habermas neglects the development of a plebeian public sphere (trade unions for example) at the same time as the bourgeois one explored in his writings, and thus even in the historic original the idea of one coherent public sphere was weak.

—Related to this, it has been argued that Habermas tends to idealise the bourgeois public sphere in his descriptions. Garnham cites the example of the capitalist control of printing from its earliest days to demonstrate that power mediation always existed in opinion formation.

—By arguing for a single rationality through which a single public opinion can be created, Habermas excludes the possibility of a pluralist version of his theory. In particular, the ideal public sphere of the debate forum model specifically excludes both households and economics. It is hard to make a connection between the simple ideal of one public sphere forum and modern democratic processes (although more recent work by Habermas substantially addresses this, as I explain later in this chapter).

—In this and Habermas' other explorations of communicative processes, the criticism can be made that he tends to exaggerate the manipulative and strategic action of the state and to present a simplistic contrast between the administrative world and the general life world.

—Habermas defines ideal communicative action as being directed towards consensus and thus neglects other forms of communicative action that are not towards consensus. It seems inappropriately narrow to define all communication that is not geared towards consensus as instrumental or distorted.

—By concentrating on consensus and neglecting other versions of communicative action (playful or rhetorical aspects for example) Habermas makes too sharp a

distinction between information and entertainment, which seems inappropriate for an analysis of modern communication, especially in the media.

One way of thinking about these criticisms is that they all reflect a frustration with the excessive idealisation in Habermas' model of communicative action and of the public sphere. However, Garnham argues that despite its flaws Habermas' approach is valuable for three core reasons:

- It integrates political institutions and practices with public communications institutions and practices rather than taking the political for granted and examining how the media behaves.

- It has a focus on the role of resources, and their influences on the communicative processes.

- It avoids the state-market dichotomy, putting the public sphere between state and civil society .

If one were to treat Habermas' ideal public sphere as an ahistorical normative ideal rather than a historical analysis, many of the major criticisms would fall away. However, it seems clear that Habermas did indeed intend a historical analysis, and in this regard it is clearly weak as a description of the workings of the public sphere. However, the value of the normative ideal as a starting point remains.

This discussion offers a starting point from which to consider ideas about how democracy should work or how it does actually work, which will then enable me to consider ways of evaluating the workings of the debate that is the subject of this thesis. Habermas' public sphere approach represents a valuable ideal against which actual practices can be judged. However, I have argued that it is excessively ideal in that there is a fundamental discontinuity between the model and actuality with regard to its treatment of power. This discontinuity makes it difficult to understand how to attempt to trace a path from currently observed actualities towards the desired ideal. A corrective to Habermas' normative ideal is required that will allow for the inevitability of power in communication.

Power and Discourse—Foucault's Challenge to Habermas

Habermas' isolation of power from the life world is unsatisfactory since it does not reflect the actuality of the pervasiveness and inevitability of power. Also, his wholly negative interpretation of the effects of power is incomplete. Most importantly, the approach lacks an explanation for the workings of power and the interaction of subjective and objective elements.

Crossley (1996: 130) criticises Habermas for essentially asserting a capacity–outcome model where the state uses its power (capacity) to try to ensure certain outcomes. In line with Garnham (see above), Crossley also points out the inadequacy of treating the state as one uniform entity, ignoring the internal differences, divisions, coalitions and other such dynamics that operate at every level of the 'state' as an institution and the negotiation and fluidity that goes with this. The state doesn't simply deliver decision outcomes like a giant computer; policy develops through negotiation and discourse, and power influences in all directions.

Thus the core problem is Habermas' attempt to take power out of the life world and describe it as purely a phenomenon of the system world. First of all, a narrow definition of power that only encompasses that possessed by the state seems very limiting. Connected to this, Habermas uses the term power to denote the steering medium for the administrative system, but it seems intangible. Power is said to be analogous to money in the economic system, but how it works as a currency and decision maker is not at all clear because there is no discussion of how power acts, how it is created or used or how it is evaluated. Power in such a vague sense lacks the tangible and countable reality of money, and one is left without a solid concept of what Habermas means by power.

An alternative view of discourse and power comes from Michel Foucault. Foucault's social theory is a departure from Habermas from the very beginning through his belief in the historical specificity of dominant discourses and knowledge. For Foucault discourse is, in effect, knowledge, but knowledge 'with its claims to truth and meaning bracketed' (Dant, 1991: 129). So Foucault's project is based on the belief that understandings of truth and rationality are developed through historical specificities rather than subject to a grand project of progress. This then is also a pluralist view: one must talk of 'systems', not just 'system' (McHoul and Grace,

1993: 43). As with Giddens (see *The Modernity Context*, above), one must think in terms of claims to knowledge rather than knowledge per se.

Foucault's theories of power can be grounded in his rejection of older theories, specifically power as a commodity possessed by a sovereign to wield as he or she sees fit and power as possessed by a social class through ownership of state apparatus and means of production (i.e. the Marxist model) (Layder, 1997:148). Both of these approaches are based on a possession model where power is something that is owned and subjectively administered or employed. They are also based on a view of power as a largely negative, constraining influence. Foucault rejects both of these analyses. Instead he develops a model that describes the pervasion of power throughout society, where power is more than just a subjectively applied entity. In a fundamental departure from Habermas, Foucault argues that power operates at the intersubjective level and that it acts on actions (Crossley, 1996: 136). Thus power is very much a life world phenomenon. Also, he acknowledges the positive, enabling role of power. In particular, he recognises the role of power in guiding the creation of knowledge, a most important point to which I will return.

It would clearly be going too far to suggest that older, more subjective forms of power have gone from society altogether; there is still dictatorship and repression (Layder, 1997: 152). However, these can be thought of as existing alongside 'newer' types of power, seen in the more pervasive, more subtle dynamics of power in the modern state. These pervasive versions Foucault calls biopower, to suggest the flow of power through bodies, through intersubjectivity and action in the life world as much as any formal structures (see Barker, 1998).

For Foucault, the state is not some sort of neutral facilitator of democratic will formation and decision making, but a key participant, both actively and passively, both intentionally and by default. This is the concept of *governmentality*:

> Foucault's concept of governmentality rejects the notion of the state as a coherent, calculating subject whose political power grows in concert with its interventions into civil society. Rather, the state is viewed as an ensemble of institutions, procedures, tactics, calculations, knowledges and

> technologies, which together comprise the particular direction that government has taken.
> (Johnson, 1993: 140)

This then is a discourse-oriented rather than actor-oriented model of governance and the state.

Opening up the concept of power in the way that Foucault does also enables him to open up the relationship between power and 'truth'. As I have mentioned, and again probably contra Habermas, Foucault argues that all knowledge is created in a power context, and so truth claims are part of a power dynamic. The important link is that of power to discourse, and the role of power in, say, defining what is normal, what is acceptable, even what is knowledge. It shows that Habermas' concept of the validity claim as the central action of an intersubjective exchange (tests of truth, correctness and sincerity) is only complete if one accepts that the guiding principles of such validity tests are themselves open to discursive influences and rooted in the specifics of practices and power. Also the link demonstrates the power of specialist knowledge through determining the value of competing validity claims on the basis of relative valuations of knowledges. (Layder, 1997: 151). This of course will be an important connection point to my themes of interest and my data.

Normative or Explanatory Theory

Beck (1999: 117) describes the Habermas Foucault axis as the tension between communicative rationality and discursive power, and I think this captures the issue well. Habermas' model of communicative rationality is weak, as I have argued, because it does not accommodate discursive power. In line with Foucault's response to traditional power theory, a distinction can be made between resource power – money, access, the direct influence of actors; and discursive power – the power in the discourse itself. Habermas, in treating power as a corruption of ideal communication, neglects the latter completely.

At the core of the differences between Habermas and Foucault on these issues is the fact that Habermas takes a largely normative perspective on democracy, whereas Foucault is undertaking a genealogy of governmental and power practices

(Dean, 1999). While Habermas is considering how democracy might work under ideal conditions, Foucault is trying to 'locate actual forms of democracy in the emergence of forms of power such as discipline, sovereignty and biopower' (Dean, 1999: 183). I consider this distinction as more than one of methodology. When Habermas asserts the connection between democracy and the discursive communication model, he is asserting a universal communicative rationality that does or could lie beneath it all. Foucault on the other hand assumes the historic specificity, and hence the relativism, of any such rationality (Dean, 1999: 184).

Mason discusses the dual normative and explanatory roles of Habermas' theory of discursive democracy. The normative role is rooted in the ideal speech situation, with its operation of validity claims and the absence of power. The theory 'enables us to specify and justify the institutional conditions for rational collective decision-making' (Mason, 1999: 9). The explanatory role of the theory works by highlighting the importance of looking at discourses to understand actual situations. Discourse analysis in keeping with Habermas' thinking would allow an investigation of the communicative role of norms. Habermas himself is very clear that he is interested in a normative model of democracy, that an empiricist approach even if it has normative intentions can at best be thought of as 'cryptonormative' (Habermas, 1996: 289). He sees empiricist approaches as reducing 'political power' to 'social power', which undermines the legitimacy idea of a normative model (Habermas, 1996: 289). In other words, by relativising the process, empiricist analyses of democracy negate the possibility of a normative judgement or a solid basis for legitimacy (Habermas, 1996: 296).

Dean notes that Habermas' model of communicative rationality, on which discursive democracy is based, is dependent on the concept of the ideal speech situation, meaning the need for participants to 'mutually recognise each other in a situation of communicative freedom' (Dean, 1999: 187). However, there is clearly a fundamental gap between this ideal and the imaginable actions of real social agents, and thus a question is raised as to the usefulness of the norm. Dean suggests that Habermas resolves this by considering that the democratic norms come from a particular interpretation of universal norms that thus take account of context, which would of course bring him closer to the specificity of Foucault's view of norms and legitimacy. This leaves, however the problem of the consequent weakening of Habermas' call to his universal principles, and their use as a source of legitimacy for law, if his model of discursive democracy in fact depends on a

specific rather than transcendental interpretation of them. Essentially then from Foucault's point of view Habermas in engaging in precisely the process of biopower; by seeking to 'introduce the principle of normalisation into the juridical system of law and sovereignty' (Dean, 1999: 187). This is a very interesting claim, saying essentially that Habermas' model of discursive democracy, because of its normalising ethic, is fundamentally expert oriented. Habermas attempts to remove power from his normative model, but neglects to consider the power of the norm itself, and it is Foucault's concepts of biopower and governmentality that allows an illumination of this.

The Habermas-Foucault Axis

I have discussed the core problem in Habermas' model of communicative action and the public sphere; the absence of an understanding of power in any other form than a corruption to be eliminated. In the first instance, this renders making connections between current practices and such a desired ideal very difficult.
A second problem with Habermas' neglect of power is more fundamental. As I have just argued in the previous section, Habermas' normative approach is in fact also a normalising approach. He derives the communicative rationality norms from his view of the ideal speech act as the idealisation of what happens in intersubjective communication, and then applies it back onto society as a (almost transcendental) norm. Expertise is part of this normalisation, in that the role for experts to interpret information and offer choices to the public is enshrined in the model, and is seen as an unproblematic (if done correctly) component of ideal democracy. Thus Habermas' project is an example of Foucault's biopower in spreading a normalising influence through its institutions and practices. To look at this part of the power equation as part of an analysis one would need to be able to step back one level from Habermas' theory to include its own influence. One can never use Habermas' theory to fully understand the actualities of power and democracy since one cannot step far enough back.

It is now possible to understand why Foucault's thinking on these issues contributes to the illumination of my themes of interest. Foucault's approach:

> opens up the possibility of analysing different ways in which the capacities and attributes of citizens are formed through practices of government and

> the way forms of freedom are shaped by political and government practices. The point of such an analysis is not to show how democracy and law are cynically used by a certain form of political thought and action but how they have come to be inserted into particular modes of government, for what reasons and to what ends.
> (Dean, 1999: 175)

In Dean's analogy, Habermas remains within the goldfish bowl, and one needs Foucault to be able to look from outside the bowl at the inside. Only discourse analysis that seeks power flows can reveal the power effects of the discourses themselves; what has shaped them and how these shapes affect the processes and outcomes.

However, there is clearly a problem with going to a Foucauldian extreme in which no evaluation is possible. Surely it is possible to recognise the contingent nature of norms and the inevitability of power flows and yet retain an interest in a normative ethic.

Habermas' project is to consider how democracy might work in today's complex society (Dean, 1999: 176). In the public sphere, he presents an ideal model, which indeed has its attractions, and the suggestion is one can analyse actual situations with a useful standard by which to measure them. His project is specifically and assertively normative.

Foucault challenges Habermas by pointing out that his ideal models are normalising in themselves. But I consider this inevitable and, while complicating, not ultimately problematic. Any analysis must work from some perspective and must be allowed to start from a normative position. In particular, a process-norm seems more defensible than an outcome-norm (see later). In my case, the norm I am interested in is the enhancement of democratic participation; and the problem under discussion is how to achieve this in particular situations and in the face of specific complications. The normative element is recognised.

Habermas and Deliberation

In more recent writings, Habermas has substantially revised his position on the idea of communicative action and the thesis of the colonisation of the life world. This is done in the important book *Between Facts and Norms* (1996).

Habermas, from the theory of communicative action, had established the centrality of communication to democracy, and the expression of norms and rationality through the communication practices themselves. However, this was done in a context of pathology. His explanation of society's response to complexity was the notion of rationalisation of the life world in the first instance, but with the pathological consequence of its recolonisation by systems, where instrumental rationality was replacing communicative rationality as the steering force in more and more spheres of society. The system-life dualism was central, and this led to major problems with the thesis, as I have discussed earlier. Delanty argues that *Between Facts and Norms* can be seen as an attempt to reconcile structure and agency through the theory of mediation, in which the life-system dualism is overcome and 'discourse now becomes part of the self-construction of society' (Delanty, 1999: 87, see also Mason, 1999).

One of the strongest challenges to Habermas' model of communication came from Niklas Luhmann, who argued that communication is made up of 'self reference' and 'external reference' and 'always entails the construction of differences since a system must always differentiate itself from its environment' (Delanty, 1999: 77). This in a way is the antithesis of communicative rationality – suggesting that the underlying tendency is away from agreement and consensus. Luhmann did not support Habermas' desire for radical democracy, arguing simply that society has become too complex to be open to simple democratic decision making. Habermas seems to have taken this argument on board, moving away from the simpler idea of radical democracy to a more subtle notion of discursive democracy. In this model, institutional structures are democratised through their communicative practices, so that democracy is not opposed to legal structures, but based on democratically constituted ones (Delanty, 1999: 77,78).

Discursive democracy is a version of radical democracy that tries to address the complexities and realities of late modernity. As Garnham puts it, the public sphere project is about adapting the simple ideal of free communication and knowledge as

perfect democracy, to the modern, complex world (Garnham, 1992: 364,365). Discursive democracy is procedural and deliberative, and the norms are embodied in the structure of communication, which should facilitate communication oriented towards understanding.

In discursive democracy, Habermas updates the idea of the public sphere to a far richer concept than the original notion of a bourgeois public space that was weak due to its positioning with regard to the life-system dualism and also because it did not allow for any kind of plurality. In his more recent thinking, Habermas argues that discourse takes place through a network of public spheres where opinion is expressed and will formation occurs. It is then the role of democracy to mediate between this and law, the institutional realm (Delanty, 1999: 88).

The public sphere does not necessarily produce consensus or solve problems directly. It produces public opinion to be used for making decisions through democratic practices. Thus there is also a requirement for public involvement before the regulated public sphere, for general opinion formation in the public sphere of civil society (Delanty, 1999: 89). In this new version, plurality is accommodated through the notion of a network of many public spaces that can be identity- or public space- based:

> the public sphere is a communication structure rooted in the lifeworld through the associational network of civil society.
> (Habermas, 1996: 359)

So we see an important point for analysis of democracy in action – the question of where to look. Opinion formation is a collective act – and needs public spheres in which to happen. Importantly, Habermas has now separated the public sphere from democracy as an institution. This is very different from simpler models of radical democracy since one can now envisage participation without decision making (the public sphere leaves decision making to the institutions of democracy), and also, through the idea of the network model of the public sphere, participation is now confined to those who are potentially affected. According to Delanty, 'Democracy and the public sphere are rooted in social spaces in which groups mobilise', and civil society is made up of all of these spaces, including NGOs, social movements etc., 'which are themselves prior to the public sphere but which provide it with content' (Delanty, 1999: 90).

Thus democracy in action needs to either make use of existing public spaces or create ones for the task. The GMO debate I am studying is an interesting mixture of public spaces, some of which existed before the debate and some of which did not. The media, for example, certainly existed, but obviously needed to be primed as a forum for this issue, and then access and control over content would become the key concerns. The tradition of convening interested people to listen to speakers and engage in debate, as often happened in the GMO story, is certainly a classic public sphere enactment. Most interestingly, the government specifically set out to create the 'official' public space for the debate when it set the consultation process in train. As far as the Minister was concerned, only opinion expressed at the consultation was eligible for consideration, and the chairing panel would be responsible for condensing everything expressed into the official public opinion on the issue. The Minister, by making no explicit commitment to act on the results of the consultation, only to listen and take it into account, was making the distinction between opinion formation and policy formation, and the consultation process aimed to achieve the former.

So ultimately the public sphere mediates between the political system and the life world. This to me is a much more attractive model of the relationship between the public sphere and the life world than was seen in Habermas' earlier conceptualisations. This version of discursive democracy, in Delanty's view, is a much less problematic version of radical democracy than simpler more direct versions that cannot translate into practical manifestos for modern, complex societies (Delanty, 1999: 92). It also allows a better understanding of the contribution of social movements (see Activism chapter) and indeed illuminates Habermas' own argument that 'political enlightenment and emancipatory politics are almost exclusively initiated not by the political system of the state but by radical politics emanating from civil society' (Habermas, 1996: 381).

In Habermas' original theory of communicative action, 'legitimation crisis' referred to the pathology of instrumental rationality taking over communicatively rational spheres:

> Legitimation relates to the way power is made subject to consensus in society ...[and] therefore presupposes that power can be challenged (Delanty, 1999: 81)

Protest, then, was legitimised when decision making had lost its legitimacy. In the mediation model, however, the institutions of law are made legitimate by their procedures. Legitimation comes from the visibility of decisions rooted in the deliberative process. Mason calls this the discourse principle: where the communicative practices that lead to decisions are valid, this legitimates the institutions and their decisions (Mason, 1999: 9). This again connects in an interesting way to the Irish consultation process; the act of collecting all possible opinions very specifically aimed to confer democratic legitimacy on the resulting conclusions. In Habermas' words, legitimacy comes as 'only those action norms are valid in which all possibly affected persons could agree as participants in rational discourses' (Habermas, 1996: 459). In the theory of discursive democracy, new social movements 'are given a central place as the carriers of a communicative rationality embedded in the life world and capable of changing the "system"' (Delanty, 1999: 85).

As with the original theory of communicative action, validity and norms are embodied in the procedures rather than the outcomes; communicative rationality is the ideal underlying process for deliberation (Mason, 1999: 53).

Importantly for Habermas' political project, this new model of radical democracy is very different from the colonisation thesis since it believes that radical change is indeed possible in the modern constitutional state (Delanty, 1999: 91). I would think, however, that it puts too much faith in the communicative rationality (and steering medium function) of the law as an institution to facilitate democracy. As before, the notion of system and life world separation is still idealised here, and power is missing, or at least removed to the policy making process as defined separately from democratic will formation.

Delanty considers Habermas' new model of discursive democracy and mediation as a major development and a strong basis for further development in theorising democracy in late modernity. However, he is critical of Habermas on two counts; one is related to globalisation, the second to culture. On globalisation, Delanty argues that Habermas' new approach is still 'constructed in such a way that it depends too much on the constitutional democratic state and the kind of citizenship it presupposes' (Delanty, 1999: 94). Thus it is hard to see how this model of discursive democracy could work on a global scale, and what structures could

feasibly be in place to represent the institutional and communicative bases for this. Delanty's second criticism relates to the treatment of culture and identity, arguing that Habermas neglects these issues in his Western European conceptualisations and in his inability to accommodate multiple rationalities (Delanty, 1999: 98).

Habermas' tendency to over-idealise the purity of the life world remains in his new theories. Pathologies of democracy are still attributed to the colonisation of the life world by systems, and thus 'the cultural conflicts endemic to the life-world are ignored' (Delanty, 1999: 95).

While acknowledging these criticisms, I see Habermas' model of mediation in deliberative democracy as a major development. It is a way of trying to see how communication and deliberation can influence governance, given the tendency of law makers to respond to power as it currently operates (Bohman and Rehg, 1997: xv). Habermas' solution is a set of multiple autonomous public spheres through which politicians are, at least somewhat, constrained and guided by the need for transparent responsiveness to democratic will. This is what makes movement towards the ideal seem feasible, and could be used as a tool to map a way forward from current political practices:

> the role of the ideal deliberative procedure is to provide an abstract characterisation of the important properties of deliberative institutions
> (Cohen, 1997: 79)

So the model allows for a vision of how current representative democracies might evolve into more participatory practices and even structures. And it has sparked a flurry of writing under the general heading of *deliberative democracy*. The general ideal and overview is easy enough to grasp:

> The notion of a deliberative democracy is rooted in the intuitive ideal of a democratic association in which the justification of the terms and conditions of association proceeds through public argument and reasoning among equal citizens
> (Cohen, 1997: 72)

So deliberative democracy is more direct and active than liberal representative democracy. Miller emphasises this distinction, stating that in deliberative

democracy the route to decision making is not deciding which point of view wins but working to accommodate various points of view and reaching an agreed solution (Miller, 1993). In this spirit, Held emphasises the importance of civil society in this model, one needs 'active citizens', not just periodic voters (Held, 1993: 24). This rests on Habermas' idea of a civil society made up of many public spheres.

I want to address two particular aspects of the overall debate; the notion of the common good, which is central to the deliberative model, and the enshrinement of the normative ethic in the process rather than the outcome.

The common good

An important element of the deliberative democracy model is the collective acceptance of the concept of the common good as the goal. This means debate and will formation is not done on the basis of competition or interests (Cohen, 1997: 68). Cohen, after Rawls (1971) says the essence of deliberative democracy is:

- Public deliberation focused on the common good
- Equality among citizens ('political opportunities and powers must be independent of economic or social position')
- The system helps to shape the identity and interests of citizens 'in ways that contribute to the formation of a public conception of common good'

(Cohen, 1992: 69)

The idea of the common good as a focus for deliberation is obviously a controversial point, and at the core of the differences between different democratic philosophies. As Fuller puts it:

> The most obvious difference between republicanism and liberalism is that the liberal does not recognise any sense of collective interest beyond aggregated self-interest; hence, liberalism has found the idea of a 'civic ideal' elusive, if not a complete fantasy
> (Fuller, 2000: 19).

Bohman and Rehg (1997: xi) quote Schumpeter that 'there is, first, no such thing as a uniquely determined common good that all people could agree on'. This is a

fundamental tenet of the liberal democracy (and pluralist) school. And it is an important concern. Firstly, if one is to seek a practice based on the common good, one must recognise the distance between this and the current dominance of interest based negotiation and competition (the pluralist model). Deliberative processes based on interest-based arguments are not in keeping with the ideal being discussed here. So in other words the model is predicated on at least some semblance of communicative rationality – action oriented towards mutual understanding. Is this starting from an article of faith?

The GMO debate is probably not atypical in being so polar – you are either in favour of or against GMOs, and either one side or the other must win. Is it possible to assert that only one common good can exist here? Could there not be multiple common goods as there are multiple rationalities? This then raises the question of moving away from seeking certain goals per se, towards seeking certain standards in the process.

Normalising a process ethic

An important part of the ethic of deliberative democracy is that the norm is enshrined in the process rather than the outcome (Cohen, 1997: 73). More than this, Cohen says that the principle of 'fairness' should not be sought in outcomes; firstly this will not necessarily select a deliberative democracy approach (pluralism may be seen as fairer than corporatism), but also this approach of outcome-focus will necessitate an almost speculative, utilitarian approach to procedure, where procedures are selected with outcomes in mind.

Elster suggests that politics is 'public in nature and instrumental in purpose' (Bohman and Rehg, 1997: xii), implying that a communicative rational process is chosen to meet instrumental outcome-aims. I feel that this confusion of process and outcome aims is a cause of some of the confusion in the debate.

So instead, deliberative democracy concentrates on the procedure. I mentioned earlier that a corollary of Foucault's description of the normalising process of discourse is the inevitability of such normalisation. In this context, normalising processes rather than outcomes per se seems preferable:

> Because the relevant standard is an ideal procedure, correctness does not imply a realist or metaphysical conception of political truth or the common good.
> (Bohman and Rehg, 1997: xvi).

The interesting claim here is that the perfect common good doesn't have to be achievable as such, it simply must be aimed for. I think this fits well with an ethic of communicative rationality, where mutual understanding is the ideal objective.

So a process ethic relates to the Habermas-Foucault questions of normalisation of certain rationalities; a possible way forward is in acknowledging a normative process component while allowing for pluralism in outcomes. Cohen says much the same when he defends deliberative democracy against the charge of sectarianism, i.e. the accusation that it relies on a particular conception of 'good'. He argues that the ethic is not a universalistic good, but a political justification of the deliberative procedure when the agreed goal is democracy (Cohen, 1997: 80,81). Outcomes are not the point; deliberative democracy is an answer to the question of how can we best do democracy in the messy modern world.

As I said above, I think that the lack of clarity in distinguishing process and outcome aims is part of the problem in the theoretical debate (but will probably be analytically useful when I examine my data). It is by no means clear that it is possible to achieve process legitimacy and outcome legitimacy at the same time – if one chooses a 'best' outcome then one chooses procedures to achieve it (Cohen, 1997). The ethic of deliberative democracy is that the procedure is legitimising in itself, not for its outcomes. This should also address the issue of universalism; I would find it difficult to argue for a model that seemed to be predicated on an assumption of universal rationality or good. However, a process committed to seeking the common good in its specific context is much more defensible. In this way the inevitability of normalising a procedural ethic is recognised but is considered better than the equally inevitable alternative of setting an instrumental purpose that is in itself also normalising, and in a much more problematic way than normalising a democratic procedural ethic.

Not everyone agrees. Taylor argues that Habermas' underlying ethic of rationality is weak because it is purely a formal (procedural) ethic, and lacks the substantialist component it would need to fully justify itself (Taylor, 1991: 31). Taylor argues that

ecological problems for example, cannot be addressed by the adoption of communicative rationality alone; there will be debates about value judgements, and 'substantialist determinations of what constitutes the good life' will be needed (Taylor, 1991: 32). However, as I have just said, I would see setting a normative ethic for a particular outcome (an ecologically rational one for instance) as much more problematic than normalising the process. In fact, normalising an ideal democratic process seems the best way to avoid Foucault's seeming inevitability of a normalised result in a debate.

Another point is worth making. Bohman and Rehg (1997: xvi) say that if you have everyone participating well and arguments winning on their merits, then you'll get the best decision subject to the limits of available knowledge, and so you could say that the pure deliberative approach is the best conceivable approximation of the best decision idea, because it doesn't make false assumptions about availability of correct knowledge. This argument suggests that best process will lead to best outcome. This is an interesting argument, but one that is very difficult to test since one can never really examine whether a 'best' outcome was achieved. However, it does suggest that choosing to prioritise process norms should not necessarily be at the expense of the quality of outcomes.

So the ideal deliberative democracy model focuses on process, not outcome. This is where its ethic resides, and to me this is entirely defensible. It even seems to offer the best way to move forward from Foucault's (entirely valid) criticism of the normalisation process.

The other reason I like thinking about process-ethic and not worrying so much about outcomes is that it helps me with the potential problem of universalism. Despite saying that deliberative democracy is pluralistic wherein its members 'have diverse preferences, convictions, and ideals' (Cohen, 1997: 72), there is a sense that much writing on deliberative democracy is based on the idea of a single rationality, in the same way that Habermas' communicative rationality is open to the charge of excessive universalism. However, if one sees a normalisation component as inevitable, as I have argued, then the process is the best place for this to be situated, and it does indeed continue to allow for multiple outcomes and versions of the common good.

So we see in deliberative democracy potential solutions to some of the key drawbacks of excessively simple models of ideal communication and democracy. In particular, it begins the process of considering the path from current actualities in the direction of the posited ideal. However, the gap between ideal and achievable still remains in the assumptions of communicative rationality and the difficulties of aiming for this in the context of the (Foucauldian) analysis of power in discourse.

Environmental Discourse

I now want to bring the discussion to environmental discourse specifically, in order to interpret the implications of the above theoretical arguments for my specific case. For the key issues I have been discussing so far, environmental debates are particular for several reasons:

-Uncertainty and incomplete knowledge about the issues and the risks
-The cross-discipline nature of the issues
-The cross-nation causes, impacts, and solutions to many of the issues
-The difficulty in establishing clear cause and effect relationships

There is also the special role of science in environmental issues. Hannigan points out the first simple level of this relationship, that most if not all environmental issues have a scientific component (Hannigan, 1995: 76). Science is implicated in the causes of so many of the problems and is also seen as integral to any solutions. Thus, more than most issues, expertise and knowledge are central concerns in issues that also reflect much wider societal assumptions and values.

Foucault and Environmental Discourse

Environmental debate was not a subject of direct concern in Foucault's work (though of course science was), but some of his key concepts pertain very closely. In particular, Foucault's work on truth claims, governmentality, and bio-power has been interpreted for an environmental discourse context (see Darier, 1999). My discussion will focus mostly on the first two.

Firstly, obviously an analysis of appeals to truth and universality form an important part of my consideration of the debates here, and so Foucault's work on this subject is very relevant. Indeed, he himself made this link:

> [I]n fact, ecology also spoke a language of truth. It was in the name of knowledge concerning nature, the equilibrium of the processes of living things, and so forth, that one could level the criticism
> (Foucault, 1988 quoted in Darier, 1999: 13)

So here Foucault made the connection to what has become a significant discussion point in environmental sociology, the ambivalent relationship between environmentalism and science (see for example Beck, 1992; Yearley, 1991). Indeed the broader issue of constructivism versus realism in environmental sociology can be seen to have a connection to Foucauldian discourse analysis and archaeology of knowledge. The archaeology of knowledge approach is a strongly constructivist methodological statement, and I think that, given the central importance of contested knowledge, strong constructivism is the appropriate methodological stance for environmental sociology, whatever one's underlying metaphysical position.

The Foucauldian concept that is of most relevance to environmental sociology is that of governmentality. As I stated earlier in the chapter, Foucault's concept of governmentality moves away from the state-as-actor type of analysis to look at discourse – the practices, actors, texts and structures that go to make up the state and an analysis of which reveals its broad intent (if intent is not too subjective a word). Governmentality is broadly a concept of how power is utilised by a state, how legitimacy is achieved, and the role of knowledge in this (Darier, 1999: 22). This obviously makes it central to my concerns. To an extent it is a management of discourse process by which normality is defined, and hierarchies of knowledge are established. This concept fits well with Habermas' original theory of the transformation of the public sphere, with similar views on the government's management of information, manipulation of public, and so forth (see Lukes, 1999). However, Foucault's concept is a much more subtle idea. Instead of direct interventions to shape or constrain pubic opinion, governmentality is a much softer, pervasive process. What is legitimate, what is normal, etc., are not an accidental set, or even a universally true set, but are put there by specifics, in particular are guided by the work of governments in reinforcing their legitimacy:

> it is the tactics of government which make possible the continual definition and redefinition of what is within the competence of the state and what is not, the public versus the private, and so on; thus the state can only be understood in its survival and its limits on the basis of the general tactics of governmentality
> (Foucault, 1991, quoted in Lukes, 1999: 145)

This process has been clearly identified by researchers into participation:

> A major barrier to effective citizen participation in government decision making is the subtle denigration of nonprofessional knowledge in the education system and throughout government interactions
> (Cozzens and Woodhouse, 1995: 545)

Again, we are seeing how discourses are guided and certain values are normalised, and thus the challenges to a model of ideal communication.

Beck's concept of subpolitics recognises the subtleties of how power and policy making works in practice, but does not go as far as Foucault does in realising that the process is discourse driven and not actor driven. In other words, subpolitics still implies that actors are consciously chasing goals, and searching for the spheres where power actually resides is part of this, and so it is still quite an actor-based theory. Governmentality, on the other hand, recognises the importance of elements that Beck would seem to imply are fairly contextual, such as institutional arrangements, dominant discourses, established practices and so forth. This indeed is why governmentality is more than the discourse practices of other identifiable groupings, social movements for instance. Such groups may attempt to guide agenda setting and establish discourse legitimacy and hence outcomes, but no other group can influence such a wide and deep range of the overall discourse than government.

An additional Foucauldian concept that is relevant to environmental sociology is that of biopolitics. Biopolitics is the process of the state attempting to spread its control to all parts of life through means such as the shape of institutions, practices and observation (Rouse, 1994; McHoul & Grace,1993), through the day to day experiences of individuals. Governmentality and biopolitics (biopower) are not far

apart, and the common link is knowledge. The process is about developing commonly held ideas about what is normal, what is acceptable, what is legitimate, and specifically therefore, what constitutes expertise (Rutherford, 1999a: 44). So in other words we must see efforts to install certain knowledge systems, expertises etc. as rooted in more than discourse in the narrow sense of texts, but must include institutional arrangements and even arrangements of day to day living. Supermarkets are a simple example; one is encouraged to buy the products in an anonymous setting, with a wide range of choice. The consumer is strongly encouraged, forced almost, to trust that someone has ensured the safety of what they buy, and not to consider questions of ethics of production or environmental impact. The large supermarket with shelves packed with very many products from far away discourages communication, there can be no relationship between producer and consumer. This example shows the wider range of the biopower idea, beyond direct subjective actions of state 'personnel' per se. The analysis must extend to a wider discourse.

According to Habermas, law, and the state, are legitimised when the processes of democratic deliberation are seen to influence decision making. But Foucault's governmentality concept shows that legitimation is not transcendental, but due to discourse power. In many ways, the historic specificity underlying Foucault's analysis negates any possibility of a fundamental legitimacy concept (see my discussion below of normative versus explanatory theory). In governmentality, sovereignty and the law are synonymous, and legitimacy is based on popular obedience to the law (Johnson, 1993: 141). Habermas, in fact, has accused Foucault of positivism in his analysis of legitimacy on the basis of what is seen rather than what should be (Dean, 1999: 184). Beck, in arguing for the emancipatory potential of ecological modernisation, states that any opening up of discourse to scrutiny might lead to a realisation of the arbitrary definitions on which legitimacy is built and thus may lead to significant change through essentially a withdrawal of old legitimacy patterns (Beck, 1999: 91). This is an argument in line with the idea of the historic specificity of current legitimacy structures. In my view, Habermas is not allowing sufficiently for the non-transcendental nature of norms based legitimation.

I spoke earlier about Habermas' categorisation of expert-decision maker relationships into the three categories of decisionistic, technocratic and pragmatistic models (see *Expertise, Science and Governance*, above). Habermas

is talking about theoretical models, so the obvious objections about the mechanisms of communication, and the interference of interests and power are not particularly relevant to these theoretical ideals. Also, it is obvious from the previous section that Habermas' thoughts in this area developed through his work on discursive democracy, and that the pragmatistic model could be extended to include expert-non-expert relationships that involve a wider constituency than official and politicians. However, the fundamental problem that remains for all of these models is that they presuppose universal rationality, and imbue the expert (all experts) with the status of rational, unbiased entities. Interests and indeed values pre-exist, they are not constructed in social spaces. Similarly, no discussion of the construction of experts is entered into.

Foucault did not share these assumptions about the transcendental nature of rationality and reason, and so was able to investigate the role of the state in defining such concepts[4]. Rather than leaving the concept of a truth claim unchallenged, he recognised that such claims are better seen as part of the power play of a discourse. Truth claims not only have weight in themselves, but a speaker claiming to speak transcendental truth will also be seen to be 'above' such power plays and as such above rhetoric. This Foucault terms the speaker's benefit:

> If truth is outside of and opposed to power, then the speaker's benefit is merely an incidental plus. But if truth and power are not external to each other, as Foucault will obviously maintain, then the speaker's benefit and associated ploys are among the essential ways in which power operates. It masks itself by producing a discourse, seemingly opposed to it but really part of a larger deployment of modern power
> (Dreyfus and Rabinow, 1982: 130).

The process of the state trying to guide how discourses and knowledges are valued is the essence of Foucault's concept of governmentality, as I noted earlier. Actions taken by the government serve to reinforce its preferred discourse since they embody knowledgeable accounts of what are considered legitimate problems, and the goals and objectives to be pursued in addressing them (Rutherford, 1999a: 60).

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[4] The issue of universal reason was a fundamental point of debate between Habermas and Foucault, although the extent of their difference is not entirely clear. It has been argued that Foucault was ready to admit that he was more of an Enlightenment thinker than many saw him (see Ingram, 1994)

Implicitly then, institutions, decisions, ways of addressing problems, all embody ideology, at the very least in the form of implied hierarchies of discourses.

Environmentalism as a discourse is as good an exemplar of this as any other:

> Enviro-discipline, then, must methodically mobilize particular assumptions, codes and procedures to enforce specific understandings of the economy and society. They generate eco-knowledges, like those embedded in notions of sustainability or development, that also constitute significant reserves of legitimacy and effectiveness
> (Luke, 1999:145)

The battle over discourses such as ecological modernisation can be seen in the context of governmentality; the values are embodied in the practices and the institutional arrangements, and this is where a new discourse must work. The historical absorption of environmentalism into scientistic and expert-oriented systems can be seen as evidence of the dominant governmentality discourses at work. The fact that so much environmental debate, certainly at state level, has focused on large scale problems that require complex technical solutions, international political agreements and so forth, rather than seeing local activities regarding land, litter, daily living as environmentalism in the same sense, would support this. A simple yet illuminating example of how governmentality deals with environmentalism can be seen in the concept of the Environmental Impact Assessment (EIA), required by law in the EU and indeed in most countries for development projects. The EIA approach specifically requires that decisions be made by experts, with a certain role for consultation but only really over technical points and with no room for value discussions. The approach empowers the regulatory science system and reinforces the power of the expert. Rutherford argues that the particular strength of the EIA approach is that it comes across as open and inclusive in that it doesn't pre-specify outcomes, but of course it does pre-specify 'the institutional and normative fields in which actions and governmental programmes take place' (Rutherford, 1999a: 58). More generally, portraying environmental debates as science and systems problems, rather than value, political or ethical questions, is part of the same overall process.

Governmentality reveals more about power and discourse than Habermas' communication models can. Through governmentality we see that issues such as

who is an expert, how experts get to meet and debate, how people get to hear these debates, all these questions and more are not simple, and power intersects at all points. I will be looking in this study to find governmentality at work. In Foucault's version, expertise is clearly seen as a problematic phenomenon:

> Foucault sees a pervasive complicity of human science expertise in modern forms of domination and discipline
> (Rutherford, 1999b: 99)

In this case, expertise is seen as specifically undemocratic to the point of domination. But if it is relatively unproblematic to accept that expert knowledge may be used in opposition to democracy, it is more difficult to decide whether this opposition is inevitable.

Contrast this to Habermas' idea of the employment of experts, through the publicly organised contest of opinions between experts and counterexperts and monitored by public opinion (Habermas, 1996: 351). To an extent, Habermas sees experts as representatives from sub-systems bringing their messages to other sub-systems, and hence overcoming the problem of the blindness of self-enclosed systems (Habermas, 1996: 346). Thus it is possible to understand how expertise should not corrupt the deliberative process under conditions of communicative rationality. Of course, Habermas does recognise that this cannot happen in practice:

> As soon as specialised knowledge is brought to politically relevant problems, its unavoidably normative character becomes apparent, setting off controversies that polarize the experts themselves
> (Habermas, 1996: 351).

But definitions of expertise are not transcendental but based on norms supposedly derived from society and human practices themselves (Dean, 1999: 174). Indeed, as a part of governmentality, Foucault sees expertise as a means to empower a 'radical extension of the capacity to govern' (Johnson, 1993: 142). Also, transparent democratic responsiveness is not the only route to legitimacy. For example, Eder (1996) argues that the state and government lose their traditional legitimacy when it comes to environmental issues because their role is welfare of the people and distribution of scarce goods; so that their role is to utilise nature and it must be someone else's role to protect it – an external actor defending nature.

Beck's idea of eco-dictatorship also illustrates another path to legitimacy that does not rely on transparent democracy.

It is important to remember that Foucault's governmentality is a discourse concept, and so analysis should not be confined to direct actions of organs of the state. Johnson points to the influence of professionalism among expert groups as guiding the expertise oriented discourse. In other words, a crude separation of state and civil society is not appropriate. This is the whole essence of governmentality, it is almost a mechanism to explain the detailed action of colonisation of the life world.

Johnson cites the work of Starr and Immergaut (1987) in asserting the role of a moving boundary between definitions of 'technical' and 'political' issues as part of governmentality (Johnson, 1993: 150). The contest is over the extent of governance, and as government policy moves so do the definitions of what is neutral and governed by simple, value-free expert systems and what is political and open to political debate. To see this as a central part of governmentality is extremely interesting in the context of my discussion in Chapter 1 of the varying and complex definitions of political and technical in the regulation of GMOs under EU Directive 90/220.

Johnson asks the important question of where is expertise embodied. His answer, very much a discourse approach in my view, is that three points can be observed; commodities such as manuals, texts or expert systems; organisations and their rules and procedures; and individuals within the expert groups with their training and socialisation (Johnson, 1993: 144). If the individual category was extended to include 'non-experts' (in official definition terms) who are socialised to recognise and accept the role of experts, then I think the full range is captured.

As I discussed (see section *Science and Governance*), Giddens identifies the role of trust in the acceptance of expertise, and the role of 'access points' – where experts and non-experts meet, as the key moments in determining this relationship. In other words, intersubjective moments (in the life world), are where discourses of expertise are created and reproduced. As Hajer puts it, 'the argumentative interaction is a key moment in discourse formation' (Hajer, 1995: 54).

The role of the intersubjective moment in reproducing expertise and its power relations has been very well illustrated by Elliot Mishler in his famous study of the

discourses of doctor-patient interactions (Mishler, 1984). In his observations of discussions between doctors and patients, he saw that the doctors tended to speak in the 'voice of medicine', scientific, precise, while patients tended to use 'the voice of the life world', more general and contextual (Mishler, 1984, 63-64). If a patient wandered off on an anecdotal track or tried to explain their ailments in general terms, relating to their emotional lives, relationships etc, the doctor would bring them back to the point and make them say where exactly does it hurt, how long has it hurt for, and so forth. Ultimately, the fight between the discourses is won by the fact that the doctor must be persuaded to issue medicine or prescribe treatment, and so the patient must comply in order to get what they want.

So this is an example of expert discourse being imposed and reproduced in the intersubjective domain. But more than that, the notion of a voice based distinction between the system world and the life world is, I believe, very valuable indeed.

When I spoke earlier of Habermas' concept of the separation of the system and life worlds, I referred to the criticisms that the separation he described is too extreme and clear cut, and that in actuality the distinction is much more fluid, with 'cross-contamination' being the norm rather than the exception. However, I think talking of the system-life distinction in voices terms is very different. Mishler's voice concept, based on that of Silverman and Torode (1980), is that voices reveal 'relationships between talk and speakers' underlying frameworks of meaning' (Mishler, 1984: 14). So speakers using system or life world voices are referring to their belief in these worlds as reference points. A system world voice refers to the system world as a reference point, for example by saying that science produces truth because science is a system world for knowledge creation. The life world voice is, to some degree defined in opposition to the system world voice, it is the voice that denies the concept of the system world, arguing instead that there are no systems of abstracted instrumental rationality, that the life world pervades all spheres of human activity.

And thus I argue for a link in discourse between system and life world voices and rationalisation and colonisation of the life world. In its defence of instrumental rationality, I see the system world voice as a key element of the discourse of expertise in its daily action. This is very similar to Foucault's idea of the speaker's benefit mentioned above, the rhetorical advantages of claiming to speak on the basis of a system world are very similar to making a claim on the basis of

transcendental truth. To test this in the data, I will be looking for reference to system worlds as a credibility claim, in other words looking for the system world voice as a source of power in a knowledge debate.

Much of the purpose of this discussion is to set the context for the application of environmental discourse analysis in this thesis. I have tried to assert the importance of analysing discourse to investigate power and knowledge issues in a claimed attempt to democratise environmental decision making. I have argued for the necessity of examining the debate on the basis of multiple public spaces; how these spaces were created or used, what contextual or structural issues guided the debate, and the content of the debates themselves in these spaces. As I have just argued, much can be learned from looking at the textual content of intersubjective interactions, and I will develop this element in all of the data chapters. As well as examination of the discourse on a textual, micro level, a slightly more macro cut at the discourse is important, and the framework I intend to employ for this is based on the important work of Maarten Hajer.

Environmental Discourse Analysis – Maarten Hajer's Approach

Maarten Hajer's book, *The Politics of Environmental Discourse* (1995), is an analysis of the discourse of certain environmental policy debates in the UK and the Netherlands in the 1980s. His is interested in how such debates are 'won' in discursive terms, particularly when more than one way of looking at things clash and compete for authority. Hajer presents a social constructivist model of politics in which agency, intersubjectivity, and discourse are central. He argues that social constructivism has brought much to political analysis, broadening the discussion out from single problem-solution couplings to a consideration of which problems, and even which definitions, manage to establish themselves in the arena of policy and debate. This is a more comprehensive model than a 'mobilisation of bias' model, where actors are seen to come representing fixed positions in a clearly defined spectrum of argument (Hajer, 1995: 44).

The central tenet of Hajer's model is that 'social action originates in human agency of clever, creative human beings, but in a context of social structures of various sorts that both enable and constrain their agency' (Hajer, 1995: 58). Policy and knowledge formation happen through argumentation between people trying to

convince each other of their view of reality and, as I referred to in the previous section; 'the argumentative interaction' is a key moment in the formation, challenge or reproduction of discourses (ibid., 54).

Hajer's analysis of the discourse of policy processes is based on two key terms: story-lines and discourse coalitions. The concept of a story-line has a similar starting point to Foucault's notion of polyvalence in discourse, i.e. that any particular meta-discourse is made up of any number of smaller discourse units, and it at this level that analysis should focus. A story-line is essentially a package of coherent discourses that combine together to present a greater version of reality as argued by its proposers.

The strength of story-lines is clear; they allow the reduction of complex and multifarious discourses to comprehensible and manageable 'packages'. Also, they allow the combination of discursive elements from many specialisations into essentially an interdisciplinary unit, and, as more people start to use the story-line, can become ritualised and solid (Hajer, 1995: 63). In other words, the story-line is the cement that brings the various sub-discourses together into a argumentation package to which a wide range of actors can associate themselves: 'story-lines are essential political devices that allow the overcoming of fragmentation and the achievement of discourse closure' (ibid. p. 62). Discourse closure here refers to the reduction of particular discourse elements into simplified, closed, metaphors. Whole areas of knowledge and analysis that are too complex for people outside the specialisation to fully grasp can be packaged into simple units, often just a few key 'catch-phrases', which can then transcend the specific discourse and move around the story-line to be used by all actors. The negative corollary of this convenient discourse closure is the tendency for unresolved debate to be closed off, and whole levels of subtlety and diversity to be lost from sight. Also, a well established story line can tend to routinise institutional practices and in turn marginalise the developmental role of intersubjectivity (ibid. p. 58).

Story-lines can give credibility to both arguments and proponents of the arguments. An argument that is framed in terms of an accepted story-line, or that is presented through the right practices, will further its chances of acceptance. This leads to reinforcement of the story-line. This can go even further, to the point where a given discourse is translated into institutional arrangements. An example of this would be when government departments are rearranged and configured in accordance with

new thinking about integration and horizontal actions, in accordance, for instance, with the sustainable development model (see for example Department of Environment, 1997).

Hajer's second important concept is the idea of discourse coalitions. Hajer defines a discourse coalition as a combination of a set of story-lines, the actors who utter them, and the practices in which they are based. In other words, they are one step up again from story-lines, broadening the field of inclusion. In some ways, this level may be too broad to be of use, but I think that what is of use is the inclusion of the actors, the arguments, and the practices in the same coalition. This has more power than treating these aspects as separate, since it avoids treating language as fixed, or treating actors as sovereign subjects who are able to rationally accept arguments or adopt practices while standing totally separated from these elements.

Obviously, discourse coalitions cannot be arbitrary condensations of a number of diverse elements. The concept of discursive affinity is important; the various elements must seem to make sense, or 'sound right', with regard to each other and to the story-line as a whole. Also, there will be ways in which certain actors or practices will seem to go together better than others. A conservative scientist may well expect to find himself on the same side of an argument as a senior civil servant sooner than an environmental activist, but there is nothing absolute about it, and story-lines can bring together diverse groups of actors. The same actors can at various times and in various circumstances align themselves to completely different story-lines, and the concept of discourse-coalitions helps explain how this happens. Indeed, Hajer suggests that story-lines influence actors in their own production of knowledge, and that 'story-lines, not interests, form the basis of coalition' (Hajer, 1995: 66). This may be an over-optimistic view of the role of rationality. The relationship between knowledge and interests on the one hand and story-lines and discourse coalitions on the other is, I believe, a much more circular process than Hajer implies. I will return to this topic later.

Hajer's Case Study

At this point, I wish to briefly present Hajer's case study of the acid rain debate in the UK which took place in the 1970's and 1980's. It is a detailed historical study of policy development regarding acid rain over this time period, based on interviews

with many leading players, such as politicians, academics and civil servants, and analysis of key documents.

According to Hajer, the acid rain issue first came to the attention of the UK Government in 1972, when raised by Sweden at a UN conference in Stockholm (Hajer, 1995: 106). But the issue failed to find a foothold in the UK at this time; local SO_2 (the principal cause of acid rain) pollution figures had been falling steadily for over a decade, and generally air pollution was considered a low priority issue. It took until the 1980's for the debate to really gain momentum and for acid rain to become a big issue.

According to Hajer's analysis, this debate was essentially a struggle between two story-lines; the traditional-pragmatist approach, and ecological modernism. Acid rain became the emblem for the battle between these two story-lines.

The story-line that dominated industry and government thinking at the time was what Hajer calls the traditional-pragmatic story-line. The essence of this story-line was that acid rain was not a significant problem; that the UK could be proud of its record on tackling air pollution, based in legislation first put in place after the famous London smogs in the 1950's. Research had indicated that local levels of ambient SO_2 had been dropping since the 1960's, and this supported the claim that air pollution issues were essentially 'solved'. Beyond that, this story-line argues that pollution abatement is difficult and costly, and therefore it would be uneconomic, 'immoral' even, to spend money preventing pollution in the absence of concrete evidence of the extent of damage caused. In other words, there is nothing inherently wring with polluting the environment, as long as the damage remains within 'acceptable limits', which are defined by science and evaluated by economics. Thus pollution avoidance, considered to be end-of-pipe abatement as opposed to prevention, only happens when thorough research reveals overwhelming evidence that action is necessary or economically justifiable.

In the 1970's and 1980's, however, an alternative story-line started to gain a foothold in environmental policy thinking. Hajer calls this story-line ecological modernisation, or eco-modernism. This story-line stands in contrast to traditional-pragmatism on almost every point. Instead of focusing on the UK's 'proud record', eco-modernists take an international approach, and compare the UK record unfavourably to many other Western European states. But it is not just on the

specifics of air pollution and acid rain that the story-lines diverge. More fundamentally, the whole way of thinking about pollution is different. Eco-modernists argue that pollution is waste, and is fundamentally undesirable. Eliminating waste makes good economic sense, and thus economic gain and environmental protection fit together. In the case of acid rain, eco-modernists argue that symptoms such as tree loss and lake acidification cannot be assumed to be once-off manifestations of pollution, but rather, signs of more to come, of a general pollution problem. The argument suggests that we know more than enough about the problems to merit action immediately, and that this action cannot be simple remedial measures, but rather more fundamental restructuring of the administration system. Present structures of monitoring, legislating, policing and so forth, are not sufficient to cope with the new problems presented by environmental deterioration. Gouldson & Murphy present a useful summary of the ecological modernisation position. According to them, the arguments can be condensed into the following four themes:

- environment and economy can be successfully combined for further economic development with the aid of government intervention;
- environmental policy goals should be integrated into other policy areas;
- alternative and innovative policy measures should be explored; and
- the invention, innovation and diffusion of new clean technologies is essential. (Gouldson & Murphy, 1996: 14)

In the UK, the traditional-pragmatist story-line, as espoused most notably by government and the Central Electricity Generation Board (CEGB), was the dominant story-line. Discussion around acid rain was thus firmly rooted in their discourse. The two key elements of this discourse that served to block the entry of the ecological modernisation discourse were the key role of the science paradigm (i.e. scientific certainty) and the presumption that existing structures and approaches were sufficient to address any emergent problem. Actors for ecological modernism had an uphill task of changing the discourse sufficiently to even allow their arguments access to the debate. At key debates and meetings, the traditional-pragmatic dominance meant that arguments had to be framed in certain ways, such as reference to solid scientific evidence or to where in existing structures new action might be rooted. This meant that eco-modernists were forced, in order to gain a platform, to sacrifice basic elements of their position to be able to

communicate effectively. For example, if asked about scientific evidence, the choice between trying to frame their argument in these terms as opposed to attempting to challenge the central role of science altogether usually meant the former, thus undermining their position from the very start. The CEGB successfully cemented the position of traditional science in the debate by funding a study to be conducted by major bodies such as the Royal Academy, and announcing proudly that they would abide by the study's findings. Of course, this was very much to their own advantage, given both the time scale involved in a 'thorough' study, and the difficulties of establishing anything 'irrefutably' with regard to environmental cause and effect.

In the end, action was taken to reduce SO_2 pollution in 1986, by installing cleaning equipment in the chimney stacks of large power stations. Of course, this end-of-pipe once off measure fits very well into the traditional-pragmatic story-line, and indeed the CEGB and others stuck firmly to this story-line by arguing that they acted once the scientific evidence became 'solid'. They had, to some degree, done what the eco-modernists wanted, but had done so within their own story-line, and so had not given way to the new story-line.

So Hajer's story ends with the traditional-pragmatic story-line still in place. Ecological modernisation has made some inroads into the debate, but the defenders of the status quo seem to have been successful in accommodating the acid rain debate within their paradigm. The eco-modernists were effectively neutralised by the CEGB acceding to their demands regarding tackling acid rain, but doing so within the frame of the traditional-pragmatic story-line.

The dominant story-line is not easily replaced. Even as particular key actors come to convert in themselves to a new paradigm, the prevailing arrangements, structural, practical and linguistic, are framed in terms of the prevailing story-line. Actors who wish to challenge this must decide between 'softening' their position in order to accommodate the existing arrangements, or risk exclusion due to the perceived extremism of their position. Hajer's research indicates that the former choice was usually preferred in the UK acid rain debate.

And yet, over time, there was certainly a trend towards the new story-line. There was a discernible trickle of conversions by certain actors, and particularly in certain policy documents. Gouldson and Murphy (1996) argue that UK industry has largely

converted to the eco-modernist way of thinking, now that they have seen that certain regulatory interventions have been good for them in terms of profitability and indeed public profile. Thus, the final stage is that pressure on government to adopt the ecological modernisation approach comes from above and below; both from industry within the UK and from the EU through its policy documents and communications, which have very much adopted ecological modernisation over the last decade. In fact, it seems that, at least rhetorically, the ecological modernisation discourse is now in place at every level. The UK government is at this stage fully immersed in the language. Indeed, a similar process seems to be taking place in Ireland, where the eco-modernism paradigm (generally referred to as 'sustainable development'), is firmly established in political language, but has not yet translated into many meaningful actions (see for example, Department of Environment, 1997).

In general, how much these sentiments get translated into policies and measures remains to be seen. In Hajer's analysis ecological modernisation, even when getting into language, still seemed to fail to achieve concrete results in terms of altered structures, institutions, legislation, and so forth. However, the evidence seems clear of a shift in language, at least at a rhetorical level, to the discourse of eco-modernism. So what were the circumstances of this success on the part of the ecological modernisation discourse?

Over time, the case against traditional-pragmatism grew; both in 'real' terms; pollution getting worse, existing institutions unable to achieve anything; and in argumentative terms. Other European states were much quicker to talk in terms of eco-modernism; the Scandinavian countries as long ago as the 1970's, states such as The Netherlands about a decade later. This is not the place to ask why these states converted earlier; each particular situation has its own political and historic peculiarities. For example, Hajer discusses the growth of eco-modernism in Holland and links it to the prevailing Protestantism and also to a sense of defending against apocalyptic nature arising from the precarious dam system of the country.

And indeed this new story-line holds many attractions; existing structures can adjust to cope with environmentalism, no fundamental changes are needed, and it shows a way of accommodating environmentalism into modern capitalism, growth and profit are still on their thrones. This attractiveness should not be undervalued as a key factor in a story-lines chances of success. Also, as Hajer himself points out, ecological modernisation is very effective in neutralising radical environmental

critique by accommodating the moderate position and allowing the environment to become a political issue and action to be taken (Hajer, 1995: 31).

Another interesting question is the role of 'realism' in the debate, i.e. how much the pressure on traditional-pragmatism comes from the fact that environmental problems are 'actually' getting worse, as opposed to more constructivist explanations. Hajer's analysis observes the path of growing knowledge and positions, watching new knowledge arriving, and whether it is accepted or not. The scientific knowledge paradigm is reluctant to accept knowledge piecemeal, wanting instead definitive answers before it accepts anything. Obviously this does not suit environmental protection, and is not even in keeping with the internal workings of science.

A further important question remains unresolved: to what extent is ecological modernisation being used as a rhetorical ploy by actors who are not genuinely committed to environmental goals but are merely hiding behind a paradigm that protects the status quo?

Hajer's discourse analysis as method

The above examples show the central role of discourse in the action of subpolitics. Industry's relationship with the state puts it in a position where it is often able to define the discourse being employed, and so putting it in a very strong position from the outset. Hajer shows how this happens in practice. The position of industry is associated with the category of 'expert', and this gives it substantial power. Interestingly, this reveals a definition of expertise based on relevant knowledge rather than independence. Part of the subpolitical strength of industry is in defining discourses as well as presenting arguments within these discourses.

A new discourse attempting to establish itself will face a very difficult task, and ultimately will only succeed if it appears convincing, and more importantly attractive, to a wide range of actors. Story-lines work because they are loose enough to engage a wide range of actors, and can bring together people from very different positions. But of course there is a downside to this looseness. It could be argued that Hajer's discourse coalition model is insufficiently concrete to be of much analytical use. If eco-modernism is so vague that business, environmentalists, capitalists, socialists, industry and government can all feel

comfortable aligning themselves to it, then is the definition too wide to be of any assistance? Discourse coalitions are defined in retrospect, by looking at what actors did or said. It is not in any sense a predictive analytical device, and does not reveal the processes of coalitions coming together in the first instance beyond observing the connections in their arguments and interests.

These points aside, I find Hajer's approach very useful. It shifts the emphasis away from a simple look at the contents of the arguments involved, to a more central role for the discourse in which they operate, including all elements of actors positioning, practices, language and content. Actors no longer come with fixed positions. However, Hajer's concept of the interaction of previous interests and new story-lines is far from complete. A significant question about the model is the role of existing interests and positions as actors come to the debate. Are they as fluid as Hajer suggests? My data suggests a more circular model, where people interpret discourses and story-lines according to existing knowledge and interests, as well as being influenced by these new inputs.

Thus I see Hajer's model as a starting point. Hajer's discourse coalitions could easily be extended to bring in the general public (including watching whether or not the discourse allows them to directly participate). The definition of expertise becomes an element of a story-line, as dependent on reproduction practices as any other. Knowledge claims, problematisation, the formation of discourse coalitions, and the shaping of outcomes are all parts of the discourse.

Focusing on actual argumentative interactions to see these processes at work is, I think, essential. Only in the action of discourse taking place can any attempt be made to understand what is at work. However, an excessive regard for the importance of these moments in themselves would run the risk of neglecting the influence of elements of the discourse in the wider definition of discourse. The concept of story lines is very much in keeping with much of Foucault's thoughts on discourse and power, and this would imply that much of the 'fight' between two discourses does not happen directly in the interactive moment, but rather that this is the best place to try and observe this fight. In my study, for instance, if I observe two speakers in a public seminar attempting to persuade each other of the view, it does not mean that I am arguing that simple persuasion is taking place in that moment where the best speaker and the best argument will win. However, the point of observing this moment is that it is here that many of the wider elements will

come, at least to some degree, into view. Credibility claims based on a system world voice, for instance, might reveal something about governmentality and expertise and the relative power of different story lines. Equally, the use of certain types of arguments over others might reflect a recognition by the speakers of certain discourses (story lines) favoured by the audience; the use of scientific arguments to an audience of scientists would be a simple example. These are relatively simplistic examples, but are meant merely to show that a study of the interactive moment should not necessarily imply a suggestion that everything pertinent to the outcome is taking place right there in that moment, merely that it is the opportunity to study them.

Conclusions – Analysing Discourse to Address Power

A central interest of this thesis is how to enhance democratic participation in environmental debates. The empirical approach to this is to examine a real case wherein democratic participation in an environmental debate was a stated goal and to evaluate its success in this regard. The core question is to see how the ideal of deliberative democracy can work in the face of the practical challenges of complexity, uncertainty and the specifics of environmental challenges, and also in the face of more theoretical concerns such as normalisation processes and discourse power.

In this chapter, I set the context of modernity through the approaches of Habermas and Beck. Habermas uses the contrast between communicative rationality and instrumental rationality to characterise the pathologies of late modernity that separate people and their life worlds from the workings of the state, leading to alienation and a legitimation crisis. It is generally accepted that there are some damaging simplifications in this work, but much of value remains. In particular, I think the significance of the system and life world dichotomy is still very much in place, at least in terms of voices and discourse if not in terms of actual societal lines. However, Habermas' view of modernity lacks contextual detail, and it is Beck who is able to provide this through his risk society thesis. This sets modernity and knowledge much more clearly in the context of environmental concerns and risk, and also develops the general notion of changing politics through the idea of subpolitics.

Habermas' approach to communication also forms the basis for the ideal of the public sphere, which has been updated and developed into a very interesting debate around the concept of deliberative democracy. In my view, it is in the idea of deliberation and mediation for democracy that Habermas has finally brought together a theory that offers very real potential for seeing possible paths from current models to future ideals. But the idea needs development. Of particular relevance to my themes is his lack of engagement with the issues of specialised knowledge and how this might be accommodated in the deliberative democracy model.

The need for specialist knowledge is strongly suggested by the complexity of many environmental issues, but this does not necessarily require the current tendency towards system world voices that deny the constructed element of the issues. Participatory models of science might show possible solutions to this.

One clear strength of the deliberative democracy idea is that it is centred on a plurality of institutions, public spheres, and discourses. In this way it can be a model of politics that is not confined to an over-narrow focus. Beck criticises much political theory for failing to look beyond the conventional political institutions for sites of political relevance, i.e. for failing to address the subpolitics thesis (Beck, 2000: 91). The deliberative democracy approach, even if to date its focus has been relatively narrow in this sense, does not have to fall into this trap. Its connection to a discourse based approach is strong, and this allows flexibility and openness in its range. It can go wherever it sees the relevant action to be.

An important theoretical issue in the deliberative democracy model is the role of power. In keeping with the communicative rationality underpinning, Cohen (1997: 74) argues that deliberative processes should be power free. However, as Foucault argues, one must separate resource power and discourse power. Keeping resource power out of deliberative democracy is an important ideal, even if it does face considerable practical objections. Cozzens and Woodhouse, for example, point out that unequal access to expertise is generally observed in knowledge-oriented debates, and they argue that a strongly pluralistic and antagonistic system is most likely to be fair (1995: 544). This is the approach of admitting the inevitability of power distortions and attempting to balance them out.

The second element, however, is that of discourse power. Foucault argues that all versions of discourse or rationality contain normalising elements, based on the dynamics of power and the constructing discourse that lie beneath them. In this sense, one can never create an ideal *tabula rasa* for deliberation and opinion formation, norms will always be present. This is a theoretical issue that deliberative democracy has not fully addressed yet, and this is why the communicative action model cannot accommodate the context of stratified knowledge. I suspect that while a resolution is difficult to imagine, a way forward exists in the notion of enshrining such norms in the process of deliberation while allowing more freedom on possible outcomes. The problem remains, however, as to how power imbalances in knowledge, expertise and discourses can be addressed while maintaining the important ideal of the common good as a goal, i.e. how to handle power in a corporatist as opposed to a pluralist model.

So discourse analysis offers the opportunity to bring together the important elements of what makes debate and deliberation good or bad; the actors, the institutions, and the content of the debate. Issue such as access, knowledge, expertise, as well as storylines, discourse coalitions and governmentality can all be viewed together in an attempt to discover what are the key components and influences in a particular debate process. Hajer's discourse model, with storylines, discourse affinities and discourse coalitions, is much better at dealing with the actualities of stratified or even just segmented knowledge in debate, than the more abstract and removed ideas of deliberative democracy in its generality. However, Hajer's analysis lacks some detail in the action of the discourse processes, and this will be an element I will hope to add from my own case study.

I will be seeking the range of public spheres in the debate, examining how they operate in terms of access, normalisation and discourse patterns. I will try to test for the presence of governmentality processes as a particular case of normalisation or power over discourse. In particular, in my examination of a debate where specialised and stratified knowledge is a strong issue, I will want to see how this influences the process. And then, of course, this broad examination of the deliberation will have to be linked with outcomes and governance issues.

Both Beck and Habermas are interested in where politics will go, particularly in the light of the emergence of new social movements, legitimation crises, and environmental challenges. They both agree on the broad thesis that there is an

observable trend towards the opening up of institutions and systems to scrutiny. Reproduction of systems requires legitimation, and once opening up commences people want to see their values reflected. When people see arguments within systems, the clear existence of uncertainty, and strong questions as to where power and sovereignty reside, they come to realise that these supposedly instrumentally rational systems are more political than had been admitted. This process of opening up offers considerable potential for future change. However this is obviously a hypothesis that needs to be empirically tested, and one question I will be chasing through my data is how much of this opening up process is in evidence.

As I stated at the beginning of the chapter, my interest is in the operation of democratic participation in the context of complexity, stratified knowledge and expertise. Beck's concept of risk society contrasts with Hajer's concept of ecological modernisation in that the former signifies a much deeper challenge to established democratic practices and legitimacy than does the latter. For one particular environmental issue in one particular place, I want to try to illuminate what are the implications for democratic goals of the current expert based system, and whether or not the current system seems robust or in a process of flux and possible collapse.

This thesis is a discourse analysis of the genetically modified food debate in Ireland. The justification for the emphasis on discourse has been argued in this chapter. If the aim is to examine how expertise features in the debate and how power balances between expertise and democracy, I have strongly argued that this is done by looking at the contests over establishing the discourses and the storylines in which the debate should be fought. The most obvious arena for this process is the official national consultation process on GMOs, and this will be a major focus of the analysis. However, I have claimed that governmentality is a much more subtle process than the direct appointment of adjudicating panels or participants in consultation processes, and this claim can only be tested by looking at other elements of the public debate. In particular, since the target of my investigation is a 'public' debate, I will strive to find the social spaces where this public debate takes place. As will be seen, this is not necessarily as simple as it sounds. In the spaces I do locate, the object of my scrutiny will be the patterns of discourse, how they are established, reproduced or challenged, and by whom. In keeping with Habermas' theory of discursive democracy, I will also consider some

pre-discursive spaces where opinion formation is started in advance of the process of will formation. These include situations where people's own opinions are being influenced (through explanatory leaflets for example), or situations where actors are preparing to participate in public spaces or being formed in some way as participants.

My discussion of Habermas and Foucault around questions of democracy and power allows me to assert two points about the way forward for this study. The first is a justification for discourse analysis as the appropriate approach, since both of these theorists agree that this is where practices reveal their underlying norms and their patterns of reproduction or challenge to norms and to power and structures. The second assertion is about the treatment of power in the analysis. Taking Habermas' version of power as a corrupter of a normative ideal would be inadequate, since power is intertwined with this norm itself. Looking for power in discourses must mean in the Foucauldian sense, seeking out patterns in discourses where power can be seen to shape them and where power can be seen to be transmitted and enacted by them.

My ultimate mission is not far from Habermas' own; 'asking how a truly democratic society is possible under contemporary conditions' (Dean, 1999: 167). In particular, the recent trend towards attempting to enhance participation in environmental decision making interests me, and my case study is the exemplar of this trend. I want to consider how a project of enhancing participation can fit with the co-existing goals of allowing expert knowledge to enhance the quality of deliberations, and I want to ask whether a participation-oriented ethic is in opposition to an expertise-oriented ethic, or whether a balance is possible.

CHAPTER 3 METHODOLOGY

Social Research

The main contemporary debates in social research methodology relate to the emergence of social research from a paradigm of science and positivism to something new. Even qualitative research is not that distant from these historic origins:

> At one time, virtually all qualitative researchers were explicitly committed to the idea that the aim of enquiry is to depict reality in its own terms, independently of the researcher and of the research process; and to the belief that this could only be achieved by close contact with it, for example through participant observation or life history interviewing.
> (Hammersley, 1997: 2.8)

The belief in sociology as a science that can unearth social reality is much less prevalent today. Comte's original project of making sociology a science modelled on the rules and epistemologies of the natural sciences is now thoroughly out of favour. As Silverman puts it:

> Much of the textbook debate about the scientific status of sociology is somewhat fatuous. Few researchers would now dispute that the cultural world has different properties from the natural world.....It is an increasingly accepted view that work becomes scientific by adopting methods of study *appropriate* to its subject matter
> (Silverman, 1993: 144)

Silverman's argument here is based on using the terms scientific to mean reliable, good quality research, as opposed to defining the scientific method in classical terms of reductionism and empiricism. Using the term scientific as a normative judgement of quality may not be appropriate, but the underlying argument, that studying the social world is of course different to studying the natural world (to use this distinction a little roughly), stands. And indeed, as well as a call for different methodologies to be applied in each, I also see this as a call to move away from

the paradigm of strict, homogeneous rules of method. To me, such a paradigm is not in keeping with the idea of appropriate methods. As Wolfe puts it, 'All forms of methodological monism reduce human beings to one of their capacities or another' (Wolfe, 1997: 39).

For me, the new paradigm of research is well encapsulated in C. Wright Mills' term, *the sociological imagination* (Mills, 1959), which captures the spirit of the social researcher as, not a scientist, but a kind of special participant. Adrian Peace, for instance, argues that the social researcher can 'in retrospect and from a distance' gain understandings as to what exactly happened in a situation in which the active participants, including the researcher, were unable to discern the patterns contemporaneously (Peace, 1993: 202). Mulkay sees sociology's task 'not as that of reporting neutrally the facts about an objective social world, but as that of engaging actively in the world in order to create the possibilities of alternative forms of social life' (Mulkay, 1991: xix).

I will reflect more on the practice and roles of social research in the following sections, and I hope these discussion will reveal what I mean about the role of social research and the concept of the sociological imagination. I want to open this discussion with a look at one of the central tenets of the paradigm shift, the growth of constructivism.

Constructivism

A central debate in environmental sociology and also in the sociology of knowledge is the constructivism-realism dichotomy. Much environmental sociology for instance debates the issue as to how much realism is appropriate in theorising environmental awareness, movements and politics. Writers such as Beck argue that environmental issues only come into existence when they are known about, i.e. they are rooted in knowledge, and yet the risk society thesis is based on societal changes caused by growth in exposure to risk, i.e. a realist impact (see Chapter 2). The constructivist approach to environmental sociology has focused on the role of knowledge, particularly science, and changing attitudes to nature and pollution through education and the media in particular (see Hannigan, 1995). Defensiveness against constructivism within the scientific community has been substantial (see for example Wolpert & Richards, 1988). I am not going to attempt

to solve this debate here. From my position, I think two important points need to be made. Firstly, I believe that any branch of sociology that is primarily concerned with cognitive issues should be, almost by definition, based on a constructivist standpoint (see Irwin, 1995). The value of social research on cognitive issues comes from its ability to step outside power dynamics such as truth claims. If it is unable to free itself from the confines of such strictures then its value is considerably lessened.

Secondly, I agree with Bloor's distinction between constructivism as a methodological position and constructivism as a metaphysical standpoint (Bloor, 1991) One may posit an out-there reality or one may not, and one's opinion on this need not influence the issue of how to conduct social research. And from a methodological point of view, as I have just stated, I think social research is only of value if it is constructivist; its strength is the ability to question all claims.

Thus what I am advocating, and adopting for myself, is a strongly constructivist methodological position. This means going as far as possible in freeing myself from knowledge paradigms that confer primacy on any particular body of knowledge. The obvious example of such a body is science. Dant (1991) argues that Bloor and many other still can't avoid imbuing science with a special status, and Irwin argues that the same criticism applies for writers such as Beck and Giddens, who tend to treat science as one homogeneous entity (Irwin, 1995: 169).

I believe that the practitioners of the sociology of scientific knowledge (SSK) have succeeded in convincing that science embodies practices, and these practices are human (life world). My project is not one of SSK; if I can draw a simplistic distinction, I am interested in looking at knowledge in its *use* rather than in its *creation*. I want to treat 'science' as a legitimacy claim in knowledge debates, viewing science as 'one story among many' (Irwin, 1995: 168). To do this, the first vital step is to treat these competing claims as equals in the first instance. The best way to do this, I believe, is through discourse analysis.

Discourse Analysis Methods

Discourse analysis as a methodological concept is not easy to define. Broadly, it has evolved as the school of social research interested in analysing texts and talk

(Silverman, 1993: 120). However, the approach has evolved beyond simply being the analysis of texts and transcripts, though it is still very strongly based in language. The style of discourse analysis that I adopt starts from that of Maarten Hajer who, I believe has developed a very strong methodological approach to investigating the workings of environmental politics.

Hajer starts from Foucault's model of polyvalent discourses. This is the notion that a particular discourse cannot be viewed from above as a coherent unit, in actuality there are any number of smaller discourses constituting the overall whole. Foucault took this important step of moving away from an emphasis purely on structure in political analysis and instead looked at these smaller discourses interweaving to form the overall discourse. However, Hajer argues that Foucault's model leaves unresolved questions regarding the issue of the role of the subject. Hajer does not adhere to the notion of a sovereign subject interacting with passive discourses, but rather to a more active concept of discourse (Hajer, 1995: 48). Hajer draws from the social psychologists Billig and Harré to develop Foucault's ideas into a more interaction-oriented model. He argues that debate, argumentation, knowledge formation, and ultimately policy formation (consensus), all take place principally at the level of social interaction (intersubjectivity). Foucault seemed to remain ambiguous as to the role of the subject, or the self, whereas Hajer does not propose to separate persons, roles, and arguments. Discourse is language and more, and the keys to reproduction are social activity and practices.

So the result is an analysis of discourse that is defined in a wide sense; texts, interactive moments, institutional arrangements, and actors, all form part of a particular discourse. In this I agree most strongly with Hajer. I also agree when he says that discourse analysis aims to 'observe how seemingly technical positions conceal normative commitments' (Hajer, 1995: 55). For me this encapsulates what discourse analysis is all about; where seeing how the questions are defined is as important as seeing what answers are given.

Some areas where I feel I need to go beyond Hajer's approach, however, include the explication of the role of power, and the action of discourse stability or change. Hajer certainly addresses power implicitly (see Chapter 2), but I will attempt to more explicitly track power dynamics through inputs and outputs, i.e. who or what achieved 'success' and why. Additionally, while Hajer emphasises the role of the interactive moment, his actual analysis does not strongly emphasise this.

The means to do all this is a broad discourse analysis of the debate on GMOs that has taken place in the past few years. Following Hajer, discourse will be taken to mean media texts, official texts, events, institutional arrangements, and the opinions and perspectives of various actors. How can a researcher examine such a discourse? The strength of discourse analysis is in the opportunity for a researcher to step back from a issue and examine it from many perspectives. Nothing is taken for granted. As Foucault argues, discourse analysis should not take the self-definitions of field-actors for granted. Using an archaeological metaphor, Dant describes Foucault's position thus:

'[T]he researcher should not presume links between artefacts on the basis of what is already known of them – all that is really available is knowledge of where they were found. Connections between layers may be more significant than connections in place. On the other hand, the inadequacy of an account of the smooth passage of time through apparently successive layers, may be realized only by recognizing the similarities between the structure of artefacts found in the same plane.' (Dant, 1991: 130)

So a social researcher can undertake discourse analysis from a *special perspective*, i.e. can become more than just another participant or casual observer by drawing together different points of view, different texts and observations, and building up a more complete picture than any simple glance could afford. One excellent example of this, to which I have referred earlier, is the research of Adrian Peace. His study (Peace, 1993) was of an environmental oral hearing process in Southern Ireland, where he was able to combine interviews with participants, his own observations at the events, with analysis of texts and records to draw valuable conclusions beyond what would have been possible for any single simple observer. Another example is the work of Nina Eliasoph. Eliasoph (1998) spent two and a half years in close contact with the members of a number of suburban groups – a volunteer group, an activists group and a recreation group, learning about their activities, their interests and motivations, and their political views and aims. As well as the long term close contact, the richness of the data set was enhanced by the employment of a mixture of collection modes; semi-structured interviews, observations, surveys, and, interestingly, tape recordings of people discussing filling in the survey questionnaires to capture their interpretations. The result is a vivid portrait of a number of small communities, a worthy output in itself, combined

with an insightful and strong theoretical exposition based on the data. It is also an excellent how-to manual for up-to-date qualitative methods, using a number of perspectives, insider and outsider, to build up a picture of the subject that is much richer than any simple observation could yield.

In summary then, the kind of discourse analysis approach I am proposing positions the researcher as an observer, with the perspective of both an insider and an outsider. By pulling together data from various sources, a much more comprehensive perspective is possible than that available to most participants or casual observers. As I said at the beginning, this is my interpretation of the idea of the sociological imagination:

> 'The sociological imagination enables us to grasp history and biography and the relations between the two of them.'
> (Mills, 1959: 6)

Different research will achieve different access to histories or biographies, and to different perspectives within each of these categories. In my research, through the cuts at the data set, I focus primarily on histories, but histories from several perspectives. Ultimately, the outcome will be my perspective, but this will be different to what it would have been had I not undertaken this analysis as a social research project. This is what I have been referring to as the special perspective.

The Data Collection Process

This project uses discourse analysis, defining discourse in the wide sense of texts, events, institutional arrangements and contexts (Hajer, 1995). To analyse all these elements of the discourse, obviously a number of data collection method have been employed. They are:

- Interviews
- Observation
- Media analysis
- General document analysis

As I have said, the range of methods was necessary to support my attempt to trace the issue 'across society'. The idea has been to build up an overall picture of the story and then focus in on 'cuts' at the whole data set, quasi-case studies or stories, perhaps. As will be seen from the data chapters of this thesis, different cuts at the issue tended to involve a particular data collection method more than others; following the people active in the issue meant interviews, considering the media role obviously meant media text analysis, and then the debate events as a case study again defined the appropriate method, participant observation. But the different methods and their data all informed each other, so for example interview data supports the observation data by revealing what other participants thought of the processes, or media texts sometimes revealed more about particular activists or particular events, and so forth. I think this approach has been good for the depth of the analysis, for enriching the analysis through the multiple perspectives and through a form of triangulation. Details on the content of the data set are given in Appendix 1.

It is worth pausing to consider why other methods were not used. I have already explained my commitment to qualitative methods, so I will not dwell further on why surveys or other such approaches were not employed. One data collection method that may have been employed effectively but was not is that of focus groups. At an earlier stage in the project, I did specifically consider the idea of using focus group methods to collect data, in one of two ways. One idea was to talk to people who had been at a debate event listening to various invited speakers, maybe even to set up specific debates and facilitate them so that I could ask questions of the audience. The second idea was to use more 'traditional' focus groups, recruited in some way, wherein I would present some of the issues and ask for reactions and comments. In both formats, the idea was to watch persuasion, argument and learning as it happened, to see what arguments 'clicked' with people and try to understand why, and to look at the dynamics of listening, discussing, and forming opinions.

In the end these ideas did not come to fruition, largely due to issues of practicability and containment. There would have been problems of representivity, and it would have required a considerable body of data to have substantial value. This approach probably would merit a full project of its own, and in any case a shortage of data has always been the least of my problems. So ultimately, the methods I used were

good at chasing the issues of interest, there were certainly other good methods available to me, but manageability required drawing a line at some point.

Interviews

This project did not involve a particularly formal campaign of interviewing. There was a cluster of interviews conducted when I needed to speak to the relevant regulators for the ELSA study (mentioned in Chapter 1), and another cluster when I decided to 'pilot' my approach by talking to people on the periphery of the debate in terms of their involvement, but apart from that interviews were done fairly sporadically over time. However, I don't believe that this approach to the scheduling of interviews has had any detrimental impact. All of the interviews followed very similar approaches. There is set of issues and topics common to most of them due to the nature of the project, but otherwise I was keen for the discussion to relate to the person being interviewed, and so I would have designed my broad outline structure for each one individually. And then in conducting the interviews my style was to be flexible in letting the discussion go where it would. For the most part, I think this was successful in elucidating valuable data. All interviewees discussed their own career in the issue, their main arguments, and their perceptions of the wider debate and other participants.

I conducted 11 interviews for this project, ranging mostly from 40 to 80 minutes in length. All interviews barring one were tape recorded. Formal complete transcripts were not made of all the interviews. More commonly, I tended to listen to tapes a few times and make detailed notes, and then fully transcribe certain extracts of particular interest. The reason for this was to avoid the risk of ending up with transcription texts rather than the interviews themselves as the data set. A degree of depth is lost if the focus of analysis shifts from the interview itself to the transcript, and I think that using a mixture of the tape, notes and transcript serves to minimise this effect. It also discourages the tendency to use interview transcripts merely as sources of nice quotes to support arguments. On the other hand, a complete transcript does lend itself well to systematic coding, and relying more on a heterogeneous record of an interview may lead to more questions of validity. However, as Coffey and Atkinson point out; 'coding should not be seen as a substitute for analysis' (Coffey and Atkinson, 1996: 26). For the way I used my data set in the project as a whole, which was always heterogeneous and broad, I believe that the approach I took was the most appropriate.

Observation

From previous research work, I had experience of participant observation and so I had a style that had evolved over time and was fairly stable. This approach essentially consisted of frantic note-taking in a jotter at the event, following the general content of speeches, questions and so forth, adding some additional observations about demeanour, atmosphere, crowd responses and so on. Anything that was captured as a direct quote would be marked as such. After the event, these notes were transcribed more or less exactly as they were into word processor documents. These documents were coded in Nudist (see below), through an initial round of fairly free bottom-up coding, taking themes from the data, and then refining these into a smaller set of common codes across the observation events (and to some degree across other data also). As is discussed in Chapter 6, this bottom up coding did reveal some interesting points that went on to be significant theoretical investigations. But also, it is fair to say that the formal coding process did not reveal as much as I might have hoped for, and I think ultimately I got more value from the data through less structured approaches.

Media Analysis

The bulk of the data constituting media texts is newspaper articles and letters. This is largely due to the issue of ease of access; newspaper articles are easily collected on a day-to-day basis or through internet archives. Television and radio extracts are more difficult to collect, though many are now available on various media websites. Also, daily searches for newspaper articles are much easier, particularly through the internet, than those for other media. This is especially so in light of the fact that I don't have easy access to television. Much of the radio data that is discussed in the media chapter comes from a particular flurry of activity, a particular week of an emerging controversy where radio coverage was very frequent and thus easier to track (see Appendix 1).

Over the few years of this project, there have been literally thousands of newspaper articles on the subject in Britain and Ireland. The issue of selection then becomes a very important one in reducing this mass of coverage to the few dozen articles I primarily used in my analysis. Two dangers arise through such a selection process: firstly, going from such a large number to a small one creates a potential issue of selectivity; and secondly the scanning of some papers more frequently

than others may have lead to a bias in coverage across the papers. These are real problems and not easily answered. My defence is simply this: the project has never meant to be quantitatively representative in terms of data inputs, instead trying to capture the 'essence' of the debate under scrutiny. The centre of the newspaper-based debate in Ireland was certainly the Irish Times, and it is appropriate that articles from this newspaper should feature more than other, if only by dint of proportionality. Many other papers are well represented, and indeed I went to some efforts to trawl through archives of a number of papers to allow their representation in the data set. The only caveat on this approach relates to the issue of readership. As with the debate events, prominence in my data set should not necessarily be taken to imply prominence of an event or article in the overall debate. About 285,000 people read The Irish Times every day, compared with say 612,000 for The Irish Independent, 423,000 for The Star, and 233,000 for The Examiner (Independent Newspapers, 1999). However, my aim was never to represent press coverage in proportion to its prospective audience. Instead, I was more concerned with capturing the essence of the debate in terms of its content and its dynamic over time. This inevitably meant concentrating on journals with the most coverage, such as The Irish Times. Articles that formed more significant elements of the data set were chosen for reasons other than their publication outlet.

Finally, a word on ethics. I have not thought it necessary to spend any time on an abstract discussion of the debates around ethics in social research, largely because I think it is fair to say that my project raises relatively few potential ethical concerns compared to many. I was observing a public debate, and, apart from my interviews, all texts and events were open and in the public domain. While few of the participants in the debate events would have been aware of my presence or my purpose, they were public debates open to observers, and indeed I do not even attempt to identify any audience members or attribute particular comments or actions to them. All interview subjects were fully aware of the nature of my study, and in fact the majority were well used to giving interviews and were happy to speak on behalf of their cause and their opinions.

I want to move on now to discussing my process of data analysis. Since, as I will discuss, this analysis was to a considerable degree computer based, I will first make some comments on the growth of computer based analysis in qualitative research and its implications before outlining the specific details of my own approach.

Computers in Data Analysis

Computers are becoming more and more commonly employed in storage, organisation and, most interestingly, analysis of qualitative data (Silverman, 2000; Fielding and Lee, 1993; Kelle, 1995). Seale says the advantages of computers are speed at handling large volumes of data, the potential for enhanced rigour through counts and other checks, facilitation of team research, say through standardised coding schemes, and usefulness in sampling (Seale, 2000: 155).

Computer based data analysis is based on techniques for coding texts. Coffey, Holbrook and Atkinson argue that computers can't do any kind of coding differently from a person, except that they can do it very quickly, and so allow for ease of systematic analysis, analysis of many alternatives, and handling of large data sets (Coffey, Holbrook and Atkinson, 1996: 7.2). Such speed is obviously attractive, but the downside is the risk of inflexibility and ending up with an overly narrow analysis of the data set (Seale, 2000: 163). Coffey and Atkinson also warn of this danger, and stress that computer packages should be seen as an aid to analysis rather than a driver of research strategy (Coffey and Atkinson, 1996: 187). I will discuss my own experiences with specific reference to my use of one particular qualitative analysis software package; Nudist.

Nudist is an software package for analysing qualitative data sets, the name being based on an acronym of 'Non-numerical Unstructured Data by Indexing, Searching and Theorizing'. I won't go into the details of the software here, save to say that its use is based on importing text documents into a project file, and applying new or existing coding systems to these texts on a line-by-line or paragraph-by-paragraph basis. Analysis can then be performed in a multitude of ways by comparing, combining or otherwise investigating the codes applied. In the simplest manner, all text elements that have had a particular code applied to them can be viewed together, or all text elements that have, say, two different codes, or one but not another, or one near another, and so forth. Reports can be made on various combinations of or relationships between codes, and indeed these reports can then become part of the data set (see QSR, 1997). Memos can also be stored that allow notes on project progress, the evolution of ideas, and the development of the analysis to be incorporated in the project data files, and this is a very powerful way

of tracking data usage and checking the rigour of analysis and conclusions (Barry, 1998: 8.4)

Good detailed descriptions of Nudist, its operation and its strengths and weakness, are readily available (Barry, 1996; Weitzman and Miles, 1995). Rather than go over these issues, I will instead concentrate on discussing my own experiences with the software. To do this, however, I must first introduce a more general discussion on my data analysis approaches.

My Approach to Data Analysis

A major issue for my project was the problem of how to extract maximum value from such a large, heterogeneous data set while maintaining rigour of representation and analysis. The potential 'whole' data set, in particular the body of media and other texts, was far too large to allow a comprehensive qualitative analysis of any depth. A second consideration guided my path. Since I was interested is a sort of meta-analysis of a particular discourse through time, i.e. two years or so in the life of a particular debate with all the major events, actors and texts that that incorporated, there would be value in an analysis that allowed a sense of story to emerge, to explicate the events from certain points of view or with emphasis on certain elements. Thus I decided that an appropriate project structure would be based on cuts at the data from different angles. Some cuts could be important sub-stories of the overall discourse, and the most obvious of these is the formal national consultation process that formed such an important element of the whole story. Others could concentrate on particular spheres of the debate, and the ones I chose were the media coverage of the debate, and public debate events in which argument, discussion and persuasion could take place in front of, and involving audiences. Finally, an important perspective would be that of the most involved actors, say significant NGO actors, regulators and so forth. These considerations have guided me to the four cuts that constitute the four data analysis chapter of this thesis.

As already mentioned, analysis approaches were somewhat different for each type of data in the set. However, the overall aim was the same, to attempt to allow the data to suggest its own patterns and points of interest in the first instance, and to

search for data elements that seemed to relate to specific themes of interest as informed by my theoretical approaches in the second.

For the event observation notes, the method was based on putting the text files of the notes into Nudist and going through a process of bottom-up coding, followed by a refined coding exercise based on consideration of what seemed to be coming from the initial pass. So if one or two of the files showed a lot of coding for, say, the use of life world language to allay risk concerns, the other files would be revisited to see if this featured there also. Additionally, a certain amount of more top-down coding was undertaken, looking in particular for say citation of scientific basis as a legitimacy claim, or searching for the working of structural power elements. Of course much of this should have come up in the bottom-up coding, and sometimes it did, but separate passes with particular themes in mind allowed me to collect and consider evidence on particular points in a more coherent manner.

The interview data was less systematically coded. Analysis mostly commenced with repeated listening to the interview tapes, followed by rough outline transcription to capture the flow and the main themes of the content. Two interviews were transcribed in their entirety and coded in Nudist as a kind of pilot experiment, but I decided that this approach was too rigid for my preference. Since I wasn't dealing with a very large number of interviews, I wasn't seeking any kind of representivity across a range of respondents, and the interviews formed part of a much larger heterogeneous data set, I felt, and feel, that the less rigid analysis I undertook was of greater value. In particular, my approach of taking cuts at the data, i.e. to some degree isolating and telling particular stories, was better served by an approach based on the structure of arranging data around these stories rather than by more simple line based coding with interviews.

Media and other document texts were analysed through a mixture of coding in Nudist and less systematic absorption. An initial set of about 30 texts was fully coded on a bottom up basis in Nudist, and this generated a set of codes that partly informed ongoing analysis of additional texts, though there was always, I hope, room for completely new findings to emerge.

Nudist formed an important part of my analysis process, but as can be inferred from the heterogeneity of this approach, it was not central to the analysis. My experience was that in order for Nudist to contribute to the full extent of its

capability, I would have to have been much more systematic in my employment of it in the project. For instance, I wasn't able to avail of the value of using the memo system to track the evolution of ideas and development of the analysis since I was not using Nudist for all parts of the analysis. However, I did find the software useful for managing the data and disciplining me to undertake what I feel was good quality bottom-up coding and comparison of certain parts of the data set. It was also very useful for preserving different analyses and trains of thought to be returned to at other times. To fully exploit its potential, I would have needed to undertake a much more formal and homogeneous analysis process. However, as it was, it certainly added to the analysis and to my own learning in the process.

Validity Issues

As I discussed earlier, issues of quality in social research have probably become more nebulous since the demise of the positivist paradigm. In positivism, social science could set its standards by fairly concrete definitions of validity and reliability, such as:

> To say that the findings of social scientific investigation are (or must be) valid is to argue that the findings are in fact (or must be) true and certain (Schwandt, 1997: 168)

> An account is judged to be reliable if it is capable of being replicated by another inquirer (Schwandt 1997: 137)

Despite being articulated as recently as 1997, I see these as very dated definitions and ones that are unable to maintain credibility in a post-scientistic social research paradigm. This is particularly relevant in a project looking at claims to knowledge, to expertise and to special positions of understanding and insight. However, ways of judging quality are obviously still very necessary. There is still a very clear difference between sociology as an interpretative inquiry and informal, anecdotal observation of the social world. So can there be equivalents of classical validity and reliability in the new paradigm?

Seale (1999) says these concepts need to be replaced with a different idea of quality, but of course there is no universal agreement on how this might be done. In

adjusting to a paradigm that does not rely on scientific certainty, the debate has been largely focused on the issue of the validity of *experiences*, not of objectivity claims (Silverman, 2000). Hammersley and Gomm state:

> while the abandonment of foundationalism requires us to recognize that research will inevitably be affected by the personal and social characteristics of the researcher, and that this can be of positive value as well as a source of systematic error, it does not require us to give up the guiding principle of objectivity.
> (Hammersley and Gomm, 1997: 4.2)

However, how is a concept such as objectivity to be sustained? Hammersley (1992) advocates what he calls a 'subtle form of realism' which talks of confidence in knowledge rather than certainty. He suggests three steps in the process:

1. The plausibility of the claim, given our existing knowledge
2. The credibility of the claim, given the nature of the phenomena, circumstances of the research and characteristics of the researcher
3. Where we have doubt about either 1 or 2, then we need to be convinced by the plausibility and credibility of the evidence

(Hamersley, 1990, cited in Silverman, 1993: 155)

There are however, significant questions about this approach. Firstly, is it desirable that the identity of the researcher plays a significant role in establishing the quality of the research? In fact, the role of evidence per se seems to be relegated in this model, only becoming of interest if other approaches fail. Silverman argues that Hammersley's proposal is also very conservative, that something being credible and plausible might mean the most obvious or traditional explanation is taken, rather than anything innovative being allowed to occur (Silverman, 1993: 155).

Silverman calls for primary focus to be on the evidence. He argues that the key to quality is in the process of thinking in terms of cases and generalising from the cases studied. This is about searching for deviant cases and employing what he calls the 'constant comparative method', which is about using a kind of quantitative check on qualitative data to test patterns and ideas (Silverman, 193: 162). So to a degree this involves falsifiability and hypothesis testing, and it is also a kind of triangulation. However, I still have a concern regarding the excessive formality of

this approach, although I fully agree with the concept of quality as based on testing through negatives. I think that Seale probably gets closer to the mark with his idea of a fallibilistic approach. He argues that, although it has emerged from a positivistic beginning, the fallibilistic approach is still very valuable (Seale, 1999: 85), and indeed he points out that both triangulation and respondent valuation can be used in this regard.

Seale argues that a fallibilistic approach should be based on searching for negative cases as a test of theory conclusions. Deviant cases can test theory in one of three ways. Firstly, deviant cases can reinforce a theory if they are seen by participants to be deviant, thus establishing credibility for the notion of the norm. Secondly, deviant cases might indeed cause emerging explanations to be changed or rejected, and research that has gone through this process will have gained in its credibility. Thirdly, deviant cases may be explainable within the theory, again reinforcing the credibility of the explanation (Seale, 1999: 78). Whatever happens, if a researcher demonstrates the work done in examining deviant cases and using them to strengthen their case, the quality of the research has benefited.

I take these issues on board, and will look at deviant cases in my data wherever possible. Also, I think I can claim some triangulation due to the multiple sources and data types, but of course they very often address different things. In the end I subscribe to the point of view that quality is best measured through persuasion of credibility and plausibility based on good checks on data collection and analysis techniques followed by well argued conclusions, which incorporate sufficient reflexivity to allow for falsifiability and testing. Through the special perspective, social research findings are more than just a person's reading of a situation, but less than 'truth'. As Seale says, the aim is to create something with which people are 'always free to disagree, but may be less inclined to do so because of the strength of the author's case' (Seale, 1999: 6).

Personal Reflexivity

It is worth a few short paragraphs to consider my own background and position coming to this project. My original college education was about as far from sociology as one could get; I have a masters degree in chemical engineering. However, my engineering career, such as it was, was strongly guided by my

interest in environmentalism, and my strong self image as an environmentalist in the moral sense. By a tortuous route this led me to spend two years on a development aid project in Southern Africa managing an environmental education project. It was here that the specific themes of this project began to foment in my mind when I observed the strong disempowering effect an expert driven approach to environmental protection had. I think some of what I saw was extreme, since there was a combination of hierarchical local political systems mixed with a colonial legacy and a new intellectual colonialism of imperatives such as environmental protection (in the Western sense), all leading to a strongly top-down approach to environmental questions where position papers on ozone depletion and climate change were quicker to emerge than any thinking on how to deal with chronic local litter, sanitation and soil degradation issues.

When I returned to Ireland, I had decided that I would investigate the idea of undertaking PhD research in a 'social' discipline to chase these themes of power, knowledge and expertise in environmental questions, but it was more or less accidental that I found a home in sociology, the choice being made on the basis on a potential supervisor who was very much what I was looking for rather than any sense of what becoming a sociologist actually meant. It has been a steep learning curve, and taking on the theoretical 'baggage' of a new discipline took longer than I expected, but probably not as long as I should have expected.

When it came time in the project to select a case study through which to investigate the broad themes, I considered some of the environmental debates currently taking place. My choice would be based on a mixture of criteria; some relating to the suitability of the issue for the study of experts interacting with 'non-experts' and the interaction of technical and other aspects to the debate, and other criteria relating to whether I thought the issue 'worth studying'. By this I mean a recognition of the political element of social research. Certainly my own concern about, i.e. negative view of, some of the developments relating to genetic food influenced my choice, and since I perceived a power imbalance, there was little question as to which side I felt any power I could bring (through awareness etc) should go to. Of course, during the few years I have studied the subject my own views have developed considerably. Because in the end my project used such a mix of data sources and types, it was relatively easy for me to avoid too much alignment with a particular side, and helped me in my efforts to remain as objective as possible. This has

especially been the case since I have taken on so much thinking relating to constructivism and the ideas of different fields and perspectives.

The other interesting dimension worth mentioning in this reflection is the fact that, in my 'other life', I am precisely one of those supposed experts I purport to study in this project. In my work as an environmental consultant, I have been involved in many projects relating to policy making and environmental *exhortation.* It has been interesting then, and most valuable I think, to reflect upon the 'cross-fertilisation' of my work in the two arenas. I think I benefited from being able to engage in 'reality checks' of my academic work from my knowledge of 'how things work' in policy making and other such fields. I also like to think that some of the many rich ideas I have encountered in my sociological life have helped my reflexivity and efficacy in my consulting life. Another interesting element has been my reception by interviewees and other actors; it was certainly common that scientists seemed to take me more seriously on hearing of my technical background, and in fact it was common for them to then assume I was on their side since I understood something about the technical aspects or the paradigms of science. At the same time, anti-GE activists would tend to latch onto my current status as a social researcher as evidence of my sympathies to their side of the cause.

I have deliberately kept abstract discussion of methodological concerns brief; particular issues can be best elaborated upon as they arise in the data chapters. The following four chapters represent the four cuts at the data set, and each one will develop theoretical and empirical themes as appropriate to their specific concerns.

CHAPTER 4 ACTIVISM AND ACTIVISTS

Introduction

This chapter follows a path through the events under scrutiny in this thesis by telling the stories of some of the key actors. The principal data on which this is based are interviews with some of these actors, supplemented with media texts and some elements of the observation notes from various events. These data are discussed in the context of social movements theory to try to consider how the debate took the shape it did, how critical were the core actors in guiding this, how critical was the media agenda, and, as with other chapters, how did power manifest itself throughout the process.

As with other chapters, the aim is to take a cut at the full data set that comprises the whole debate and to focus in on one aspect of the larger discourse. This chapter is a little different to the other cuts that follow in that it is not a segmented part of the public sphere *per se*, but rather is based on following actors through these other spaces. The choice of topic for this chapter was guided by the importance of looking at how specific actors interrelate to the discourse as a whole, and the possibility of investigating this afforded by qualitative interviews with a number of these people, although the data used in the chapter goes beyond the interviews and includes media texts and observation notes.

This chapter looks at actors and their influence on the process of carving out and shaping public spaces for debate. An actor who wishes to influence outcomes on a particular issue will wish to either access public spaces of the debate or create these where they do not exist. I am particularly interested in trying to identify key points in the process where power can be seen to operate. Access will prove to be such a key point, as actors or organisations attempt to create interest for, and to participate in, the debate. One clearly identifiable field of action for this process will be the media. Ultimately, though, I will argue that the influence of power will be most visible in setting the broader rules for access and participation through mediation of the public spaces. In order to guide these discussions, I will introduce some new analytic frameworks, most significantly from social movements theory, which I will find to be of valuable, if ultimately limited, usefulness to the analysis.

Before these discussions, however, I will commence directly with a presentation of the data set that forms the basis of this chapter.

The Context for this Debate in Ireland

Even for such an international movement as environmentalism, national knowledges and movements are strongly influenced by local culture and contexts (see for example Jamison et al, 1990; Hajer, 1996). So while it is beyond the scope of this thesis to engage in a lengthy discussion of the many contextual factors that probably helped shape the nature of the GMO debate I am studying, some discussion is merited.

Yearley (1995) presents a broad overview of how he sees the evolution of environmentalism in Ireland. He argues that factors contributing to the growth of mainstream environmental consciousness in Ireland have included the growth of numbers of the middle class and of knowledge workers, as well as some of the specific environmental conflicts, over factory developments and so forth, in the 1980's.

Additionally, there is a growing body of literature detailing the failures of recent attempts at consultation and participation in environmental decision making (see for example Peace, 1993; Taylor, 1998a; Broderick, 1999). These would include some of the controversies Yearley mentions as contributing to the conscientisation process. As I discuss in the consultation chapter, many of the environmental activists would have been cognisant of this history. Most recently, there has been a significant upsurge in local environmental activism in the form of opposition to proposals about landfill sites, power stations, and other such developments.

Meanwhile, on the other side of the coin, Peillon (1995) argues that there are clear elements of the corporatist model in the way the state works with interest groups in its decision making, thus further contributing to a picture of a democratic deficit in the eyes of many environmentalists. As Jamison et al point out, there has always been a close relationship between environmentalism and ideas about participatory democracy, possibly since both burgeoned together in the movements of the 1960's (Jamison et al, 1990: 5). Democratic decision making is a significant theme

in the Irish environmental movements (see Broderick, 1999 for example), and as I will discuss below the discourses closely intertwine in the genetic food debate.

Yearley's analysis of environmentalism in Ireland is weakened by his assumption that there is one entity called environmentalism. Tovey (1993) shows that this is not the case in Ireland, and that there is a clear distinction between two broad types of environmentalism; the more urban-based, top-down, expert-oriented type as against the more rural, local version which often is connected to farming issues or often emerges in response to particular conflicts. I think this categorisation is truer than ever in the light of the huge upsurge in recent years of local campaigns against projects such as landfill sites or wind farms. The tensions between these two types of environmentalism would certainly influence the discourse of the GMO debate under discussion here. In particular, farming generally has already been on the defence against mainstream environmentalism, and many urban-centred environmental activists would tend to see farmers as part of the problem in their terms.

In the Introduction chapter, I have given a brief overview of the sequence of events that make up the main history of the debate I am following. At this point I would like to move on to a presentation of the data set that is the principle focus of this chapter. I will start with the most central and significant group of actors; the pressure group Genetic Concern.

The Genetic Concern Story

Foundation

Genetic Concern was founded jointly by Clare Watson and Quentin Gargan in April of 1997. At the time, the two founders did not know each other well, but they both emerged from the general body of interest among NGO people as those most willing to push forward a new group to deal with the emerging issue, stimulated in fact by the Monsanto application for trials of beet in Ireland.

At the time, interest was growing in the issue, with information starting to come from the US and the UK, and well connected environmental activists like Clare Watson would have been seeing the issue mentioned in bulletins and e-mails

circulating among the 'community'. But it was the application by Monsanto for a licence to grow trial crops of GE sugar beet that triggered Irish activism per se.

As Clare Watson tells the story, she was not actively involved in any particular campaigns at the time (unusually for her), and was in the process of setting up a support network for environmental groups, when she received a fax from one of her contacts about GE and the Monsanto application:

> it was from the Cork Environmental Alliance. They had got word of Monsanto's first application and I said okay fax me up the stuff and I read it and it was almost like I had no choice.
> (Interview with activist)

She then spoke to various people she knew about the issue, and was put in touch with Ricarda Steinberger, a scientist in the UK active in the early stages of the anti-GE campaign there. Clare Watson invited Ricarda Steinberger to Ireland to speak at a press conference to generate interest in the issue here. The evening of the press conference, a general meeting of NGO activists took place to discuss what the Irish response might be. Various NGOs and activists were present, and it was decided to set up a separate organisation to campaign on this particular issue. Clare Watson and Quentin Gargan volunteered to set up Genetic Concern.

At this time, Clare Watson was a seasoned environmental activist, and in fact had written a 'how-to' book about campaigning in Ireland (Watson et al, 1997). Quentin Gargan was not such an experienced campaigner, he was the owner of a successful whole food distribution business and had become interested in the issue from this field, and had already been working in parallel from his own constituency of health food interests.

So Genetic Concern was established by these two key actors, with a committee of about ten people. Most of the core group were seasoned activists, usually environmental activists. According to participants, the committee was there to discuss overall policy and strategy, and to share out tasks among the members. On a day to day basis, however, it was clearly Watson and Gargan who drove the campaign, with Quentin Gargan establishing himself as the spokesperson (the movement communicator in Eyerman and Jamison's term; 1991).

In the early stages, Genetic Concern's activities were about raising the profile of the issue and the group. From the start they went for a tight, professional image:

> when we were setting it up we wanted to be a group that could be talked with and that we could debate the issue with anyone who wanted to talk about it and we were out there to highlight our concerns and we'd highlight them to anyone you know and discuss.
> (Interview with activist)

Media attention was a central objective from the very beginning (with the organisation having been founded on foot of a press conference). To achieve this aim, a process of legitimation had to be gone through. In the early days, this meant bringing scientists over from the UK and using them as spokespersons, as in the example just mentioned. Right from the start, Genetic Concern viewed the Irish Times as their forum, regarding this paper as the most powerful in terms of the influence of its readership, and also due in part to the paper's willingness to cover the story when others were uninterested. However, the Irish Times demanded its own standards of credibility for access, which were based on legitimacy of the source as they saw it, meaning scientists or respected commentators (Interview with journalist). All of these terms are of course subjective and constructed, and the credibility issue is fluid.

From the activists' point of view:

> when we were ringing the media and trying to get the media there their first thing was well have you got a scientist to speak it was interesting like that went on for a year or more year and a half... we all felt and myself included we all felt disempowered by the science of it which is a huge part of the campaign this sense of disempowerment it's only now that we've got over it I think in the last six to eight months and now they ring up Genetic Concern and okay Genetic Concern speaks they never ask us for a scientist anymore, I mean every so often we bring one up and it's Joe Cummins em was there and that, they don't look for it and I think that's a sign that the issue has now moved more into the mainstream and they don't feel that it's just a discussion between scientists but we had no choice in the early days,

its quite interesting but I mean they dropped things if we said we couldn't get a scientist.
(Interview with activist)

So one had to gain expert status in the eyes of the Irish Times in order to gain access. This meant importing established experts (i.e. academics) in the early stages and then over time building Quentin Gargan's personal credibility so that he could achieve the status of expert (representative) for himself. Interestingly, it seems to be the case that any academic scientist has automatic standing in terms of credibility, if one can say that a genetic scientist said so, then it will be regarded as worthy of report. It was obviously clear to the actors involved what Quentin Gargan had to do, and more to the point avoid doing, to build his legitimacy, i.e. come across as reasonable, back up his stories with evidence, not appear to be scaremongering and so forth. More basically, he also managed to build his position by being useful to the media in that he was quick with press releases when a story broke, or he was always available for a comment, and this made him valuable to journalists interested in the issue. Right from the start the power of the media in guiding the behaviour of the movement is clear; the actors saw it and accepted it, and the movement strategically guided its behaviour to ensure media access on the media's terms.

Soon there was a media based debate well underway, with spokespersons for various positions well established, such as Quentin Gargan for Genetic Concern, and Patrick O'Reilly for Monsanto. Both were keen to attract attention to their position, and both were quick to counter arguments presented by the other, so an energetic process of claim and counter-claim, press release and riposte, was established, with the Irish Times ready to devote considerable space to the issue and in what it saw as a relatively simple position regarding balance; there was a spokesperson for each side so once both were cited balance could be maintained (Interview with journalist).

Genetic Concern activities

Reflecting the range of sub-topics encompassed by the issue, people were attracted to the organisation for many different reasons. Certainly, people with environmental concerns were the most common, with food safety (whole food, organics) also being a common background for the principal group members. The

group also attracted the interest of a wider circle of associates from other organisations and people, including those with environmental or food concerns, but also those concerned with global development, trade, and other issues.

A typical 'food person' said:

> ultimately it would be food safety, and just an idea of purity, and not polluting your body basically, so I came into it from a very selfish, human health kind of angle
> (Interview with activist)

The early days of Genetic Concern were based on two strands of activity; the campaigning and publicity side, and the legal side. Committee members made themselves available for debates at universities, local organisations and so forth; they produced leaflets, and they tried to build a subscription base for the organisation (with limited success). More than anything, though, the campaign was clearly media oriented. A typical example is the creation of a photo opportunity by Clare and Quentin sitting in a bed outside Leinster House delivering a 'wake-up call' to the minister, demanding he take the issue, and Genetic Concern, more seriously ('Group's "wake-up call" on GM foods', *Irish Times*, November 19, 1998).

Their stated aim was to bring the issue to people's attention, founded largely on the assumption that lack of awareness was genetic engineering's only support mechanism; and that if people were told about the issue they would take the side of Genetic Concern. This is a common theme; both sides consistently argue that the majority of people will clearly agree with them once the 'know the facts'. One Genetic Concern member told me:

> Em, well, I suppose this is a very biased view now but, it doesn't matter whether they're on our side or not, by just listening to what we have to say, they are quite swung over, generally, simply because there is so much information, and so much of it goes against the industry, like what are the opposing views? Insulin, we hear it over and over and over and over and over again, feed the world feed the world, when all the statistics show that this is very inaccurate and also very misleading. And, the other thing is just the very suave, PR, approach. None of which really work with people on the ground who want to know what's happening.

(Interview with activist)

Another interesting example of Genetic Concern's approach to campaigning is the supermarket information tours. This was an event that entailed a display stand outside a Dublin supermarket at which shoppers could sign up for a short tour of the supermarket led by a Genetic Concern activist which would inform people about genetic engineering issues and would be 'explaining to customers how to spot genetically-modified food products.' ('Supermarket allows GM food tours', *Irish Times*, August 3, 1999). People could also book places on the tours, there would be about six in a day, in advance by telephone. This event was a direct import of an idea from campaigns in the UK. I stood at the information stand for a couple of hours on the day and followed some of the tours as an observer. The numbers were small; on the two tours I followed there were certainly more media people that 'genuine shoppers'. The tour involved a fairly tight script (that had been discussed with and approved by the supermarket) visiting a few parts of the shop and giving information about sources of foods, the possibility of products containing genetically altered ingredients. Mostly, such information was along the lines of 'this product may contain GMOs but we can't know for sure'.

Two points about this event are worth making; it was clearly media oriented, with many pauses for photographs to be taken and, as I have said, more reporters in evidence than shoppers; second, the content of the tours could not be said to have had an aim of converting people to the anti-GE side (if any such people might possibly join the tour) but rather an exercise in 'preaching to the converted'. The amount of information actually transmitted in the tours was very small and general. It is possible to argue I am being harsh regarding the media orientation since I was observing the first tours in what was a novel campaign; and possibly later tours (and there were a few repeats of the event in other locations) were more oriented towards the shoppers. However, it did not appear to be a forum that was capable of meaningful education or empowerment.

So overall the campaigning side of Genetic Concern centred on raising the issue itself and imparting basic information in the hope of stirring opposition. For the most part, the orientation was towards the media.

The second strand of activity related to the court case initiated by Clare Watson against the EPA regarding their procedures in granting the licence to Monsanto to

carry out crop trials on GE beet. This side had evolved separately from the rest of Genetic Concern; Clare Watson made the decision very early on in the process to take the case, not realising how long it would last. The case was always treated separately, with Genetic Concern keen to avoid too close an association with it in that it was in the name of Clare Watson herself. However, the organisation did provide support to her for the case and of course took a very keen interest:

> It's one strand, it's more a focus for the organisation, but the whole outlying thing is still ongoing, that won't change. It may change, if the case is successful in that, obviously there's going to be more media attention, there's going to be more focus on the group and what their priorities are, and maybe more people will listen to them. So therefore that means more information, assimilation, it will just generate more energy there, and that energy will take on a life of its own. But if it's a no, it doesn't matter, it doesn't stop going around the country and giving talks and all that sort of thing, that still continues.
> (Interview with activist)

Clare Watson said in a newspaper article that she took the case in frustration over the lack of legitimate routes to debating the whole issue. So it was another way of trying to create a public sphere for the issue:

> I decided to go down this route in the full knowledge of the risks involved, not because I felt the risks were acceptable, but because I knew there was no other option. A stand had to be taken to ensure that the issue was taken seriously.
> ('Discontent over lack of information on GM foods', *Irish Times*, March 18, 1999)

The court case certainly helped attract media coverage to the issue, there were always clusters of articles in the Irish Times and elsewhere at particular landmarks in the case such as the opening day, closing day, (and indeed daily coverage of the proceedings) and the judgement. In the end, Clare Watson lost the case on all counts, and indeed substantial costs were awarded against her, which was considered harsh (Interview with journalist). The case thus also served to highlight how narrow the possibilities for challenge to licence decisions were, and that the process seemed to strongly favour corporations over members of the public.

However, to date no changes have occurred or no particular debate of this issue has ensued. The court case certainly drew attention to the issue, and played a part in opening up the debate more widely, but in itself proved to be an inadequate public space for the issue:

> The court case did not answer the questions we had to ask. We wanted to examine claims by industry that genetic engineering is safe for human health and the environment. However, a judicial review can only look at the technical and legal issues. In effect, what ended up being examined in court was whether the EPA used the correct procedures to make its decision. ('Discontent over lack of information on GM foods', *Irish Times*, March 18, 1999)

A significant change in the way Genetic Concern operated occurred in early 1999, when the organisation recruited two full time staff, at full wage levels, to run the office and handle the day to day work. At this point, Clare Watson and Quentin Gargan quickly started to step back from their prominent positions and allow staff to both run and represent the organisation. One of the two new recruits was a well known activist who in the past had been a campaigner for Earthwatch and a Green Party local councillor. The second was one of the founders of the group Growing Awareness, formed to organise the conference in Skibbereen discussed in Chapter 6. The established activist, Sadhbh O'Neill, as befitted her experience, quickly became established as the new spokesperson for the group. She would have already been well known to journalists, and also would have tended towards the 'professional' end of the spectrum in terms of environmental activism.

The main new source of funding that enabled the organisation to employ two professional staff was Greenpeace in the UK. As time went on, it seems that Greenpeace became more involved in guiding Genetic Concern, especially towards the end of its life as the original team of people were becoming less and less involved.

The employment of two full time staff should have, and was intended to, bring a new momentum to the group and the campaign, but this never seemed to happen. My own observation is that this second stage never had the same 'buzz'. One reason is certainly that the issue itself was somewhat on the wane by this stage, in attention cycle terms, and interest from the media had certainly lessened after the

national consultation process. Also, it would seem the new staff lacked the perceived charisma of Watson and Gargan (see discussion later) and were not able to maintain the profile for the group and the issue (again not necessarily due to factors within their control).

Then Sadhbh O'Neill left, and the office was a one-person operation seemingly without much support or guidance, except apparently some discussions with Greenpeace in the UK. The organisation then essentially fizzled out, becoming less and less active and less prominent. The inevitable happened when Genetic Concern officially announced its closure, saying it has fulfilled its role in alerting consumers to the issues, but with a very clear underlying tone of disappointment ('Genetic Concern pressure group decides to disband', *Irish Times*, April 13, 2000).

Other Actors in the Debate

While anti-GMO activists (or proto-activists) responded quite quickly to the development of the issue, in particular with the rapid formation of Genetic Concern, there was still an early time in the debate when some media coverage was being generated, and thus spokespersons were required. From the very start, Monsanto were keen to play a role as a pro-GMO representative. Another keen advocate was Professor David McConnell of the Department of Genetics in TCD. I will come back to him in my discussion of the academic group shortly.

Throughout the course of the debate over this issue in Ireland, Monsanto played a prominent role as representative for the 'pro' side. This evolved from the fact that the Irish debate on the issue started when Monsanto applied for licences for field trials of its modified sugar beet. As will be mentioned later, however, it acted as the pro-GMO representative even in situations that did not directly involve its products, such as in the Pusztai affair (see Chapter 5). While in the initial stages their spokesperson was a man called Sydney Reid, for most of the debate it was Patrick O'Reilly, Monsanto's 'business manager for Ireland'. Traditionally, this position had been a quiet job centring on dealing with customers and distributors, and marketing Monsanto products. Activists I spoke to generally agreed that O'Reilly was brought on board when the position of business manager developed from its 'normal' function into the prominent media- and public-oriented activity that endured for more than two years. So while Monsanto's involvement in the Irish debate was very

much based on this one individual, it would seem that the organisation had wanted to take on such a role. O'Reilly had worked for Monsanto abroad for many years, and was a loyal and committed pro-GMO scientist. He came across as a professional and intelligent spokesperson for his company and the issue, and clearly had access to resources in terms of information, public relations support, and finance. Press releases from the Irish Monsanto office were often the same texts as British releases, with some small additional mentions of Irish specific aspects (see Chapter 5).

As will be seen in some of the case studies in Chapter 5, Patrick O'Reilly's preferred tone was invariably one of bringing 'reason' to the discussion, and simply putting the facts in front of people. Like most activists on all sides, he was convinced that once people heard the facts presented in a reasoned manner, they would agree with his position on GMOs (Interview with company representative). His arguments always strongly emphasised the potential benefits of GMOs and rejected claims as to their associated risks (see for example 'Monsanto pushes benefits of GM foods to the environment', *Irish Times*, March 1, 1999). He was very commonly quoted in the media, and seemed always willing to take part in debates and seminars. He was personally popular among other actors in the debate, including opponents. It is difficult to go much further with a discussion of his role, as he always spoke in a professional capacity on behalf of Monsanto, and was one of the few principal actors that could not be said to have become involved in the debate because of an ideological commitment (although of course this may have been the case in private).

It is difficult to know exactly why Monsanto chose to take up such a prominent position in the debate, even in elements that did not directly concern them. It seems to have been its practice internationally to take up prominent and assertive positions and to seek to very closely associate itself with the development of GMOs. Monsanto undertook major acquisitions and expansions globally to develop itself as a key biotechnology company, and more than other companies involved in producing GM products its business success was very dependent on the successful establishment of GM technologies (see Buttel, 1999). I did hear occasional anecdotal comments to suggest that other biotechnology companies were uncomfortable with Monsanto's assertive position on the issues. However, in the absence of other volunteers, Patrick O'Reilly proved to be a very good spokesperson from the media's point of view – he had the legitimacy of

representing a major player in the story, and he was always willing to speak and was quick to supply quotes or press releases (Interview with journalist). And thus each side of the debate had its major figurehead; Quentin Gargan versus Patrick O'Reilly, and these were the most ubiquitous and most vociferous actors in the whole debate in Ireland.

The Academic Scientists

Apart from Monsanto, the main group of pro-GMO spokespersons were the academic scientists, usually from biotechnology or genetics departments, but rarely specialists in GM food or crops specifically.

The first to come to prominence in the debate was Professor David McConnell, head of the Genetics Department in Trinity College, Dublin. He spoke on some of the earliest radio debates on the issue, positioning himself as a strong supporter from the very beginning. He associated himself closely with the development of genetic engineering since its first activities in Ireland in the late 1960s, and professed a strong faith in the science and cited the lack of negative experiences over the first 25 years of the technology as his basis for confidence in its safety. Over the full length of the debate in Ireland, he was involved to a lesser or greater extent. He was on the Technology Foresight Panel on Life Sciences that was cited frequently in the consultation process (see Chapter 7) and also spoke several times from the audience during the consultation debates. He has also spoken at several debates and seminars on the topic, usually explaining the underlying principles of the technology to allay fears, but also speaking on topics such as public attitudes to genetic engineering.

Apart from Professor McConnell, the two academic scientists with the highest profile in the debate were probably those that spoke at the national consultation debates. In Chapter 7, I describe how these two men acquired their positions as spokespersons for the academic group, and I also discuss their arguments. Some of their arguments from the consultation days included a defence of the role of science in decision making, a defence of the regulations, the idea that 'interfering with nature' is nothing new, and that the key to public acceptance is information and education. All of these arguments fit in with an overall stance of defending systems, and I will return to this later in this section.

Their participation in the process led to some media attention and they both, Prof Whitaker in particular (see Chapter 7), participated in a number of media debates and interviews, and also some of the public debate events. Many other academic scientists, usually from genetics departments, also spoke at various debate events in defence of GMOs. It does not seem to be the case that the prominent academic scientists mobilised themselves in any formal way, rather that they each entered the debate individually, and then interacted with each other at various occasions.

Talking to members of Genetic Concern and other activists, there was a general perception that the academic speakers came across as more extreme in their views, less open to 'reasoned debate', and generally less polished and professional than say Patrick O'Reilly of Monsanto. There were some scientists, for instance, who regularly made claims that GMOs presented 'zero risk' to health or the environment, something that most speakers were careful to avoid. Others were seen as personalising their attacks on opponents too much or 'flying off the handle'. One activist, speaking about one of the active scientists, said:

> he was on the radio with [an NGO representative] and he apologized to her afterwards saying that he realized that he had overshot the mark on a few things that he had said and em you know he realized he had made some mistakes and he made some wild assumptions.
> (Interview with activist)

In the debate events, the common approach taken by the scientist speakers was that of explaining the facts, from an expert to a lay audience. They used similar language of debunking the science behind the issue so that it no longer appeared frightening. In other words, much like all camps in the debate, they asserted that their position was obvious to anyone who had the facts before them, and most opposition was based simply on ignorance.

Two points arise from observing the discourse of these academic scientists. The first relates to definitions of expertise, the second to defences of systems and expertise.

As I have pointed out before, the definition of expert in this debate often seemed to include any scientist in an even vaguely related field. Cattle geneticists and

molecular geneticists were among those putting themselves forward to speak on GM foods and crops. While the academic scientists were often quick to challenge the credentials of others there seemed to be a consensus that all scientists qualify as experts and sometimes to the observer qualification as experts seems to depend more on what you say than who you are (see the discussion on this issue in the section on Actors and Language in Chapter 6).

The second issue is that of people defending the notion of system worlds. As I have said, the scientist speakers routinely:

- defend the role of science in the issue
- express complete faith in the regulations
- support more (value free) education as the key to acceptance

In other words, the speakers frequently come to the defence of systems generally, that is they express their faith that systems (meaning system world spaces guided by instrumental rationality, the instrumental rationality of scientific knowledge for example) exist and work in a positive way. For example:

> It is entirely possible that some genetically modified foods are unsafe, but those foods which are on the market are safe
> (Colin Hill, *Irish Times*, 2 February 1999)

Here, a scientist from the FSAI scientific sub-committee on novel foods is saying that the regulations are sufficiently robust so that if foods have come to the market, then they must be safe. The regulatory process is a system that is robust and foolproof. Another interesting example comes from an opponent of GMOs, who still wishes to defend their own paradigm; science:

> We are strictly opposed to the unlabelled introduction of GE foods into the food-chain; because this disables the most basic prerequisite for epidemiological research
> (Dr U. Hild of Irish Doctors Environmental Association, from electronic discussion forum at www.princeofwales.gov.uk/forum/)

By arguing that a problem exists because current practices are not conforming to system rules, a faith in systems when they work properly is clearly implied.

Both of the above issues relate to the systems-lifeworld analytical distinction. As I discussed in the Chapter 2, a system world voice can be seen as one that makes references to the existence of systems and bases claims thereon. In the sphere of argument and debate I see this as a claims issue; the operation of systems per se is not the central issue, it is more a question of whether power can be obtained by system world associations (again, see *Actors and Language* in Chapter 6 for further discussion on this issue).

A word is also merited about scientists who have taken the other side of the argument. One I mentioned earlier is Ricarda Steinbecker, a UK geneticist who spoke at the first press conference that led to the formation of Genetic Concern. Another geneticist who has been prominent in her opposition to GE is Mae Wan Ho, who has written a number of books challenging the technology. Both of these scientists have spoken at a number of events in Ireland, including the Growing Awareness conference in Skibbereen.

Their argument is that GE is bad science. Mae Wan Ho in particular often criticises the underlying science of genetic engineering. She talks about the 'fluid gene' (Ho, 1998) in opposition to the simple model genetics based on one gene one function, arguing that such a narrow reductionist view of genetics is flawed and outdated:

> I am one of those scientists who have long been highly critical of the reductionist mainstream scientific world-view, and have begun to work towards a radically different approach for understanding nature.
> (Ho, 1997: 34)

Interestingly, these scientists have also taken on board the notion of bias in science due to funding, revolving door etc:

> Practically all established molecular geneticists have some direct or indirect connection with industry, which will set limits on what the scientists can and will do research on, not to mention the possibility of compromising their integrity as independent scientists.
> (Ho, 1997: 37)

Here we see an opening up of some of the issues of the science paradigm. But ultimately there is a defence of science; science, if these bad things are removed, can be good. Similarly, one of the national consultation speakers on the 'anti' side described himself as 'an ecocentric scientist'. Again, the speaker retains the title of scientist and the concept of science as a system. The principle of systems is not challenged, just the specifics of the systems under scrutiny.

The Food Writers

The next group I want to talk about is those I will broadly call food writers. Some of the Irish people in this category are Darina Allen, Maureen Tatlow, and John McKenna, all well known writers of books or newspaper columns on cookery and food issues.

All of the above mentioned spoke at the Growing Awareness conference in Skibbereen. John McKenna spoke advocating local, diverse food systems, arguing against homogeneity. His position was very much that of a food quality advocate. Maureen Tatlow also made similar calls, but her own specialisation in her writing concerns consumers, ingredients and labelling, and so this was the area she focussed on.

Darina Allen spoke as part of the evening panel debate, presenting a broad overview of the issues (even if she did take more than twice her allotted time despite having skipped several pages of her written speech). Darina Allen has been the most prominent of this group in the debate, so I will reflect on her role a little longer.

She did have a pre-existing public profile on environmental issues, at least back to 1997 (see for instance 'Environmental group to campaign on water quality', *Irish Times*, November 5 1997). Her specific interest in GM seems to have been sparked by the proposed siting of a GM beet test crop on a farm near her organic farm and cookery school in County Cork. Her first media comments on the issue were in February 1998 ('Culinary expert speaks out on modified beet plans', *Irish Times*, February 11 1998). From this point she quickly developed a strong profile in the debate, and was regularly quoted in media coverage and spoke at several events. She also became involved in an international 'chefs against GMOs'

campaign that included many UK celebrity chefs ('TV chef leads campaign against GM food', *Irish Times*, January 26 1999). Maybe it would be unfair of me to suggest any connection between this rapidly expanding public political profile and the launch of a range of food products branded specifically on her name and image ('Stopping "global food rot" the vital ingredient', *Irish Times*, February 19 1999). But more recently she has also been seen in the media connected with other issues, ranging from fluoridation of water supplies, ('Fluoridation forum just a token gesture says Gormley', *Irish Times*, May 30 2000) to Ireland's neutrality ('Public petition Fianna Fáil for PfP poll', *Irish Times*, April 22 1999)

To illustrate the nature of her arguments, I will present two typical extracts from her media coverage:

> Genetically modifying our food ingredients is the biggest single experiment on humankind that has ever happened and I think it's completely outrageous that these companies can do it. I figure this will be the single most important stand I ever take. Once these genes are introduced, they can't be removed. Once it is in the human gene chain and once it gets into the environment, you can't recall it. We must make sure this can't go wrong.
> ('Stopping "global food rot" the vital ingredient', *Irish Times*, February 19 1999)

> 'They say they've done the most comprehensive tests ever, but in reality when you look into it in detail, the tests have been quite limited. They have not done tests on whole foods to animals, only on selective ingredients. Many people would feel the tests are inadequate and totally non-assuring. The animal feed, for example, was released after only 12-weeks of trials. Three months is an incredibly short time to test anything, especially something as important as food, which can affect people worldwide,' she says. 'I find it all horrendously frightening.'
> ('Darina Allen calls for Government ban on food altered by science', *Examiner*, January 11 1999)

These show that she is clearly well informed or well supported on the issue; the breadth of knowledge is impressive, as is the range of topics within the debate that she comments on. In fact, on one occasion she even released a statement to the press reacting to comments by UK prime minister Tony Blair on the subject ('Food expert welcomes British PM's turnaround', *Examiner*, February 29 2000). The

above extracts also demonstrate her tone of taking a layperson's view of science (Allen often referred to herself as a mother or a consumer). It is very much a life world voice that says things like three months is an incredibly short time to test anything. This could also be seen as the opening up to scrutiny of science that may well lead to significant change in perceptions, as Beck argues (Beck, 2000). For many years scientists have been testing foods in particular ways, but it is only when outsiders observe, in life world terms, that the tests are only on parts of the foods rather than the whole, and that test periods are quite short, that people learn exactly how good, or bad, this system seems to be in actuality.

Food writers' involvement in the GM debate is a very clear demonstration of Hajer's model of discourse in an environmental debate, in that actors from a range of issues can come together under one simple banner, in this case 'no to GMOs'. They are an example of people bringing headlines from various disciplines into the overall *GM is bad* camp; even in the above brief examples we see arguments about food safety, labelling, environmental impacts, the slow food movement, local production and commerce, anti-globalisation, and others. Clearly strong affinity exists between these issues that allows them to be grouped in this way. Many of the food writers wouldn't necessarily have shared a platform with some of the other people in the campaign in other situations; what we saw here was a discourse coalition (Hajer, 1995).

However, Hajer himself points out that an explanation of this phenomenon that simply says story lines reduce complexity and allow individual strategists to come together is both over-simplistic and over-individualistic (Hajer, 1997: 66). Hajer talks of 'discursive affinities', where different discourses go well together because to the participants they 'seem to fit' or they 'sound right' (Hajer, 1997: 67). In an extreme case, discourse affinity becomes discourse contamination, a term which Hajer uses to describe 'inappropriate' cross-usage of different discourses (his example is the application of Darwinism to social Darwinism). I am not sure it is so easy to draw a distinction between discourse affinity and discourse contamination simply by talking about appropriate and inappropriate mixing or combining of different discourses. However, the point is well made that discourse interaction clearly happens in the realms of the discourse themselves; rather than by strategic individual action. Certain sets of discourses tend to fit together well; for example those that support the notion of systems based (expert based) knowledge, or, in the above case, those relating to local food production, environmentalism and anti-

globalisation. This explains at least some of the polarisation in the debate; there are clearly visible yes and no camps, and discourse affinities will tend to steer people coming from any particular discourse towards one of these polar meta-discourses or the other.

The food writers also demonstrate an interesting type of power in action. Darina Allen can release statements commenting on statements by Tony Blair, on fluoridation, and on more or less any topic, it will get coverage due to her public profile. She also writes a regular column in the Examiner newspaper, which obviously gives her direct access to air her views. So a public profile is a source of power in itself; a celebrity speaking on a subject imbues the subject with importance. As we saw with scientific experts commenting on topics well outside their owns spheres; there is no relationship between the person and the topic. If a person is accorded the status of celebrity, then they can speak on any topic, no matter how far beyond their own area, and it will probably receive media attention.

Other State Agencies

There were a number of 'public' agencies who were part of the debate and who generally tried to maintain neutral or 'reasonable-moderate' positions. Among these were the Food Safety Authority of Ireland (FSAI), and the Consumers' Association of Ireland (CAI).

Patrick Wall, director of FSAI, spoke at the Bernie Malone conference discussed in Chapter 6. In that forum he stated the position he has used more than once, that GE is simply a technology and thus cannot be said to be good or bad, it is a question of how it is used. Inevitably, of course, a position such as this, that calls for a case by case review and the acceptance of at least some GM foods, will be seen as simply pro-GMO by its opponents.

One commentator has assessed that the regulatory approach towards GMOs in Ireland 'protects the environment against known risks' (Flynn 1996: 24). The point here, of course, is the word *known*. I think this kind of approach is exemplified by the following statements from an FSAI press release:

> Currently, there is no scientific evidence that any existing [GM] products licensed within the EU are unsafe for human consumption
> (FSAI Press Release, August 10, 1998)

Also, in Chapter 5, I discuss an FSAI information leaflet, which states, among other things:

> Genetic engineering is just a technology. How it is used determines the benefits it brings to Mankind. Great advances in medicine have been brought about using this technology to develop new vaccines and treatments. It has the potential to generate healthier foods that would be of direct benefit to consumers. Also, it could contribute to the development of crops that could survive and grow in arid conditions in famine stricken areas of the world.

> GM foods are subjected to an extensive range of analytical tests for food safety evaluation. Such tests include chemical analysis, allergenicity tests, evaluation of nutritional composition and many more. The independent GMO and Novel Foods Sub-committee of the Food Safety Authority of Ireland reviews each new food separately to ensure that it complies with specified safety criteria.
> ('Food Safety and Genetically Modified Foods', FSAI leaflet, 1999)

The FSAI position is that GM foods must be considered on a case by case basis, and there should be no blanket acceptance nor rejection. This is a defence of systems, showing complete faith in both science and regulations. Of course, FSAI is an official state body, founded on principles of scientific analysis, and any other position would be quite surprising. However, from time to time it has been possible to see some tension between the scientific sub-committee and FSAI itself, in particular its director, who does seem to be a little more willing to allow reflection and admit the complexities of the issue on social and political levels.

All actors in the debate tend to root their arguments in claims of either specialist knowledge or democratic representivity. As I will explore more fully in Chapter 6, it is very common for speakers to assert that they are speaking for the public, that they know what really concerns people and what they want to know. As Breyman

points out (1995: 41), knowledge claims can give environmental movements power in the same way as works for more conventionally created experts. Consider the following extract from a Press Association report:

> Millions of shoppers are calling for improved information about genetically modified food as part of World Consumer Rights Day.
> Consumers International, an organisation representing 250 consumer groups in 111 countries, says its members will not tolerate supermarket shelves stacked with GM foods.
> (PA March 15, 2000)

Note the clear intermingling of the consumers with the representative organisations; if the organisation calls for something, then the 'millions of shoppers' it represents have called for it. The reason for raising this topic here is to observe the particularly interesting use of a mixture of both types of legitimacy claim by organisations such as FSAI. FSAI is science based, and so its information can be trusted, but it is also a state agency responsible for looking out for the public's food safety concerns, and thus essentially acting on behalf of consumers. I think that one of the reasons why FSAI has had difficulty at times articulating a clear and coherent position is the inevitable tension between the two types of legitimacy claim.

Outcomes

Finally, before moving on to some discussions of the data, a few words on the outcomes of the debate to date are merited. The first point to mention is that there is no doubt but that the debate has dramatically died down since its heyday in 1999. The down turn in media attention in Ireland seemed to happen very quickly after the national consultation process, before, indeed, the final report was even issued. In this regard I think it is strongly arguable that if the intention of the consultation process was to bring closure to the debate then it was very successful indeed. By most accounts, and indeed by more than one private admission to me, Genetic Concern essentially 'lost' the debate in the consultation process.

Using the effectiveness terms introduced earlier, if the goal of Genetic Concern was to influence Irish policy towards opposition to GMOs, then it has obviously

failed. If one sees its goal as stimulating debate on the issue, then one would most probably come to a different conclusion on effectiveness. While clear causality is obviously difficult to establish, I think most observers would agree with my own view that Genetic Concern were very effective in generating interest in the issue, especially considering their tiny resource base.

The issue continues to make headlines as I write, but most strikingly stories that would have cause a huge furore a year or two ago now generate only passing media interest (see for example 'Firm claims weed-control benefits of GM sugar beet', *Irish Times*, October 10, 2000; or 'GM-contaminated rape sown here', *Irish Times*, May 31 2000). It can be plausibly assumed that closure of the issue, in terms of public controversy, would be an objective of both the government and the GE companies. In this sense they can be judged effective.

Overall then I can state the obvious and say that evaluating effectiveness depends on how one defines the goals. More importantly though , one must recognise that goals are not fixed in advance of a campaign, and indeed are not created in a vacuum, outside of political and other contexts. A full evaluation of success or failure is a much more complex matter than can be dealt with by effectiveness as an isolated concept. However, for now my aim is simply to finish the story I have been telling. In this and other chapters I have given an overview of some of the many components of the GMO debate that has been taking place over the last few years. Compared to any time in the last four years, the issue has never had a lower media profile than it does now, and in that sense the story ends with a fading away of the issue from the centre of public and media attention.

Characterising the Movement - Social Movements Theory

The above discussions have introduced the data set itself and explored some particular points arising in relation to my core themes. In order to characterise and analyse GMO activism more formally, I will apply elements of social movements theory, specifically the *knowledge praxis* approach of Jamison and Eyerman. This approach is valuable for its broad focus on the knowledge, objectives, beliefs and contexts of a movement, more than simply looking at actors or at their arguments. Jamison & Eyerman state that their project is to position themselves between what they see as the poles of identity theorists, looking at history of thought and ideas;

and resource mobilisation theorists, looking at groups, and actors (Jamison et al, 1990: 2). The key issue for their analyses, which they argue is missing from these previous versions of social movements theory, is what they call 'cognitive praxis' (Eyerman and Jamison, 1991: 44). Cognitive praxis is about the interplay of individuals, interactions and macro-societal elements. Importantly, it allows not only for knowledge contexts to be incorporated, but also the knowledge creation roles of social movements (Eyerman and Jamison, 1991: 54). The concept as defined by Eyerman and Jamison is important because it is able to put the knowledge and ideas elements centre stage, but in a way that retains the importance of interaction, of construction, i.e. of praxis.

Eyerman and Jamison are particularly interested in the environmental movement, and in how this movement may be characterised. In keeping with the cognitive praxis idea, they employ the concept of 'knowledge interests' to define the movement:

> a social movement exists when a distinct set of knowledge interests is present in the consciousness of activists and reflected in organisation, when these knowledge interests form the basis not only for collective identity but also co-ordination and co-operation between those organisations which identify themselves on their basis.
> (Jamison et al, 1990: 3)

Knowledge interests are broader than ideologies, since they include assumptions, values (together what Melucci (1996) would call codes) and contexts and, as praxis, they are constantly interpreted, reproduced, changed (Jamison et al, 1990: 7).

While moving towards the constructivist model characterised by cognitive praxis, Eyerman and Jamison acknowledge the action of strategising of objectives and means in a movement, through their concept of 'political strategy'. But they stress that such strategies are 'mediated through the meaning system provided by knowledge interests' (Jamison et al, 1990: 15). There is plenty of evidence that actors strategise to achieve their goals, as I discuss in this chapter. However, strategising is done on the basis of interpreting possibilities, efficacies and so forth (see Hjelmar's conduciveness concept below), which in turn are given meaning by the particular set of knowledge interests involved.

Cognitive praxis is an analytical concept; the actors themselves usually take it for granted and don't reflect on it or disaggregate it in the way an observer might choose to (Eyerman and Jamison, 1991: 44). However, the important point is that an analysis of a social movement must look at both ideas and activists. I use the term 'social movement' then largely in the cognitive sense, not meaning Genetic Concern itself, but the broader overall discourse of the debate, including all those strands of thought, context and activism that chare the same knowledge interests.

Jamison and Eyerman argue that knowledge interests can be considered on three levels, cosmological, technological and organisational (Jamison et al, 1990: 5). In simplest terms, the GMO opposition movement can be described under these headings as follows:

- Cosmological - Opposition to the use of nature for human ends, manipulation of nature, reductionist science
- Technological – the manner of food production, interventionist versus organic agriculture
- Organisational - role of science in decision making, participation, sovereignty

Of course, it would be inappropriate to try and characterise the knowledge interests of the activists I consider too narrowly; the people involved come from different backgrounds and with many different motivations for their involvement. However, it is not unreasonable to say that there are very many common elements observable among people in terms of these dimensions of knowledge interests, and there is a fairly readily identifiable set of knowledge interests for Genetic Concern itself. Opposition to genetically modified foods is obviously the central technological element of this set. The cosmological basis for this opposition relates to objections about the excessive manipulation of nature (whether GE represents something more 'unnatural' than other food, farming or husbandry practices has been a common discussion point), about the scientific philosophy of genetic engineering (see my discussion of Mae Wan Ho above), and about holism, globalism, and, simply put, big and centralised versus diverse and local. On the organisational level, the common beliefs centre on anti-globalisation, anti-corporation, and pro-participatory democracy. Thus there is a 'world view' underlying the movement,

although it is not unique to the anti-GMO movement by any means. It is the broader one of environmentalism, anti-capitalism, and participatory democracy. The 'world view' (a term Genetic Concern used themselves frequently) encompasses organisational as well as cosmological elements. Then it is the technological level of the knowledge interests that specifies Genetic Concern itself, it was an organisation set up to take a position on a particular technology, more oppositional than anything, but also promoting organic agriculture as an alternative, as inspired by the world view.

Eyerman and Jamison's categorisations serve as a useful framework to describe the beliefs of Genetic Concern. But I am describing beliefs more than knowledge interests in the full sense that Eyerman and Jamison mean. Genetic Concern could not be said to be a movement that created new knowledge in any coherent, movement level way. I think it is clear that the people in Genetic Concern reacted to news about the advent of genetic modification on the basis of their existing world views in relation to environmentalism and similar issues. Eyerman and Jamison say (1991: 70) that cosmology is the core of the identity in world view terms. The genetic engineering opposition movement has clearly been based on a cosmological and organisational knowledge base reacting to a new technology, and saying no to this technology on the basis of the largely pre-existing knowledge interests.

Contrast this to say the anti-landfill movements that have become very common in Ireland in recent years. In this case, people reacted first to the specific technology, this became an organisational issue (democracy, planning and decision making) and cosmology is then the last component. In some cases, anti-landfill movements create environmentalists in that people involved essentially become converted to the wider environmental cause, prompted by their involvement in this first campaign. Many others do not take this step, and remain involved only in opposing one specific proposed development. For the most part, the principal activists of Genetic Concern were closer to Tovey's (1993) concept of 'official' environmentalists, in that they saw themselves as environmentalists well before this issue, and they reacted to this issue according to their pre-existing beliefs.

Activists themselves of course make connections between their issue and wider contexts and campaigns. One activist commented to me about the court case:

so it was that sense that something can really be achieved here, which is not just a success for Clare or for Genetic Concern, it's a success for NGOs, for people taking on the system, and it can be done.'
(Interview with activist)

So 'taking on the system', an organisational knowledge interest, is part of what it is about. Quentin Gargan in his talks frequently mentioned that disagreement over the GE issue was down to world view. He characterised the two polarised world views as global versus local, reductionist versus holistic, big versus small. In this context, it is important to remember that GE as a technology seems to fit well with the 'official' cosmology of states and governments; interventionist agriculture, science, exploitation of nature and so forth. Thus I am painting a picture of essentially pre-established (though of course subject to ongoing change) knowledge interests based on the cosmological and organisational levels that were able to assess a new technological question such as GE through this context.

Eyerman and Jamison derived their three levels of knowledge interests directly from Habermas' concept of 'knowledge constituting interests' (Eyerman and Jamison, 1991: 68). The cosmology level 'represents the common worldview assumptions that give a social movement its utopian mission', which Habermas termed its emancipatory aims (Eyerman and Jamison, 1991: 68). The technological level of knowledge interests is based on Habermas' technical-practical interest, and the organisational level is based on Habermas' communicative interest. Thus the three levels have direct connections to Habermas' equivalent concepts, but the common difference is that Eyerman and Jamison say they wish to 'operationalise' the original concepts, i.e. use them in the context of social movements creating their knowledge interests through cognitive praxis (Eyerman and Jamison, 1991: 68). This makes the knowledge interests idea less like a description of ideology, and more a description of bodies of knowledge being created on the basis of interests at these levels. Again, this seems to suggest a certain lack of fit between this framework of analysis and the specifics of my data set; it is not at all clear that Genetic Concern were creating or articulating unique knowledge interests, or that they had a central utopian vision. Touraine (1981) also argues that a social movement is distinguished by the presence of some kind of utopian vision. Genetic Concern may not have such a complete utopian vision, but certainly there are strong 'emancipatory aims' within its world view. The best way to visualise this might be to consider the anti-GE movement as a technological level sub-movement

that is part of a larger movement that is well described by the same world view on cosmological and organisational levels. This would also make one more comfortable with looking at the content of Genetic Concern's beliefs and arguments in the context of the knowledge of the large flows of information from the UK movement to Ireland via electronic mailing lists and contacts between individuals and organisations.

In this framework then, it would seem that the GE movement should really be considered more of a sub movement, or at least as a movement that shares most of its knowledge interests on the cosmological and organisational levels with a number of other movements, and is mostly distinguishable at the technological level. This is interesting because if one is looking at ideology or belief sets, then in many ways the technological level is the least interesting, since it is really just the emblem or the local focus for a set of beliefs. However, in Eyerman and Jamison's concept of cognitive praxis, the technological level becomes the most interesting, since this is where new knowledge is created as a translation of world view concepts into real ideas and societal choices. It is not clear that Genetic Concern ever really engaged in cognitive praxis in this sense.

Melucci also offers a framework for defining social movements, related to the orientations of their collective action. He posits three dimensions in which to consider the orientation of collective action. The first dimension is whether the action is oriented towards solidarity or towards aggregation. The distinction here is that solidarity implies a common identity of some sort, but aggregation is simply the coming together in space and time of atomised units, and indeed analysis of aggregated collective action could be done at the level of the individual as effectively as the collective (Melucci, 1996: 23). The second dimension is orientation towards either conflict or consensus in collective action. This refers to whether opposing groups see themselves, or are seen, as fighting for the same pool of resources, or if they see there is consensus 'over the rules and procedures governing the control of valued resources' (Melucci, 1996: 24). The third dimension is the question as to whether the action is oriented towards the breaching of system limits or the maintaining of system limits. Melucci proposes an analytic definition for the term social movement that describes collective action that is oriented towards solidarity, conflict, and breaching of system limits (Melucci, 1996: 28).

The formal definition of social movements as distinct from collective action more generally is of less interest to me here than the consideration of the three dimensions of orientation as a way of considering the aims of a movement. The most intriguing one here is orientation towards solidarity versus orientation towards aggregation. There is a curious mixture of these orientations in the case of Genetic Concern. Certainly much of the core group exhibit and promote solidarity, e.g. the organic movement, or the environmentalists, but there are also central appeals to people more generally, often based on more individualistic typologies, such as the shopper, the eater, and so forth. So then where is the balance between collective identities and solidarity in the specific issue and the attempts to recruit people to the concern on a much wider, and less collective, basis? Part of the reason for this difficulty is that the movement, despite being somewhat collective in itself is rooted in liberal democratic ideals. Genetic Concern want to offer people choice about GMOs. But there is a world of difference between an outcome of fully labelled, well understood products allowing consumers individual choice, and a national policy decision to exclude GMOs from Ireland in pursuance of an alternative model of agriculture and food production. This second outcome would certainly be a breach of system limits (indeed a frequent argument of pro-GMO speakers was that we have no choice on a national basis, EU and WTO rules mean we must allow GMOs to enter Ireland). It is clear that some anti-GMO activists sought different outcomes and had different ideas of what democratisation meant for this issue.

Steven Buechler has an interesting analytical tool for illuminating this issue; which he calls the continuum of collective identity. Movements can be characterised along this continuum in terms of what their collective identity is based on, ranging from movements based on collective identities that already exist (say gender or ethnicity) to those that create their collective identities from scratch (Buechler, 2000: 191). Obviously here we are not dealing with a movement whose collective identity is 'structurally and historically grounded in the social organisation of society' (Buechler, 2000: 191). However, the GMO movement does share significant parts of its knowledge interests and cognitive praxis with other sister movements. As I have said above, this is particularly so on cosmological and organisational levels. Some pre-existing collective identities that featured in this movement include mothers (who should be concerned about what they feed their children), and environmentalists. There was obviously also an attempt to coalesce a new collective identity; those that oppose GMOs. However, this is not a fundamental collective identity in the same way as those just mentioned, but rather a discourse

coalition of different groups and belief sets. This, I believe, is because collective identities based on knowledge interests are much more likely to exist on cosmological and organisational levels than on technological levels. The technological concerns of a movement tend to be emblematic of the other levels of knowledge interest. This would again imply that the anti-GMO movement is really a sub-movement of wider knowledge interests and broader collective identities, and that any discourse coalitions that coalesce for this debate are debate-specific and may or may not lead to the forging of stronger collective bonds between groups than existed before the debate.

Melucci also presents a framework for investigating in what fields of society a social movement is acting. He argues that, as a movement starts to challenge more deeply rooted structural elements of society, i.e. elements such as the political system or the system of resource production, the following trends can be observed:

- increasing symbolic content
- decreasing divisibility of goals
- decreasing reversibility of conflicts
- decreasing calculability
- solution tending towards zero sum

(Melucci, 1996: 38-39)

Looking at the GE case study, the first thing to say is that this movement acts across an number of levels, as all do, but could be said to act principally at the political level. This is because the central feature of the debate, beyond the simple opposition to the technology involved, is the challenge regarding participation and decision making. There is also an element of operation at the level of the system of resource production, since the debate very often involves anti-corporation and anti-capitalist stances. This puts the movement quite far along the spectrum of its implications in Melucci's terms. And indeed we certainly see a high level of symbolic content in the debate, the importance for instance of what the debate is seen to be about - food safety, democracy, agriculture etc. Also, Genetic Concern show very well that symbolic resources can now match material resources in many ways. While lacking traditional resources such as money or political power, Genetic Concern did have considerable symbolic power through the *symbolic resonance* (Eyerman & Jamison, 1991) of their messages, and indeed of the perception of

them as the few committed individuals taking on the corporate giants. This illuminates what Giddens calls the dialectic of control (Giddens, 1984: 32) - there can never be a completely one-sided power relationship. In this debate, it was very much a case of symbolic resources versus conventional material resources, and Genetic Concern were able to maintain a strong and influential campaign for several years on the basis of this dialectic, although of course the ultimate victory went to those with the traditional, material, resources on their side.

We also see a clearly emerging indivisibility of goals in the strong polarity on the technical level of the issue, (excepting of course some degree of broader agreement on participation and information, at least rhetorically). Ultimately, through the polarity of the debate, there is no obvious compromise or win-win situation. From the perspective of the activists, GMOs are either banned or they are not, and thus there is either victory or defeat. Melucci's typology argues simply that the more fundamental the issues addressed by a movement, the harder it is to find either relatively simple and superficial or mutually acceptable solutions.

At the centre of Melucci's analysis is the argument that the more deeply rooted the fields of society that are challenged by a movement, the more difficult resolution or compromise becomes. Another way of putting this is that, in terms of knowledge interests, disagreements at the technological level alone are often relatively simple (but of course not necessarily easy in themselves) to address compared to those that involve the meeting of dramatically different cosmologies. However, in a situation, as we have here, where the technological arguments are emblematic of a larger world view clash, polarity is much easier to understand.

The idea that a particular technological debate, the pro- or anti-GE argument, represents the meeting of two opposing world views, also helps to develop Hajer's idea of discourse affinities. I have said that in this debate people came to Genetic Concern for variety of reasons and due to a range of interests, including food, environment, development and others. So at the technology level we see a disparateness, but there is much more common ground in terms of broader knowledge interests, i.e. at the cosmological and organisational levels. This common ground allowed them to bring their discourses together into a relatively simple 'no to GMO' movement.

This coming together of people enables the building of a discourse coalition from different storylines into the 'no to GMO' storyline. The discourse affinities that allowed this happen came from the common cosmological and organisational elements of the discourses. Hajer's model is clear on this, but does lack a certain degree of detail at the level of people. My data can help fill this gap. First we see that affinities that bring people together work on more levels than simply discourse; most obviously in the way that many people know and trust each other from previous campaigns or mutual acquaintances in other movements. We also see some of the reasons for the range of people who become involved, campaigners, academics with an interest in the topic, scientists who wise to defend science, and those keen or at least willing to have a public profile. From this range, the discourse of the debate (and in particular the media processes) placed people in the yes or no camp, and there was little opportunity to position oneself outside of these two. So some of the shaping influences on the public space for the debate included the shaping of the discourse coalitions, i.e. the creation of polarity and simple yes and no camps. Actors also were willing to use this categorisation, with a 'you're either with us or against us' attitude being common. Discourse affinity and the three levels of knowledge interest also possibly explain why, despite very widespread unease about GMOs among the public, the movement ultimately failed. The cosmological interests that underpinned the technological stance (opposition to GMOs) of the principal activists were not widely shared among a population relatively comfortable with interventionist agriculture and processed foods.

Eyerman and Jamison's three levels of knowledge interests help in breaking apart the content of a discourse to see where the commonalities lie. In this case we see common cosmological and organisational levels of beliefs reacting to new technologies. So we can see people from different technological interests coming together because of common cosmologies or organisational positions. This is important to note because the idea of discourse coalitions gives the impression that different world views can come together around a technology. I am suggesting rather that the differences among elements of a coalition tend to be at the technological level; an anti-gm person for environmental reasons coalesces with an anti-gm person for trade and development reasons, so they are coming together at a new technological level. But they are not starting from different cosmological or organisational levels; their differences were essentially only technological in the first place. On the other side, we see scientists whose main interest is directly in GE, and we see others who are more interested in a defence of science itself.

Again I argue that the world view levels are common and the coming together process is really only at the technological level.

Since the anti-GMO movement is less about knowledge creation than a new technological element within existing broader interests, and since my own interests centre more on discourses than on such knowledges, there is a limit to the usefulness of Eyerman and Jamison's analytical approach for my project. However, many parts of the framework, as I have shown, are of real value to my analysis. I have been able to develop an understanding of where this particular movement fits in the wider context of environmentalism and social movements, and to examine what elements of the GMO movement are or are not different or unique. I will now move on to other frameworks that will allow me to take this analysis further.

Public Spaces and Actors

I will now discuss how public spaces get created or shaped, how power impinges, and most particularly what are the roles of actors in this. I will introduce three areas of discussion, problematisation, media strategies, and conduciveness, as guiding frameworks for this. The overall aim is to look at some of the actor focussed parts of how the discourses were shaped, what influenced the creation and shaping of the public spaces, and how power operated.

Problematisation

As I have discussed elsewhere, an important part of discourse analysis is the recognition that how issues become 'issues', what is on or off the agenda, is as important as how the consequent debates proceed and conclude. Hjelmar calls this element of the discourse *problematisation* (Hjelmar, 1996: 43). He starts from the perspective of politics as 'the construction of meaning' (1996: 44), putting him in much the same camp as Hajer, and putting the emphasis of analysis on the discourse, as much in developing the terms of the discourse as against merely following the arguments that ultimately occur:

> This view of politics does not focus on the state and the decision-making on issues over which there is overt conflict of interests. Rather, this line of thinking emphasizes the overall bias of the political system towards

> consideration of certain issues and exclusion of others. Hence, this form of power is not only associated with observable conflict, but also with the shaping of discourse which in turn affects decision-making (or non-decision-making).
> (Hjelmar, 1996: 7)

The mass media play a very important role in problematisation, and of course, environmental organisations are often very strategic in how they use the media to help promulgate their versions of the discourse (Hjelmar, 1996: 49; Eyerman and Jamison 1989: 107). But the converse is that the organisations are very dependent on the media.

Problematisation often means trying to question the authority of the state, and so social movements' debates can often be struggles with the state and challenges to its authority (Hjelmar, 1996: 54). Hjelmar describes two levels of context for this; what he calls political opportunity structure and cultural conduciveness (Hjelmar, 1996: 39). It is clear that a social movement and its principal actors take account of political context when formulating their strategies. The simplest typology is whether or not a movement attempts to work within political structures. If they see that there are opportunities for them to achieve their aims in this way they will tend to do so (Hjelmar, 1996: 40). Rüdig, for example, says that the vast majority of environmental activists and organisations in Britain attempt to work within the political structures, and they tend to present their demands as 'sensible and practical' so as to keep their appeal among conservative audiences (Rüdig, 1995: 219). In other situations, an environmental movement may decide from the beginning that the political context in which it finds itself will not allow pursuance of its aims and thus its sphere of challenge must include political structures.

Obviously this relates closely to power; groups that can access power in the traditional structures will do so, people who are unable to access this power need to look for other ways. It is no coincidence that the groups that tend to employ the more radical tactics are those whose agendas tend to marginalize them or who come from oppressed social groups (Kamieniecki, 1995 :315).

An interesting corollary of a movement's decision on whether to work within existing political fields is the possibility for these structures to attempt to contain the movement within the structure. As Rüdig observes, states may attempt to contain

environmental challenges either by 'integration or by marginalization' (Rüdig, 1995: 220). For example, Cracknell points out that bureaucrats may invite a pressure group inside a process, onto consultative committees for example, to ensure not just its expertise but also its co-operation and silence (Cracknell 1993). So a movement's relationship with political context is an important part of the problematisation process and how the movement defines the extent of its agenda.

The fact that Genetic Concern's aim was essentially safe food and a protected environment made it 'mainstream' as far as many political and media actors were concerned, and so the strategy of concentrating on these simplified goals was successful in as far as could be. A more radical agenda would have made it difficult for the DELG to allow Genetic Concern such leeway in making demands regarding the consultation process, or making them such a central actor in the process (described more fully in Chapter 7). However, it did make ultimate 'victory' for the group very unlikely since, as I have argued, GM technology fits well within current state paradigms of agriculture, food and business. Thus, Genetic Concern's attempt to work within mainstream politics could only take its aims so far. Similarly, the media were happy to see a potential food risk problematised, but were generally less interested in raising the more fundamental questions about the food industry. Once again, these points relate very closely to Hajer's storylines concept. It is seemingly inevitable that an environmental movement must face the dilemma of how to balance working within established paradigms to make its messages acceptable and allowing more fundamental, radical, and ultimately central, questions to be raised.

Interestingly, if a movement decides to attempt to work within political structures, this would seem to move it outside Melucci's definition of a social movement, which he argues should imply an aim of breaching system boundaries. However, one could argue that system boundaries can be nudged along from within in a relatively gentle manner, so that changing systems does not necessarily imply a breach in the conflictual sense.

The problematisation concept in isolation is in danger of coming across as deeply rooted in a resource mobilisation model of movements, where constructivism and intersubjectivity are lost. To avoid this, I want to introduce a concept that can accommodate a greater consideration of context than political structures, and this is the idea of cultural conduciveness.

Cultural conduciveness

Hjelmar's second element of context is the notion of cultural conduciveness, which he defines as 'the degree to which people can identify themselves ideologically with particular themes in campaigns' (Hjelmar, 1996: 39). When a group such as Genetic Concern is trying to problematise a new issue it is very important that their themes resonate with the cultural context. Suggesting that our food may become dangerous due to greedy corporations or incompetent regulators resonates well with many people, and will stimulate concern. To argue that food should be safe will conflict with very few ideologies, and in the era of BSE and other food scares, the theme will find it easy to attract interest.

In line with Melucci's view, the cultural conduciveness concept suggests that cultural themes are growing in importance in politics (Hjelmar, 1996: 57). However, I am not convinced of its usefulness to the same extent as concepts of political context. In crude terms, cultural conduciveness sounds like the extent to which the wider population will agree with a movement's aims or not. If this is assumed to be a fixed entity which the movement is observing and taking account of, this seems like a very anti-constructivist analysis. The cultural conduciveness concept seems to fit much better with resource mobilisation models of social movements where the focus is on actors, not knowledge. In the cognitive praxis model, the notion of separating out the general cultural context from the movement's knowledge interests does not make sense, and in fact observing the evolution of a movement's cognitive praxis in the context of culture and politics is really the central project.

However, the importance of context is clear, and there is indeed some value in separating out cultural and political contexts in analysis. To give an example, Rüdig argues that in Britain the political structure (the two-party system) has served to keep down environmental movements that might otherwise have found some support in cultural terms (Rüdig, 1995). Similarly, the GMO debate in Ireland was influenced by several political factors relating to the EU. The national consultation process was oriented towards the impending review of Directive 90/220 at EU level (see Chapter 1). Also, the question as to whether Ireland could attempt to ban GMOs unilaterally was a common theme in the debate. Beyond this, there was also a cultural context for these EU components. The UK, for example, is generally taken to be much more 'eurosceptic' than Ireland, and the European dimension of

the issue was quite different there; the connection to collective European policy or the reluctance to take unilateral action were much less frequent themes in the debate in the UK than in Ireland. Also, the public interest in political 'sleaze' and the possible connection of a government minister's financial interests to a food safety scare made the Pusztai affair much bigger than it might otherwise have been (see case study in the next chapter).

Media strategies

While the next chapter focuses on the media aspect of the GMO debate, it seems appropriate to locate some discussion of the relationships between activists and the media in this chapter. This discussion will focus not on media discourses but on what the actors have said about the media, and vice versa, and what strategies towards the media have been in evidence.

As I have said, this has been a very media-centred, and media-oriented debate. Both sides were strategic and professional in their efforts to gain access to the media to present their arguments. I have described above the efforts Genetic Concern had to make to establish themselves as legitimate correspondents for the media, or movement communicators. Even if they had not invested so much effort in this themselves, as the issue grew in currency and controversy, the media would certainly have wanted somebody to speak for the anti-GMO side. Hjelmar argues that the media tends to construct leaders in movements to make life simple for itself in terms of easy access to quotes and responses (Hjelmar, 1997: 38). I have already mentioned that the Irish Times had policies on balance that meant 'both sides' of a debate had to be represented, and thus spokesperson for both sides were required. Quentin Gargan was a good spokesperson because he was articulate, dependable and quick to issue statements or respond to media inquiries (Interview with journalist).

Cracknell (1993) discusses Solesbury's (1976) idea that 'issue entrepreneurs' trying to get media attention for their issue are essentially attempting to do three things:

- command attention
- claim legitimacy
- invoke action

(Cracknell, 1993: 7)

The first two of these may often clash with each other. Sensationalism is often a very effective way to command attention in the short term, but is usually detrimental to efforts to build legitimacy and credibility. I mentioned examples of this tension earlier, such as Genetic Concern's photo opportunities that may have tended to attach an air of flippancy to their campaigns.

Legitimacy, in the eyes of the media in particular, but also in the eyes of legislators and actors generally, has been an important issue for Genetic Concern. One journalist I spoke to was explicit about his newspaper's need to see credibility in Genetic Concern before they started using them as spokesperson for the issue, and this meant using scientists, talking science, and avoiding sensationalism or 'scaremongering'. Until this legitimacy was built, the media would ask for an established spokesperson, which could include any academic scientist, or else a representative of a more established organisation. Qualification to speak on the issue has been a constant theme in this debate (for example, see Chapter 7 on speakers' assertions of their qualifications in the consultation process) and, as I have discussed, this has usually meant either claims to particular expertise or to representing the public.

Genetic Concern tended to strategically select the messages it thought would work quickest and easiest on the public; meaning food safety messages with some elements of themes such as environment and democracy, i.e. technological issues in preference to organisational or cosmological issues, in that order. One activist said to me:

> there are so many angles and you can't, its almost you think focusing in on one is the best bet, very simple message that people can just hear and understand straight away, you know the less complicated the better ... I think ultimately its what affects them personally, is possibly the main, the most likely one to go for, the most popular sort of argument
> (Interview with activist).

Also, there is no doubt that messages were softened to maintain credibility in respect of media access and experts. Strategising ones messages and activities with regard to context is part of a successful campaign.

Success in commanding attention is dependent on both the issue and the communicator. A current issue can create a communicator, as I have mentioned, and a communicator can also create currency for an issue. In this case we saw a mixture of both of these processes. Genetic Concern attracted attention to the issue and helped develop the debate, but other factors were involved too, such as controversies in the UK and the consequent media coverage there. The currency of the issue obviously helped create Patrick O'Reilly of Monsanto as a kind of movement communicator also. He was equally adept with the press release and the photocall as Genetic Concern, and the media could report current, and controversial, stories with the content, and the controversy, provided by and responded to by both sides of the debate.

Hannigan (1995, 68) identifies what he sees as the five key elements in guiding the media coverage of an environmental issue. Firstly, the new issue must seem to fit with the cultural context, the cultural conduciveness concept again. Environmental stories are often framed as, say, safety scares, or corruption stories (see Chapter 5), and such framing will be guided by cultural contexts in the sense of what interests people. The Pusztai affair was of much more interest to the media when there was a hint of cover up and corporate interference than when it was simply a new scientific finding. Similarly, food safety aspects of GMOs, with headlines such as 'is it safe to eat?' receive much more coverage than other aspects of the debate. Secondly, an issue must be articulated through legitimate routes, what Hansen calls 'authority fora' (Hansen, 1991: 451). This is clearly the issue Genetic Concern faced in their early days, needing to bring scientists from abroad to speak at their press conferences. Hannigan's discussion, however, does not allow for the change in discourse of the definition of such authority fora, such as we saw in this debate when Genetic Concern could build their own legitimacy over time. As Eyerman and Jamison discuss (see above), social movements create movement leaders and communicators, and so are not necessarily bound to existing models of authority and leadership. However, in the early stages of building such new models, reliance on old models of authority seems almost inevitable.

Hannigan's third element in determining media coverage is what he calls 'social drama' (Hannigan, 1995: 69). This means a good story, with heroes and villains, easily seen and easily told. Subtle, abstract issues are less attractive than, say, pictures of a large disaster. When Genetic Concern created photo opportunities

such as the 'Wakey Wakey Minister' event described earlier, they were following a well established pattern of environmental groups recognising the need to create immediacy for their issues in ways that the media will like. The fourth element is related to this, in that a story must be based in the present, not the distant future. The fifth and final element in Hannigan's model is that an issue should be action oriented, it should be possible to see a solution, so that the issue is not too abstract or hopeless.

Hannigan's analysis is a useful and clearly plausible overview of what the media looks for in an issue to determine its interest. However, the elements discussed above are largely a set of ex post facto observations; it is clearly the case that stories that have received the most coverage tend to fit these criteria but this is not an explanation as to how this happens. The cognitive praxis approach to social movements allows for a more subtle portrayal of the discourse based processes of interaction between actors in movements and actors in the media, and the knowledge interests context for this. People do tailor their issues to fit what they see as the media's requirements, and this gives power to the media. But it would be simplistic to say that journalists or editors are acting as simple subjective gatekeepers passing stories through a filter of selection criteria. As we have seen in this chapter, a movement can over time establish new leaders and new issues and so can in effect shift the media rules in its favour. Additionally, the normalising role of the media, and its associated biopower, are ignored in an excessively one-sided model of conduciveness.

Conduciveness, and Hannigan's models of the how stories gain attention and how claims are successful, are useful analytical tools for considering the context of a debate, but the fluidity of the processes must be recognised. If a movement wishes to put forward an argument that is in keeping with currently prevalent knowledge interests, it can be relatively straightforward in its approach. When Genetic Concern came forward with the message that certain new foods may be dangerous the goal of commanding attention was easy, the story was dramatic, current (post-BSE), immediate, simple, and there were even identifiable villains. If, on the other hand, the message to be sold was a call for a fundamental rethink of the entire agriculture and food production economies, this story was much less immediate or dramatic, and also fitted less well with prevalent cosmological views. However, these more difficult messages were more 'saleable' at the time of the GMO debate than at any point in the recent past. Stories such as BSE had established food

safety and associated cover ups and official collusion, as a general concern, and a media frame in itself. Also, as Beck (2000) has argued, any challenges to systems and previously unexamined legitimacy practices will tend to open much more to scrutiny, and so the theme of science or regulations failing to protect as they should were also understandable messages in the late 1990s.

As well as seeing Genetic Concern as a movement communicator or an issue entrepreneur, many other actors in the debate filled similar roles. As I have said earlier, the involvement of a number of scientists in the debate can be seen to an extent as motivated by a desire to defend science generally. The science community was the source of much of the discourse in this debate, ranging from researcher's claims about either newly found risks of GMOs or newly invented products and their associated benefits, to defences of the role of science as a policy making tool and calls for more science-based debate and decision making.

Hannigan presents an interesting discussion about science as a claims making activity. After Aronson (1984), he divides claims made by scientists into two broad categories. On the one hand, cognitive claims are attempts to convert new findings or results into 'publicly accredited factual knowledge' (Hannigan, 1995: 77). These he sees as relatively simple compared to the more important category of interpretive claims. In this case scientists are essentially translating scientific knowledge into other discourses, such as the social implications of a finding or the policy imperatives leading on from certain research, and so forth. Interpretive claims might be:

- *technical*, involving the scientist-as-advisor advising government or industry about specific risks or problems,
- *cultural*, which means claims aimed at building support for science and acceptance of the role of science, or
- *social problem interpretive claims*, which 'assert the existence of a social problem which a particular scientific speciality is uniquely equipped to solve' (Hannigan, 1995: 78).

To a degree this is a plausible model of how science engages in subpolitics (see Chapter 2). Claims are made in order to attract capital, or to obtain power. Once again conduciveness, and storylines, pertain. The above categorisation of claims making by science should be seen in the context of a dominant discourse of

science as a steering medium for many knowledge-oriented issues. This is what makes claims making by the scientists different to claims making by most other communities or movements. In the ideal public sphere postulated by Habermas, any actor could come to the public sphere and make claims about the existence of particular social problems and the best approach to tackling them. However, storylines strongly influence what will be seen as the appropriate discourse in which to address an issue. In particular, I am referring to the dominance of the science as decision maker discourse. The difference between a *technical* and a *cultural* claim by a scientist is the difference between Habermas' model of *pragmatistic* expert-decision maker relationship (see Chapter 2, *Expertise, Science and governance*) and a more *technocratic* model, where scientists try to install science-centred decision making to the detriment of inclusion. The *technical* claim makes assumptions about the established position of science in decision making, whereas *cultural* and *social problem interpretive* claims aim to extend or reinforce the decision making role of science, and this is what classifies them as subpolitics.

Conclusions

This chapter has looked at how public spaces were created and shaped in the GMO debate, and the roles of specific actors in this. Conduct in the public sphere is at the core of democratic practice. The ideal models of democracy I discussed in Chapter 2 all rely on a well-functioning public sphere. As Melucci points out, social movements are invariably about trying to create public sphere opportunities, to expand the possibility of debate on particular issues (Melucci, 1996: 177). This helps to explain his argument that power and control are becoming less about material resources and more about symbolic resources, and in modern societies the creators of *codes* hold the power. The global media organisations are the obvious example (Melucci, 1996: 180).

The clearest evidence that a debate can be fought with symbolic rather than financial resources must be that a GMO debate took place at all in Ireland. Genetic Concern had a new issue they wished to tackle and they wanted to carve out a public space for it. The role of the few key actors in getting the space created is clearly visible. But also the process of shaping the space is visible. Genetic Concern had to 'sacrifice' much in terms of the shape of the debate to get it created, for example amending their messages to make them media-friendly, and

largely adhering to the discourse of science based decision making. Symbolic resources work when the actors involved successfully judge where the connections between discourse and power lie; this is the principle of story lines, and it is why certain discourses dominate and new discourses will not find it easy to establish themselves.

In the introduction to this chapter I said that three aspects of the making of public spaces for a debate interest me in particular; creating a debate in the first place, accessing a debate, and influencing the discourse of a debate. In this chapter we have seen all three elements in operation. We have seen power balances between various entities where symbolic resources have come up against material resources. Some actors could access a debate more easily than others, some in particular had to make explicit trade-offs between gaining access and using their preferred discourses and arguments. All of these ebbs and flows are barriers to the operation of ideal models of democratic debate.

However, I think it would incorrect to imply that the process of refining and indeed simplifying messages has been due to poor functioning of the public sphere through the deployment of power in a purely negative manner. It must be recognised that, thinking in terms of context or conduciveness, many people were receptive to Genetic Concern's messages on a technological level – that food should be safe and that GMOs were worrying in this regard – but not so receptive on organisational or cosmological levels. Genetic Concern chose to use messages they knew were less contentious and more likely to find acceptance. One must go further in the discourse to consider processes such as governmentality and biopower to see why one might view current public spaces as distorted. Recognising the created nature of discourses and knowledge, a lack of general receptiveness to, say, cosmological themes of exploitation of nature or organisational themes of global capitalism and liberal democracy is not a fixed, pre-existing, state. Problematisation processes, story lines, political and cultural conduciveness are all constantly recreated through normalising processes such as media discourses, framing mechanisms and, ultimately, governmentality.

In this chapter, social movements theory has proved useful in helping me to characterise the nature of the debate and its actors. It seems clear that Genetic Concern and the anti-GMO movement could not be classified as a social movement in either Eyerman and Jamison's or Melucci's terms. In the first

instance, it seems more of a sub movement that reacted to new technological issues on the basis of broader cosmological and organisational knowledge interests, and most of the principal activists came to the movement through these broader interests. Additionally, the anti-GMO campaign exhibited an ambivalent attitude towards collectiveness in both action and identity terms. At times it was a movement for fundamental re-organisation of decision making, economics and global governance, while at other times it was merely a consumer campaign asking individual consumers to boycott certain products and make their preferences known through their shopping habits.

The theoretical approach of Eyerman and Jamison has helped me greatly in analysing the movements and actors in this debate. However, I must conclude that there is a limit on the usefulness of the theory to my project, simply because my focus is at a different place. This data set is not about knowledge creation or a broad movement in Eyerman and Jamison's sense, and my interest is not at this point but at the meeting of different points of view and discourses in the public sphere. It is a weakness in their approach that movements are seen is a somewhat isolated context and that movements are seen in the largest sense rather than as fluid interactions of sub-movements across a range of technological issues as informed by, and informing, cosmological and organisational knowledge interests.

We have seen how various actors try to get issues onto media and public agenda, and how they try to influence their conduct and their outcomes. We have also seen some of the barriers and distorting influences. As well as the relatively simple examples such as gatekeepers to media access, there are also the important, more intersubjective, patterns of conduct and normality, how these are established, maintained or challenged. Eliasoph argues that practices in the pubic sphere are the link between action and structure for democracy:

> Political beliefs and political power are embodied in this elusive but very firm sense of what is appropriate to do or say in the contexts of the public sphere.
> (Eliasoph, 1998: 237)

This is why the focus needs to be not just actors, but actors and discourse and their relationships. The actors I have discussed in this chapter are those that have been centrally involved in the most visible parts of the public sphere for this debate. They

have been the speakers at seminars, those quoted in the media, those issuing press releases and encouraging media coverage. But all of this has happened in evolving contexts and discourses. It seems clear that the actors perceptions of and reactions to these contexts are the principal means of transmission of the patterns and rules. This, again, is why the focus must be on discourse.

CHAPTER 5 THE DEBATE IN THE MEDIA

Introduction

No one could doubt the centrality of the media to the GMO debate, both in terms of volume of activity and of concern to the main protagonists. There has been a huge volume of media coverage of the issue, with most of the key actors and arguments featured, and with more than a few celebrities created. Across the public sphere elements utilised or created by the GMO debate, the location of most of this public element of the debate has been, almost by definition, the media.

This chapter presents data from the media, principally newspaper articles, but also radio extracts and publicly distributed leaflets. These are all elements of public spheres where arguments are made and opinion is formed or shaped in some way. The assumption from a theoretical point of view is that the media is a public sphere that can be analysed as a case study of the wider debate, particularly in terms of its own role in the debate and the effects of its central position. In other words, the media debate is analysed as an important part of the debate as a whole, and also to examine the role of the media itself in shaping the discourse. The discussion starts with a look at this theoretical premise; the notion of a public sphere, and the specific issue of media discourse and its relationship to wider society.

The Public Sphere

This is not a media project as such, and my primary goal is not to examine how the media has covered the GMO issue. However, I consider the media to be an important public sphere for the debate, one of the main arenas in which actors argue and an audience observes. It seems unproblematic to declare the media a public sphere for such debates. As Fairclough puts it, 'if the media is not sustaining a political public sphere, where else can it be constructed in our mediatized society?' (1995: 11).

The public sphere is the domain of opinion articulation and public will formation, and it is to the media that most actors look as a forum for this articulation and for

the opportunity to persuade comparatively large audiences. But it would certainly not be reasonable to suggest that the media is simply a benign institution that acts as no more than a neutral forum for debates to take place in. It is the tension between a perspective on the media as reflecting public debate and seeing the media as a much more active player that makes study of the role of media so important.

I have already discussed the concept of the public sphere in theoretical terms. Put most simply, it is 'the sphere of private people come together as a public' (Habermas, 1991: 27). Habermas' account of the transformation of the public sphere, with its associated divergence of the normative ideal and currently observed practices, calls for a two-level analysis of the role of the media. Thinking of the media as an ideal public sphere calls for an analysis of its role in reflecting society, whereas treating it as a transformed public sphere allows for analysis for the consequences of that transformation, i.e. its active influence on society.

The active role of the media can be addressed by considering the gap between the ideal of a public sphere and what is seen in practice in the media. There is a substantial body of literature discussing the issue of the ideological and power functions of the media, which I won't explore in any detail, save to acknowledge its active role in such a debate. There is no doubt, for instance, that the media can often be viewed as 'the gate through which privileged private interests invaded the public sphere' (Habermas, 1989: 185). This raises the whole area of public relations, the deliberate use of media and the 'manufacture of consent' (Chomsky, 1989). Taken to an extreme, we find a model of the major media as 'corporations "selling" privileged audiences to other businesses' (Chomsky, 1989: 8). I accept the argument that the media 'generally reflect the perspectives and interests of established power' (Chomsky, 1989: 10). I also note that this can be said for both privately and publicly owned media; the core idea of governmentality is that public service media will be guided by established power patterns and dominant discourses as much as any privately owned equivalent.

The whole issue of the media as a power instrument and as a builder of consent is the core of the difference between Habermas' ideal of a public sphere and what actually takes place. A connected concern is the use of the media as a proxy for an ideal public sphere. Cracknell (1993), for example, discusses the use of media discussion as a barometer of the public mood on environmental and other issues. If

the media holds power both to drive public opinion and consensus, and also to position itself as a proxy for public opinion, it quickly becomes clear why media access is so important to so many actors in debates such as this. It is no wonder that everyone wants to obtain media coverage, and that they will go to considerable lengths to do so, including changing their messages and even their goals themselves (see Chapter 4). At times it can seem as if the entire debate is taking place in the forum of the media, and favourable coverage is the only goal. This is obviously all the more serious an issue if one accepts the initial argument that the media is far from the simple ideal of a neutral reflector of public opinion.

Fairclough sees media analysis as a way to gain insights into social patterns and changes. While I agree with this perspective, media analysis should not be used to chase wider social research questions, unless the media are seen as part of this wider concern. So on one level I am postulating the media as an arena of public communication, of particular relevance to this debate. In fact, Habermas describes the press as 'the public sphere's pre-eminent institution' (1991: 181). On a second level, the media merits attention because of the way it raises issues of power and access, and its influence on outcomes.

Media Discourse Analysis

The case studies I present in this chapter are communicative events; instances of communication taking place through a public medium, examples from the totality of the public debate. As I stated above, their analysis serves two purposes; seeing the media as an important space for the GMO debate, and looking at the specific role of the media in shaping the debate.

The discourse of the media can be taken, to at least some extent, to represent societal discourses and reveal societal practices and assumptions. In the simplest sense this is because the media are by definition part of public discourse. As van Dijk puts it 'news is not only written but also public discourse' (van Dijk, 1988: 74), and because it is placed in this context, and is addressing a wide and diverse public audience, 'a considerable amount of generally shared knowledge, beliefs, norms, and values must be presupposed' (ibid.). These presuppositions can be analysed. Assumptions, omissions as much as inclusions, can reveal what is held as common or accepted, and can in particular track changes in this regard.

Analysis is valuable simply on the level that 'media texts are sensitive barometers of cultural change which manifest in their heterogeneity and contradictoriness the often tentative, unfinished and messy nature of change' (Fairclough, 1995: 60). In particular relation to the current topic, Nelkin argues that 'by their choice of words and metaphors, journalists convey certain beliefs about the nature of science and technology, investing them with social meaning and shaping public conceptions of limits and possibilities' (Nelkin, 1995: 11).

I have dealt with some aspects of the influencing role of the media in the Chapter 4, where it was seen how the primacy of gaining media attention directly influenced actors' behaviour, and determined relative power balances. The desire to obtain access to the media, and the techniques 'required' to do this, shape actors' behaviour and discourse. Some analysis of this aspect will also emerge during this chapter. One area I will not be exploring in any detail is that of media reception. This is because I am examining the discourse in particular public spheres, looking at particular communicative events such as newspaper articles and also even leaflets. So its important to state that I am not using media analysis as a proxy for general public debate or even more for a measure of general public opinion. Research on reception studies shows the complexity of the processes of people receiving media stories, and their ability to see through rhetoric (Burgess & Harrison, 1993; Corner & Richardson, 1993). It also seems to suggest the important role of the *habitus* (see Chapter 6) of the recipient in shaping their interpretation (Anderson, 1997: 191). Corner and Richardson, particularly, were able to show this factor at work through their study of the reception of videos on nuclear power stories shown to different groups such as environmental activists or members of different political parties. This private sphere element of how media texts are received and interpreted is beyond my remit.

Observations of the pubic sphere in practice, and their contrasts to the ideal, make the concept of public opinion particularly problematic. As Watson puts it 'the sphere where public opinion was formed becomes a sphere where public opinion is either considered to pre-exist without the need for it to be formed through discussion or the state attempts to create public opinion through public relations experts' (Watson, 1998: 3). Public opinion is not built by the public, and what is presented in the media as public opinion is either making assumptions or even actually trying to create this rather than reflect it.

Habermas himself acknowledges the active role a government might play, through public relations, in trying to set the tone of the public sphere, and the media in particular. This is clearly an acknowledgement, in that the 'normalising' effect of the underlying assumptions of media discourse can be 'guided' or influenced, of governmentality. However, there is evidence that media opinion and public opinion are often conflated. An example is the reaction of supermarkets to the GMO controversy by banning GM foods, when the only evidence they have of opinion are media content and the comments or phone calls they receive. Another example would be the national consultation process itself, again the main evidence the Minister would have for the existence of a 'public controversy' would be the existence of a media controversy.

In choosing a way to analyse media discourse I seek something more than a language based approach that takes media texts out of context and isolates them as discourse phenomena. Context is centrally important, and indeed I see a revelation of the text-context relationship (in both directions) as the main goal of the analysis. To get at this relationship through analysis based largely on texts, I will combine elements of media discourse analysis approaches by Norman Fairclough and Teun van Dijk.

In line with my discussion above on the two levels of the role of media in public debate, Fairclough argues that assumptions and representations in media texts, and in particular their change over time, both reflect and influence analogous societal change:

> The media are shaped by the wider society, but they also play a vital role in the diffusion of such social and cultural changes.
> (Fairclough, 1995: 51)

Thus on one level I wish to simply look at particular media discourses to gain insights into some of the themes, assumptions an arguments of the wider debate. I am treating media articles, radio programmes etc., as 'communicative events' (Fairclough, 1995).

Fairclough suggests that this concept of media discourse can be viewed as having three constituents:

- text

- discourse practice ('the processes of text production and text consumption'), and
- sociocultural practice ('the social and cultural goings-on which the communicative event is a part of')

(Fairclough, 1995: 57)

The text is the key point of intersection for the analyst, since media texts 'constitute versions of reality in ways which draw on the social positions and interests and objectives of those who produce them' (Fairclough, 1995: 103,104) Thus the text itself reflects the influence of the other elements of the discourse. For Fairclough, the text will reveal these connections when examined in terms of three key elements; representations, identities, and relations (1995: 5). How is the world represented? What identities are given to actors? What relationships among these actors are presented?

Of course, these can also be seen from what is absent from a text. Fairclough uses the term 'presupposition' to describe what is absent from a text because it is taken as commonly understood and accepted, and thus reveals what these understandings are, and how they 'draw the viewer into the common sense assumptions, the world-view, upon which the programme is founded' (1995: 108).

Dunwoody and Griffen (1993) also talk about the connections between text and context, when they suggest that a text will be shaped by three levels of influence: frames, organisational issues, and social context. Frames, a common concept in media analysis, are essentially the genres or categories into which journalists tend to put their articles; a crime story, or an accident story, or many others. Environmental stories, being a relatively recent genre, often tend to get put into other frames, such as political or accident related frames. The concept of *organisational issues* refers to how newspapers actually work and how news is produced, and the influence of these elements on what appears in the newspaper. For example, a larger newspaper, with more resources, may have specialised correspondents to provide depth, or may have the time and money to run reflective articles on issues as opposed to more short term oriented reportage. Additionally,

the business structure of newspapers pertains here.[5] The third layer is the *social context*, meaning the context of the community of readers.

This is the overall framework I use to connect analysis of texts to the wider discourse. The approaches of Teun van Dijk are useful in supplementing the specific tools of discourse analysis to reveal all that the texts have to offer, in particular around issues of language in the citation of sources and evidence and the overall process of credibility building.

Van Dijk, like Dunwoody and Griffen, talks of the influence of news production issues (e.g. deadlines) on the product. But more than this, the 'style of news reports in the press, like any style, is controlled by its communicative context' (van Dijk, 1988: 74) This does not refer to wider social context in this case, but simply the specific context of what is expected of a newspaper article:

> news style is heavily constrained by various contextual factors deriving from the public, mass-mediated, and formal nature of news.
> (van Dijk, 1988: 82)

However, within any such constraints, there is still plenty of room for various influences to act, and in particular for rhetoric to be employed to achieve certain ends. Possibly the key goal of these strategies is to persuade, by means of achieving credibility for the content. In this regard, 'news discourse has a number of standard strategies to promote the persuasive process for assertions', the most common of which are to:

- emphasise the factual nature of events (e.g. eyewitness evidence, signals of precision, and use of reliable witnesses)
- build a strong relational structure for facts (e.g. mention previous events, use well known scripts and concepts)
- provide information that also has attitudinal and emotional dimensions
(van Dijk, 1988: 84,85)

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[5] The Irish Independent, for example, is in the same international media group of companies as the London Independent, and so runs many of its syndicated articles. This had an influence on its coverage of UK originated GMO stories in that the Irish paper ran more stories on the issue than it probably otherwise would have (Interview with journalist)

I will expand a little on some of these issues. The objective of the journalist is to convince the reader that their representation or analysis of events and issues is reliable and correct. If a journalist cannot make universal expertise claims for all stories he or she writes, other means must be used to persuade the reader that the information and claims in the article are correct. The key to this is de-emphasising the interpretative role of the journalist in an attempt to create the impression of more direct links between the reader and the events and protagonists. Language styled as direct description and eyewitness reports, for example, work because 'if ordinary people are participants and are interviewed, it is as if the ordinary reader himself or herself has seen the events' (van Dijk, 1988: 86). In the same regard, 'quotations or quasi-quotations are closer to the truth and more reliable than event descriptions by the reporter' (ibid., 87).

Van Dijk is particularly interesting on this subject of quotations and sources. He observes that 'not all sources are equally credible', and it seems from the evidence that among the media 'there is a hierarchy of sources and associated degrees of their reliability'. A Prime Minister, for example, will always be more credible and quote-worthy than a mere minister, a boss more valuable as a source than a worker, and so forth. In fact, 'the social hierarchy seems to be reproduced in the rhetorical hierarchy of credibility and reliability' (van Dijk, 1988: 87). This applies to all debates, and is a key issue in my whole project, where assignment of credibility to actors and arguments is so important. As Anderson (1997: 171) points out, environmental issues are regularly mediated through the voice of the expert, 'however, there are various tensions over what is viewed as "expert discourse" and what is perceived as "lay discourse"'.

These examples of language and discourse issue from van Dijk serve to illustrate the approach I will be taking for the rest of this chapter. Media discourse both provides important insights into the wider GM debate, and also the media field serves as a significant actor in itself in the debate. The media arena is a major arena in terms of the action of power in the debate, strongly influencing through aspects such as access, selection of coverage and, of course, language. Most of the rest of this chapter will focus on the issue of discourse and language to see how power dynamics among arguments and actors are reproduced or challenged in this important sphere of the overall debate. First, however, to make the connection between more general theory of media discourse and the specific

issues that pertain to this analysis, I wish to present some discussion on other literature in the field. Two particular topics are of interest and have been the subject of significant academic attention. The first is how issues around risk, science and technology, tend to be presented in the media, and the implications of this. The second relates to discussions in the Chapter 4, particularly the relationships between the media and other actors in the environmental debates, in particular environmental activists.

Risk, Science and Technology in the Media

Science has obviously been a topic for press reportage in one way or another for a very long time, and indeed, for most people this is the extent of their interaction with the world of science (Nelkin, 1995: 2). One driver for recent interest and growth in coverage has been the growth of interest in the negative connotations of science, through risk, environmental damage, health scares etc. As Beck (1992) argues, science is looked to as the cause of many environmental problems, and at the same time as the source of the solution. Equally, the globalising tendency of the media has contributed, as emphasis on local focus declines and stories get bigger in their perspective; 'increasingly, in the 1990's, science appears in the coverage of such global issues as climate change, environmental disasters, and international economic affairs' (Nelkin, 1995: 2).

Through this environmental connection, many stories featuring science are essentially risk stories, about risks created by science. But, as Dunwoody and Griffen (1993) point out, generally even stories that are nominally about risk do not tend to concentrate on the risk itself, and furthermore there is no correlation between the supposed extent of a particular risk and extent of coverage. Other factors influence the press agenda more strongly, such as a story's newsworthiness in terms of drama, visual impact, or wider ramifications (for example a risk story becoming a story about political bungling, or impropriety). In the next section I will focus more on this disaster mode of science reporting, specifically reporting of environmental issues, but first I will consider the issue of science reporting in itself, i.e. with more of a focus on science coverage as science promotion.

The tendency of news coverage towards events and drama (see Hannigan, 1995) means that science coverage is mainly dramatic stories either about great discoveries or great disasters (Nelkin, 1995: 4). The Irish Times, for example, runs a weekly science page, which seems to see itself as a science promotion vehicle, and frequently runs articles about dramatic discoveries, cures for cancer etc., particularly if Irish scientists are involved. This fits well with Nelkin's concept of 'the scientist as star' (1995: 15), where scientists are heroes, fighting for the betterment of humanity. This kind of imagery is very common in science stories, which tend to concentrate on the big picture 'campaign', for example the war on cancer, the fight against hunger etc., rather than on the details of the science itself. Two significant potential effects of this are that findings tend to be reported fairly uncritically (i.e. taken as true), and secondly, that expectations tend to be high on the basis of small amounts of information such as initial reports of findings (often not yet even at the journal article stage).

The science community are obviously conscious of, worried about even, their relationship with the press. Nelkin (1995: 7) observes the ambivalence of scientists towards the press; on the one hand using more sophisticated PR, on the other hand tending to mistrust and criticise much of the coverage they receive. However, I would argue that most press coverage of science, in both the 'discoveries' and 'disasters' categories, tends to reinforce its status. The aforementioned Irish Times science page, for example, tends to be very unreflexive in terms of social analysis of science, concentrating on the discoveries approach. Even coverage of scientific mistakes, as Nelkin argues, generally isn't presented as a challenge to the status of science, but rather as a defence, since mistakes are presented as exceptions thereby proving the rule: that science generally works, and errors will be weeded out by the process. In this chapter for example, I will discuss a case of scientific research results published and then quickly withdrawn as flawed, and much of the consequent discussion centred on whether or not this was 'good' science, and the fact that science-the-institution had caught the flawed results showed that the system worked. Thus such reportage 'further idealizes science as a pure and dispassionate profession' (Nelkin, 1995: 26).

Generally, then, direct reportage on science tends to be favourable, or at least fairly unreflexive, and effectively 'most reports on technology are promotional, conveying the message that each new development will provide the magic to solve economic problems or ameliorate social ills' (Nelkin 1995: 32). This issue of raising

expectations is of particular relevance to biotechnology, and Nelkin makes some insightful comments on this. The basic model is one of extremes; swinging between positive and negative presentation of biotechnology. 'The media coverage of new technologies shifts with prevailing fashions, but it plays on the desire for easy solutions to economic, social, or medical problems' (Nelkin, 1995: 45), but the tendency to be over enthusiastic about new technologies that supposedly offer great promise can 'open the way to disillusionment, should they falter' (p.46). The result is that:

> Reporting on biotechnology, the press bats readers back and forth from biotechnology miracles to visions of apocalypse, from celebrations of progress to warnings of peril, from optimism to doubt.
> (Nelkin, 1995: 37)

In quite a prescient comment for 1995, Nelkin argues that 'these dramatic shifts take place as journalists respond to the promotional enthusiasm of technical institutions and then to changing popular fashions' (p.37).

As I mentioned in Chapter 1, one issue in the debate about 'the risks versus the benefits' of GMOs has been the intangible nature of not only the risks, but also the benefits. Many claims of potential benefits were regularly made, such as drought resistant seeds, vitamin enhanced vegetables, and vaccines built into foods, all based more on speculation rather than on current technical achievements. Many of these were headline grabbing (see for example 'Fear Mongering Threatens to Nip Miracles in Bud', *Boston Globe*, 5 June 1999; 'Latest GM Foods "To Benefit The Consumer"', *Irish Times*, 8 May 1999), and contributed to the cyclical process of predictions of wonderful benefits alternating with predictions of catastrophic damage.

Of course, there is 'promotional enthusiasm', and 'pressures from aggressive sources of information' (1995: 45) on both sides, with NGOs seizing on every snippet of evidence against GMOs, issuing press releases, and the press reporting these. This has very clearly been the case in Ireland, particularly in the Irish Times by dint of the extent of its coverage. Goals of balance and access mean that a cycle of reportage from each side of the debate is created, with a scare story followed by a breakthrough story, and with each side complaining of bias when the

wrong kind of story appears (Interview with journalist), and with the result of polar coverage and overall confusion.

The other important feature of biotechnology reportage is the breadth of issues that are, necessarily, dragged in. Since the beginning of the raised profile of the issue, 'the reporting in this area suggests that biotechnological risk is in many ways a surrogate issue, linked to deeper ethical and religious issues, concerns about economic inequities, and public mistrust' (Nelkin, 1995: 60). Before considering this further, some context is merited regarding how environmental activists and the news media interrelate in practice.

The Creation of Environmental News

Beyond science journalism that reports on developments, personalities, and broad issues in science, much reportage focuses on the supposed consequences of science, in particular environmental damage. Again, the traditional focus of the news media has been on events, an oil spill for example, with more abstract issues such as ozone depletion posing more challenges to standard reporting conventions. I mentioned earlier Dunwoody and Griffen's model of the tendency for stories to be fitted into existing frames, for example a nuclear power station incident presented in the accident frame as opposed to as a risk story per se.

Hannigan's overview analysis of media presentation of environmental stories reveals some interesting patterns. Firstly, as mentioned above, journalists prefer immediate events over stories with more vague or abstract time frames. One consequence of 'event-centred coverage' is that while it might raise public awareness of specific events, it tends to give the impression that these events are isolated, rare, incidents, and that generally environmental damage is not a serious problem (Hannigan, 1995: 65). In addition to an event-orientation, journalists, comfortable with modular stories with two sides to present, but little connection to broader issues, prefer to report 'monocausal frames rather than frames involving long and complex causal networks' (1995: 65).

A third such shaping influence is the role of sources. Van Dijk's work on sources was mentioned earlier, and much work has also been done on citation and sources in environmental stories. Of specific interest here are the relationships between

environmental actors and the media, which has been a subject of considerable academic attention in recent years. Hannigan talks about practices and patterns around journalists' sources, and the power associated with being a 'source', something I have already raised in Chapter 4.

From the outset, environment campaigners often must decide whether they focus on campaigning towards government or campaigning towards the public, which essentially means through the media. Getting public attention for an issue, or indeed just for the group itself, can be very high on the agenda (see Yearley, 1992). This can be towards the greater goal of attracting funds, gaining access to decision making circles, or building legitimacy. Anderson (1993) points out that very often new environmental groups begin effectively as outsiders, without a reputation or credibility, or without contacts in lobbying or government circles. As Cracknell puts it; 'early environmentalists lacked the contacts which might have made low-profile campaigning effective and thus felt they had little option but to resort to publicity seeking' (Cracknell, 1993: 6). Thus they need the media to help them build a name for themselves and gain access to their desired audiences. On the first level, 'the very act of achieving media coverage can result in credibility for the organization concerned', particularly if the coverage presents them in a positive light, for example the presentation of research they have undertaken (Cracknell, 1993: 7). This credibility then may lead to an elevated status. Additionally, in terms of debating an issue in public, generally a government has fairly ready access to the media, and so an NGO must attempt to match this. A group with poor access will often choose a provocative, publicity oriented, course because 'by generating public concern or outrage through the media they hope to force the hand of government, and thus get a rapid commitment to action' (Cracknell, 1993: 16). Of course, the aims of building credibility and gaining public attention are often mutually conflictual, as I will explore shortly.

Media access, then, is often a main strategy in itself, and may require a constant effort on the part of an NGO (as I discussed regarding Genetic Concern in the previous chapter). Anderson (1991) talks about what she sees as the increasingly professional strategies of environmental groups in achieving media access, for instance by providing well packaged stories, maybe even broadcast quality footage, and through precise targeting of publications and journalists for particular themes. At the same time, environmental stories are often attractive to media when they are simple, not too political, and have strong visual elements (Cracknell,

1993). But of course it is not simply a one way relationship with environmental activists moving to fit into the media agenda. The way the media reports the environment has changed substantially over the years, and indeed has effected change in reporting more generally. For instance, Cracknell (1993) points out that stories such as global warming undermine the traditional notions of timescales in media stories.

It would be wrong to over simplify the importance of media coverage in the life of an environmental pressure group, and in particular it would be inappropriate to use media coverage as a reliable indicator of an NGO's performance. Hansen points out that 'how much coverage a pressure group receives in the various media, however, tells us little about how successful or otherwise it may be in terms of influencing the media agenda' (Hansen, 1993: 151). For instance, Genetic Concern may feature in the papers frequently because their issue is current, with no implication that they are necessarily creating the opportunities, or that they are making good use of them. Additionally the adage that there is no such thing as bad publicity should not necessarily be applied, since sometimes media attention per se can be interpreted by actors as an indication of lack of seriousness. Of course, press coverage comes in many forms, and if credibility is the goal behind seeking coverage, then not all attention is of equal value.

In particular there is, as mentioned above, tension between a sensationalist approach and one based on building legitimacy as a serious actor. I mentioned in the previous chapter Solesbury's (1976) description of *issue entrepreneurs* trying, in their efforts to attract media attention, to command attention, then claim legitimacy, and then finally to invoke action. Presumably the third of these is the ultimate goal, but it is obviously the most difficult, and indeed the hardest to measure. The 'commanding attention' goal often becomes a proxy measure of success, possibly to the detriment of one, or probably both, of the other two levels of objective. Most particularly, strategies for gaining media attention often do not correspond with strategies for building legitimacy. This depends to a degree on the medium in question, the Irish Times for instance would claim to use perceptions of seriousness and knowledge in their gatekeeping (Interview with journalist), but often many newspapers are interested in a photo opportunity as much as a detailed press release about what they see as a relatively obscure issue. Over the years, Genetic Concern have not been averse to strategies such as camping outside Dáil Eireann in a bed with a sign saying 'Wakey Wakey Minister', and other such 'stunts'

have been mentioned to me by more than one interviewee as causing damage to their image as a serious group. But these events do get media coverage.

Anderson argues that this tension between media friendly approaches and building credibility is often manifested around the issue of scientific certainty. Yearley (1991) talks about the ambivalent attitude of environmental NGOs to science. I would argue that is closely linked to Beck's (1992) point that the modern environmental movement is centred strongly on knowledge from a modernist and scientific perspective, that much environmentalism would not, could not, exist without science, and this is why environmentalism cannot stand against science despite often seeing science as the cause of environmental problems.

NGOs utilise scientific knowledge, and often recruit, or form alliances with, scientists, as part of their campaigns, and as discussed above, have become successful at it. This contributes to their legitimacy as perceived by observers. However, Anderson finds that journalists still tend to be sceptical about NGO sources, indicating that legitimacy building has been only partially successful to date (Anderson, 1993: 59). But Anderson's conclusion that 'if environmental groups are to attract favourable media coverage they must be viewed as legitimate and authoritative' (Anderson, 1993: 55), is probably only half the story. Hansen's study of the media strategies of Greenpeace, referred to above, found that that organisation managed to achieve substantial coverage based on the approach of generating publicity through campaigns, as opposed to them having become established as a source journalists routinely go to (Hansen, 1993:176). Sensationalism can often achieve access, though possibly it would be seen as a short term strategy that does harm in the longer run, or indeed a strategy likely to achieve attention but with no real effect beyond that.

The importance of these ideas for my work is that they show clearly the influence that media practices have on stories, and hence on the wider debate. This reveals the gap between the actuality of how media debate takes pace and what shapes it, and Habermas' model of an ideal public sphere 'neutrally' hosting actors' arguments. Actors seeking media attention must form a strategy to achieve this, and such a strategy may be considerably different from that of seeking access to government officials, effecting policy change, or other objectives. In particular, a media strategy will probably change the content of the actors messages and the exact nature of their arguments and goals. This has certainly been the case in the

GMO debate, as I discussed in the previous chapter. Thus before the media have even published their stories, they have influenced the debate. Then, as I have discussed, the practices of story writing and publication in the media affect the content of the debate in a number of ways. Again, the media are far from a simple, benign reflector of debates taking place in the wider public sphere.

Much of the above discussion has referred specifically to the print media, usually privately owned. However, my data set goes beyond newspaper texts, and includes radio broadcasts and distributed leaflets. In particular, some of the texts I use come from the Irish national 'public service' broadcaster, and one of the leaflets I analyse was produced by a public agency, the FSAI. Certainly, some of the above discussion relating to issue entrepreneurs, media frames and so forth, does not pertain so directly to the leaflets case study I present below. However, I contend that all of the issues about presuppositions and normalising discourses do pertain in all elements of the data set. My earlier discussions on governmentality establish clearly that public service institutions are no different to private ones in their capacity, and tendency, to influence presentation and so guide norms, intentionally or otherwise. The presentation of arguments in a newspaper article, a radio broadcast, or a consumer leaflet, all entail similar discourse practices. As will be seen, the presentation of 'facts' or 'opinions', the credibility of sources and the legitimacy of science are but a few examples of the many ways norms are directed through the discourses in all types of texts. And since all these types of texts are important elements of the public sphere, they all merit attention for what they can reveal about the discourse practices in this debate.

The Data Set

The data set available to a researcher interested in media coverage of the GMO debate is very large indeed, and merits much more than one PhD thesis, never mind just one component thereof.

I will attempt shortly to give a brief overview of these data, but for the sake of depth, and simple manageability, my analysis will be largely based on three case studies; particular sub-categories from the entire body of data. Two of these are news media coverage of particular stories within the overall GMO story, in both cases delineated by a timeframe of about a week in which a number of related

stories appeared in a number of newspapers; a specific scientific controversy in the first case and a court case in the second. As indicated, most of my analysis will be based on newspaper texts, but some reference will also be made to radio coverage. In order to represent the full range of written public communicative events taking place on this issue and to include 'earlier' stages of the public sphere in the analysis, the third case study will use as its source not the news media per se, but rather information leaflets on GMOs produced for public distribution.

One other element of the public sphere of this debate that falls outside the category of conventional media is that of electronic communications; e-mail and the Internet. More than any environmental issue to date, this public sphere has played an important part, particularly in communication among interested parties (not so much as a route to general audiences such as effected through newspaper coverage). Based on one subscription to an email contact on GMOs, I was often receiving about 10 to 20 emails per week, up to 10 per day during the peaks, from many NGO groups around the world, usually comprising reports on campaigns and actions or, more commonly, transcripts of mainstream media coverage of the issue. It is interesting that this medium has been used mostly to transmit coverage from the conventional media, revealing their continuing importance in the eyes of activists. However, purely for the sake of containment, the email sphere will not feature significantly in my analysis.

As outlined above, some of the factors that obviously influence how the media reports environmental issues include those related to news production, such as frames or organisational issues. I will talk about some of these in relation to the data, but mostly I will be presenting a text-based discourse analysis of particular media articles relating to the GM debate over recent years. Features I will be looking at will include:

- What arguments feature in the articles, and how are they presented
- What actors feature and how are actors identified
- How credibility is built by articles and arguments
- How science is used for credibility and how it is presented more generally

At the start of this chapter I suggested that analysis of media is important for two reasons: the media as a space for the wider debate, and the role of the media itself

in shaping the debate. On the former point, credibility claims and rationality and rhetoric issues will be key elements of the analysis. On the latter, the direct effects of the media will be examined through a look at how stories, issues and actors can be portrayed in different ways, and some comments on what does and doesn't feature in the media coverage. I start with an overview of the media coverage, particularly in Ireland, of the GMO debate.

Overview of the Media Debate

Stories on GMOs first started appearing in the newspapers in late 1996 early 1997. Probably the first article to appear in the mainstream news media was published on the 18th of August 1996, an article in the Observer entitled 'Genetically engineered foods to hit your local supermarket soon. And you won't know it's happening', quoting consumer lobby sources in the UK. The first Irish article I am aware of is from the Irish Times of 19 November 1996, called 'Ban on genetically altered food urged'. From this time to the end of April 1999 I count over 160 articles in the Irish Times, and they are still a regular feature ever since. In the debate to date, the period of February and March 1999 saw the peak of media attention, with the Irish Times featuring more than 30 articles on GMOs in February 1999 alone.

Most Irish newspapers, both national and regional, covered the issue at some time or other. In my files I have articles from the Irish Times, Irish Independent, Examiner, Sunday Business Post, Sunday Tribune, Sunday Independent, and Evening Herald, and a number of regional papers. Many other publications, such as the Farmers Journal and several magazine style publications, also covered the story as various times. Irish Times coverage was by far the most significant, probably outweighing all other newspapers put together. There have also been many editorials, special features, letters (over 35 letters were published by the Irish Times between November 1996 and April 1999), in all of these publications.

Local events often spark local paper coverage, such as a conference in the area (as happened in Skibbereen in early 1998, see Chapter 6), or events like the New Ross trial, featured here as one of the case studies. In the national press, identifying patterns in what causes coverage is more difficult. Some of the events that have caused particular media activity have been Clare Watson's high court

case on the legality of GM beet trials, the Pusztai affair, and the sabotage of field trials in Ireland, the latter two being case studies below.

All of the major actors in all spheres of the debate have featured to some extent in the media coverage. In the early days of the issue, Genetic Concern quickly established themselves as a source, as did Monsanto. Other sources cited early on included the Green Party, the Consumers Association of Ireland, and FSAI. Another early actor in the media debate was Professor David McConnell of the Genetics Department in TCD, who positioned himself as a vocal advocate of the technology. I have spoken about these actors in the previous chapter.

At various times in the debate, people from many points of view have criticized the media for being biased against their positions. One journalist told me that every time his newspaper publishes an article seen to be on one side, people from the other position complain about lack of balance. I discussed earlier some theories on why media coverage tends to swing between poles, and evidence of this phenomenon is certainly present in the data set of Irish media coverage of GM issues.

As well as all actors, the extensive media coverage has fairly comprehensively featured all aspects of the debate. Without engaging in any particular empiricist or quantitative analysis of media content, I will discuss some aspects of the trends in the coverage. Common themes in the coverage include science related elements and political aspects, but I would suggest that the majority of coverage is focussed on the question of safety: environmental impact and, even more, implications for human health. Even many articles that are nominally framed as stories about political sleaze, trade, or other themes, ultimately lead to the question of what implications this has for the safety issue. This means that the question of who you can trust was central – articles about various topics led to issue of whether certain actors could be trusted or not, and therefore to judgements as to which way the balance of evidence, or doubt, was currently considered to be leaning.

One theme that features fairly regularly is the independence of scientific research, particularly when funded by companies:

it [Genetic Concern] does not accept that research funded by Monsanto is independent, though such a commissioning relationship between research and business is commonplace.
('Battle Lines are drawn over GM foods', *Irish Times,* 19 June 1998)

The ultimate question remains the weighing up of competing evidence for and against safety claims. As with credibility claims discussed in other chapters (see Chapter 6 in particular), the issue of evaluation of evidence very frequently hinges on evaluating its proponents and their motives rather than its content :

The consumer has, however failed to recognise the safety of these products because the message has become confused by the use of scare tactics and media headlines designed to sell stories and muddy the waters.
(Kathryn Raleigh (IBEC), 'Consumers not receiving accurate information', *Irish Times*, 29 April 1999)

ACRE says that the experiments it has approved are safe. But its credibility has been called into question yet again, as the acting head of the committee works for the organisation contracted to carry out the farm-scale trials.
('Trials to test if GM plants harm wildlife are a nonsense. They do', *Guardian*, 15 July 1999)

Many other examples of this pattern exist. Proponents appear to be challenged much more frequently than their evidence, an understandable trend in the face of often very complex and technically specialised issues. But all the while the focus remains on answering the question of safety.

The challenge to credibility is most often on the grounds of 'vested interests', but a particular ideological position can also get one dismissed:

So why did such a distinguished panel make such evident mistakes? You don't have to look very far for an answer. While people of every kind sat on the committee, all its biotechnology experts were drawn from the same ideological pool.
('Getting it wrong about food', *Guardian*, 3 June 1999,)

> So there you have it, you can either believe the world's most renowned plant breeder, with an incomparable track record, or you can believe the scaremongers, most of whom have a vested interest, commercial or political or both, and no qualifications in this area, or no track record to speak of.
> (Tom Raftery, letter to the *Irish Times*, 12 May 1999)

Note in the latter example that the 'renowned plant breeder' is legitimised purely by his qualifications, while his unspecified lumped-together opponents are both unqualified and biased. Note also the interesting point that vested interests can be political, not just commercial (see Chapter 6).

Nelkin (1995) claims she detects the biotechnology coverage acting as a surrogate for wider issues. The core theme of safety in biotechnology broadens into wider issues of politics, ethics, economics and many others, and many actors in the debate are interested in addressing these. However, my analysis of the media coverage suggests that the dynamic is in the other direction: wider issues are dragged in to contribute to the narrower question of safety. Politics pertains if political ineptitude or corruption might allow unsafe products onto the market; the funding of science is important in order to enable judgements on safety claims by scientists, and so forth. Ultimately, the frame for the story as a whole has largely become the food safety frame, a frame developed in the context of BSE and other food scares of recent years.

Case Study 1: The Early Days of the Pusztai Affair

Arpad Pusztai has become a familiar name to many people interested in the GMO issue. He caused a major storm by making claims that his research had produced scientific evidence showing serious safety concerns over GM foods. The issue quickly became politicised in Britain, and disagreements remain almost two years later about the validity and implications of the original claims. This case study focuses on the very first week of the story, starting on Monday, August 10, 1998, when the first coverage appeared. Data come from Irish and British newspapers and a number of Irish radio segments.

The story

The story of the week under consideration here originated in the publication of results from the Rowett Research Institute in Scotland that tests carried out by Dr. Pusztai, involving feeding rats genetically modified potatoes, revealed stunting of growth and deterioration in the immune system, compared to rats fed unmodified potatoes. These revelations were aired on the ITV documentary World in Action, although some newspapers had covered the story earlier in the day. The revelations sparked a heated debate between proponents and opponents of GMOs as to whether these results merited, among other things, a ban on GM foods until further research could be carried out. As this debate proceeded, it was then claimed that the results reported were fundamentally flawed - the rats in question had been fed potatoes directly spiked with the protein, not genetically modified. The scientist who had presented the findings on World in Action, and in many newspaper and radio interviews, was forced to retire amid many comments of sympathy and regret. Monsanto and others were quick to seize the opportunity to declare vindication, while GMO opponents were put firmly on the defensive. The story continued to attract considerable attention for more than a year after the start, but I will focus on the first week of intensive media activity.

Telling the story in the newspapers

As mentioned above, the catalyst for the week's flurry of activity was the documentary, World in Action on ITV on Monday evening. The Express in London also carried the story as its front page headline before the programme was shown ('Genetic Crops Stunt Growth', *Express*, 10 August 1998). The key revelation was the results of research done by Professor Arpad Pusztai at the Rowett Institute in Aberdeen. According to this research, tests performed showed stunted growth and suppressed immune systems in rats fed potatoes that contained a genetic modification to make them produce a type of protein called lectin. The programme also reported on other research, such as that carried out in Germany in 1994 which had found that genetically modified materials fed to parent mice had passed through the placenta into the brains of their offspring in the womb.

The programme interviewed Professor Pusztai, who expressed his misgivings about the rapid pace of biotechnology product development and called for slower development with more rigorous testing:

> If you start with the idea that a gene isn't toxic, and just go through the motions, you won't find anything. But that isn't good enough. You have to really demonstrate that there are no harmful effects.....If I had the choice I would certainly not eat it until I see at least comparable experimental evidence.
> (Arpad Pusztai, as quoted in 'Research increases pressure for ban on GM crops', *Examiner*, February 13, 1999)

As mentioned above, several newspapers covered the revelations earlier in the day of transmission. The Express headline across its front page was 'Genetic Crops Stunt Growth', a strong message indeed, presenting the story as a 'health scare'. It also reported that a Liberal Democrat MP, Norman Baker, was now calling for a ban on GMOs.

The essence of Professor Pusztai's message was 'I am not against biotechnology, but I am against rushing' (*Express*, 10 August 1998) and that research findings such as those from his new study were sufficient cause for concern that a rethink on GMOs was necessary. More stringent scientific testing, over longer periods of time, was required.

So the story had the legitimacy of a leading British scientist, backed up by new scientific findings from an independent institute, all rounded off with political support. Also, the message was not abstract environmental concerns, ethical or political issues, but risks to human health and consumer safety. The Express editorial on Monday framed it in this light, and argued that it must be ensured that 'these products are safe beyond reasonable doubt for human consumption'.

Even though the products involved were not theirs, the biotechnology company Monsanto took on the role of de facto spokespersons for the GMO producers side in the debate. This is presumably because of their strong role in testing and selling GMOs products in the UK and Ireland, and in particular their extensive public relations campaign currently underway in the British media. Monsanto, of course, contested the claims, and their own arguments sought legitimacy from the fact that they had carried out their own scientific studies and 'we have published the results in one of the world's leading journals' (*Express*, 10 August 1998).

In their own press release, Monsanto spelled out the arguments that would be the core of the weeks discussions; that the Rowett tests showed that the scientific testing process works, since a dangerous product was identified at the first stage and, like all other dangerous products, would never make it to the commercial stage. This position was reiterated by UK junior foods minister Jeff Rooker, and reported in many of the articles (e.g. Financial Times, Glasgow Herald).

The fact that the issue centred on food safety for the consumer was reiterated in the Financial Times on Tuesday, which argued that the core issue for people was whether or not you would eat these foods yourself, thus bringing things down to a very local level (which resonated with a concurrent controversy in Britain where MPs refused to ban GMOs generally but nonetheless banned them from the House of Commons canteen). However, the tone of this article was that this technology is here to stay, and there is no way Britain could oppose it unilaterally. The best option was thus to stride ahead as a key player, while making sure the scientific and regulatory processes are sufficient. As senior UK Government figure Peter Mandelson put it, 'I would have to assume .... people who know more about these matters than I do'. The issue is one of trust in the regulators and in the scientists.

Monsanto spelled out its case further in Tuesday's *Independent*, in a 'right of reply' article. Here Monsanto presented arguments about the potential benefits GMOs could yield, and referred to the safety assurances of '25,000 trials' and 'hundreds of scientists'. Ultimately, the argument was that if people informed themselves properly, and rational debate occurred, then Monsanto had no doubt that people would be in favour of GMOs.

On Tuesday afternoon, the story developed dramatically when the Rowett Institute issued a press release announcing that the reported findings at the centre of the discussion were invalid. The rats that exhibited the negative effects had in fact been fed on potatoes spiked directly with lectin, a known toxin, rather than genetically modified potatoes. Thus the whole controversy (the very central notion that 'genetic crops stunt growth'), was now said to be without foundation. The Institute's press release expressed great regret, and commented that they recognised the great potential of GMOs:

> The Institute regrets the release of misleading information about issues of such importance to the public and the scientific community.

> The Rowett Research Institute is an independent government sponsored institution for nutrition and has a range of research concerned with assessing the risk of genetically modified foods. The Institute has the responsibility to help develop new and better approaches to the risk of genetically modified foods. The Institute's staff recognise the great potential value of genetically modified foods and collaborate with a wide range of scientists, companies and government around the world in helping to assess the value and safety of such products.
> (Rowett Research Institute, Press Release, August 10 1998)

The statement argued that the Institute agreed to take part in the World in Action programme because of its 'recognition of its responsibility not to suppress scientific views of importance'. It is noticeable that the phrase 'scientific views' was used, as opposed to results, findings, or facts. The Institute also reported that Professor Pusztai had been suspended.

Monsanto was quick to respond with its own press release, which talked of the tremendous harm done by these false results 'presented in the name of science', and also referred to the work as an 'alleged study'. The work leading to this mistake was, according to Monsanto, not real science, and again science had triumphed by identifying the fraud and exposing it. In this way, the original research claims were a vindication for science in correctly finding dangerous substances, and the exposure of flawed work was also a vindication of science since the flaw was spotted. As before, the tone of Monsanto's comments were that calm, rational debate is required, and not 'alarmist publicity stunts'. Once again, the claim was made that there is a lack of 'credible' evidence as to the supposed hazards of GMOs.

In Ireland, Wednesday's newspapers were still working on the assumption that the new research was valid. Various bodies had now had time to react to the initial revelations. Both the FSAI and IBEC were keen to reassure consumers that they were being well protected by existing procedures. The chief executive of FSAI said that 'currently, there is no scientific evidence that any existing (GM) products licensed within the EU are unsafe for human consumption' (*Irish Times*, 12 August 1998), echoing the arguments of the British Government, and indeed of Monsanto,

through a strong emphasis on scientific authority, and an effective 'innocent until proven guilty' approach.

The reaction to the revelations of the flawed research appeared in the Irish newspapers on Thursday. The Irish Times ran a long piece, with quotes from Patrick O'Reilly, the business manager in Ireland for Monsanto, who also took part in the two key radio debates, as discussed below. Most of the newspaper quotes attributed to Dr. O'Reilly were identical to phrases in Wednesday's press release from Monsanto in the UK, but also included specific reference to the Irish Green Party who, Monsanto suggested, 'reacted in an irresponsible and hysterical manner' This links in with Tuesday's radio debate between Dr. O'Reilly and Nuala Ahern of the Green Party, which included the accusation from Dr. O'Reilly that Nuala Ahern was 'high on emotion but low on evidence'. This radio debate is discussed in more detail below.

Thursday's Guardian had the story across the top of the front page, as effectively the second main story. This article contained comments from most of the main actors. Monsanto were willing to drop their guard slightly and revealed some glee in that the revelations were 'dynamite' from a public relations point of view. The Guardian also quoted a spokesperson for Foodfuture, a biotechnology industry lobby, saying 'sloppy science and overblown reporting is no substitute for providing balanced, factual information'. Again, the call was for rationality and 'facts', but Foodfuture did consider the incident to be in the realms of science, albeit sloppy, in contrast to Monsanto's clear distinction that bad science just isn't science at all.

The radio debates

I will now describe some of the Irish radio coverage of the story that occurred on two days in the week under scrutiny. RTE1, the main national public service station, had several segments on their 'Morning Ireland' morning news show on Tuesday morning, and then again featured the issue on Thursday on the lunchtime news.

On Tuesday, when the Rowett results were creating a storm (before their withdrawal), the coverage was split into two segments, both quite long by the standards of morning news radio. The first segment was a brief review of the World

in Action revelations relating to the Rowett Institute research, followed by a telephone interview with Peter Dargan of the Consumers' Association of Ireland. Mr. Dargan expressed concern about the scare, saying that the technology has great potential (he particularly focused on the notion of vaccines built into foods), but that it is new and so we must proceed slowly and carefully. He then brought up the issue of corporate involvement in science and said 'somebody has to watch the scientists', calling for a supra-body for independent monitoring. He also called for full labelling and segregation of GM products, again making it clear that he was not opposed to GMOs per se, but that 'we want it to be safe and honest and open'.

Later in the same radio show, a second long segment was presented on the subject. It was introduced similarly to the first segment, outlining to the revelations of the Rowett research, and then presented a telephone interview with Professor Pusztai himself. His argument was simple; his test results showed that risks do exist, he didn't know how good companies testing was (compared to the independence of the Rowett Institute), and so he was calling for a tightening of requirements for proof of safety to the regulators, and also for full labelling. He, like Peter Dargan, was expressing faith in the scientific regulatory process once it is done properly.

The segment then played extracts from the World in Action programme, including a snippet in which a Monsanto scientist admitted that long term toxicity testing was not carried out on their products. The comments of Gillian Sheppard, a UK consumer rights spokesperson were also presented.

The final element of the coverage, the radio debate I'm about to discuss, thus represents the last piece in an extended feature on the issue on the Morning Ireland programme. The debate was introduced by the presenter with the question 'They're worried over there, should we be worried over here?', localising for Ireland what had thus far been coverage of arguments taking place in Britain.

Tuesday's radio debate was between Nuala Ahern, Green Party MEP for Dublin, and Dr Patrick O'Reilly, Head of Business Ireland for Monsanto, and regular spokesperson. Nuala Ahern was in the studio with the presenter, while Patrick O'Reilly was on the telephone.

Nuala Ahern opened the debate arguing that the test results from Rowett represented 'conclusive evidence' of the potential dangers of GM products and justified a total ban until long term mammalian toxicity tests could be carried out. Legitimacy was repeatedly sought from the European context (not surprising from an MEP), saying we should 'follow the example of other EU countries, particularly Austria who hold the presidency' in banning GMOs. Her language, and indeed her tone of voice, comes across as emotional, with words like 'outraged' used frequently. When talking about GM products already on the market, particular reference is made to chocolate and bread, and the fact that 'children are eating them'[6]. She also appealed to the politics of consumer rights, calling for the right to choose and the right to know. The following extract gives an indication of he tone of the discussion:

> N: Well this is very serious, and its time for Ireland to join other EU member states in banning gene food eh, we now know that genetically engineered food, we have evidence that it endangers peoples health and damages the environment. We should join particularly Austria who hold the presidency at the moment in banning this gene food.
>
> P: Where's the evidence that it damages humans?
>
> N: the, there, in fact, w-what the public are entitled to expect is the same kind of protection, from novel foods as they would for new drugs, and this is the impression, and this is the impression they're being given, the...
>
> P: But you began by saying there's evidence it damages humans, where's the evidence of that?
>
> (P: Presenter; N: Nuala Ahern, Green Party. Morning Ireland, RTE Radio 1, 11 August 1998)

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[6] It must be noted that the citation of chocolate and bread as foods of concern, and also some of Nuala Ahern's statistics, came directly from a Friends of the Earth press release on the subject issued the previous day, which apparently formed part of her briefing on the subject for the debate

Again the focus in this discussion is on the question of what does this say about the food safety issue. Patrick O'Reilly of Monsanto then entered the discussion and sought to represent the voice of reason:

> I'd just like to put some of the points Nuala made into perspective, eh she seems quite high on emotion but low on evidence, eh, the tests that were carried out by Professor Pusztai were on a type of protein called lecithin protein and these are not used ... some of these proteins are already known to have mammalian toxicity....
> (Patrick O'Reilly, Morning Ireland, RTE Radio 1,11 August 1998)

The core of Monsanto's argument, as already presented in various newspaper articles, was that scientific tests had successfully identified a dangerous product at an early stage, thus verifying the adequacy of the existing testing procedures. Top scientists around the world, including agencies such as the FDA and EPA, were monitoring what Monsanto and other biotechnology firms are doing, and had found no cause for concern. To further reassure, Dr O'Reilly pointed out that all this testing information is freely available on the internet for anyone to look at and verify for themselves. This is an interesting assertion of transparency considering the expertise that would be required to assess such information, but not dissimilar from the common argument that once GMOs were labelled consumers would be empowered to make decisions, ignoring the inevitable complexities of such labelling and the difficulties for people trying to interpret them.

Much discussion centred on the use of long term safety testing. Nuala Ahern argued that such testing is not carried out but should be mandatory. Patrick O'Reilly responded that it would be carried out if preliminary testing showed any potential risks, but this had simply never happened. Monsanto's position on long term testing came across as somewhat unclear; radio coverage of the World in Action programme included an extract in which Catherine Hooper of Monsanto UK responded to a question as to why long term tests are not carried out with the offhand comment 'because they're not done'. In the radio interview, Patrick O'Reilly at one point said that such tests would be carried out if necessary, but at another point argued that such tests are not possible since the genetic elements of the products decay so quickly. The discussion, despite the attempts of the presenter to find an answer to the 'is it safe' question, ended up coming across as quite opaque and confusing.

The second radio debate under analysis here took place on the lunchtime news on Thursday, in the wake of the undermining of the Rowett Institute results. This debate again featured Patrick O'Reilly of Monsanto, but this time opposition came from Quentin Gargan, spokesperson for Genetic Concern.

Quentin Gargan started by arguing that the particular test results were unimportant, that 'we never said these tests were that important'. Instead, their concern was over the broader issue of safety of GMOs and the adequacy of testing and regulation. As on Tuesday, Patrick O'Reilly called for rational debate, not 'scaremongering'. He again used the phrase 'put things into perspective' repeatedly. His main point was that the week's events were a vindication for science, since the flawed research was quickly spotted and exposed.

Quentin Gargan argued the opposite, that the events showed that there are flaws in science, and that other serious mistakes might get through unnoticed, leading to dangerous products on the market. He brought up the German research into the passage of genetic materials through the placenta in mice that was discussed on the World in Action programme, and he also brought up a scare around the drug tryptophan[7]. The general tone of his comments was that scientific regulation is imperfect, and we should not necessarily trust it on the safety of new GMOs.

Patrick O'Reilly again defended the safety record of GMOs, based on the assurances of the extent of 'independent research' being carried out, the increasing ubiquity of GMOs with no negative repercussions, transparency through data available on the Internet, and the role of the regulators, who 'are the experts in areas of quite complex detail.'

It is interesting to contrast some elements of the two radio interviews. Obviously the main distinction is that the first took place while the Rowett Institute research was still taken as 'valid', and the second took place after it had been withdrawn. However, the tone of the two interviews was not as different as this fact might lead

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[7] This is the story of a drug produced by a Japanese company, a batch of which was contaminated resulting in several deaths. Company records were lost in a suspicious fire. The drug was a GM product, but pro-GM actors argued that the problem arose because an incorrect filter was used, and that the tragedy was unrelated to the GM issue.

one to expect. Monsanto did not seem to be so much less on the defensive in the second debate as might have been expected. Patrick O'Reilly was certainly in a stronger position on Thursday than he was on Tuesday, but still seemed to be in a defensive role. In both cases he was strongly defending the role of science and the existing regulatory process. In both cases he was trying to present himself as the voice of reason, and his opponents as emotional and irrational. The attitudes of his opponents towards science are also interesting. Nuala Ahern defended the role of science by basing her calls for a moratorium on the scientific evidence now released, and the core of her argument is a call is for further testing. Quentin Gargan, speaking after the apparent discrediting of the results, attacked science in terms of its fallibility. Neither of these speakers raises the issue of science's relationship to funders, as was raised by Peter Dargan. Once again the complex and often very different approaches to science by the NGOs is observable.

As the week ended, a certain degree of closure was put on the events by the Irish Times, through a piece on Saturday from the science editor entitled 'Public loses as scientists argue over GM food' (*Irish Times*, 15 August 1998) The article criticises both the over-enthusiastic reactions of Genetic Concern and the Green Party to the news, as well as the 'triumphalism' of Monsanto after the flaws in the research were revealed. But even the title of the article indicates that the whole event was seen as an argument over a particular bit of science, not really over the broader ethical and political concerns. The author suggests that one should 'forget the advocates and look for the truth hidden in the science.' The closing paragraphs of the article reveal some very interesting issues relating to science and the media, and seem to confirm Nelkin's comments, which I presented at the start of the chapter. They are worth presenting in full.

After talking about Dr. Pusztai and the general public as being among the losers in the week's controversy, the author goes on to say:

> The last often forgotten loser, left cowering in a laboratory, is the scientific truth. The two lobbies attempt to use science to prove their own arguments are correct. But how can science support these two opposite poles, that modified foods are fine and modified foods are dangerous?

The answer can be found in the use, or abuse, of the scientific information. A scientific fact is peculiar in that it could be correct today but then found wrong tomorrow.

Some facts do not change: What is the speed of light? How many moons around the Earth? How much does a kilo of water weigh? Others change as scientists learn new things. There were eight planets in our solar system until the 1930s when Pluto was discovered. New work now suggests there is yet another mini-planet beyond Pluto.

This variability makes science a consensus game. A scientist makes a claim that the Earth is round; others look at the claim to see if it is true, and eventually a consensus will emerge that yes, the Earth is round. This is not to say that there won't be someone else out there with an opposing view that the Earth might really be flat.

The modification of foods by stitching in extra DNA is relatively new, yet is here long enough for a consensus to form. Most scientists working in the field believe the modified foods produced so far are safe, but this is not to say that scientists will not continue looking for problems and health risks.

There are other scientists who argue against this general view and who make claims against modified foods. They too present scientific arguments, but their views run counter to the consensus.

Who is correct? And for how long will they remain correct? As consumers we hope the consensus position on modified foods is the right one and it probably is and will remain so. But do not be surprised if some aspect of genetically engineered food goes bad or leads to a dead end. Science is not absolute, and there are always new things to learn.
('Public loses as scientists argue over GM food', *Irish Times*, 15 August 1998)

What is most interesting in this extract is that the author is quite perspicacious in his observations on the complex role between science and politics, and the use of science as argument in politics and lobbying. However, there is no sense of doubt at all that this is due to a misuse of science, which itself is not at all to blame.

Despite this article's tone of wrapping up the story at its end, any sense of closure at this point was premature. The Pusztai affair continues to cause debate and disagreement, and his results are still often cited by GMO opponents and dismissed by others. One must assume that for many people the confused position of science and the public wrangling that mixed together complex science with opaque politics served only to add to their confusion and indeed possibly their ambivalence towards scientific expertise.

The debate about science

Rather than suggesting that the events of the week attracted considerable media attention, it seems more appropriate to say that the whole story was one of a debate taking place in the media sphere. The fact that the story was launched through a well-publicised television special set the tone for the week. The Glasgow Herald referred to the 'first conclusive evidence' of health risks from GMOs, and this perception supported the extent of media activity. Then, after the withdrawal of the results, the involvement of politics and the potential for a 'sleaze' story, a strong frame in British media at that time, certainly fanned the flames. In fact, one interesting aspect of the story is how other research featured on the original World in Action programme (quite striking in itself) was quickly forgotten as developments in the Pusztai story guided the focus of attention. It seems plausible that the Irish media picked up the story on the strength of the coverage in the UK, particularly the World in Action programme itself, as well as on the merit of the story itself.

The role of Monsanto in the debate is an interesting feature. As mentioned earlier, the products being tested were did not involve Monsanto, but, in Ireland entirely and to a degree in Britain, Monsanto became the de facto spokesperson for the industry. This seems to connect with their general strategy at the time of a high media profile and consequent close association with GMOs overall, while other companies kept well out of the spotlight (see Chapter 4).

The story is also interesting for its mixture of frames, starting with a relatively well defined food scare based on new science findings, then incorporating politics, sleaze (connected to the suggestion that Pusztai's suspension was politically motivated), and even some debate on the role of science. This seems to support Dunwoody and Griffen's (1993) findings on the complex mixture of risk stories with

other frames, to the extent that most nominal risk stories actually tend towards other themes, such as politics.

The media discourse on this story also provides some interesting insights on the issue of the positioning of science, and legitimacy claims more generally. Nelkin argues that stories of mistakes in science tend to be presented as exceptions to the norm, the coverage generally 'further idealizes science as a pure and dispassionate profession' (Nelkin, 1995: 26). Certainly this was the explicit aim of Patrick O'Reilly and others (including, strikingly, Nuala Ahern), and attempts by Quentin Gargan to open up the issue to allow deeper questioning of science seem mostly to have failed. Any editorials in newspapers during the week all took the position that GMOs would require further testing and regulation to establish their safety, thereby cementing the position of science and current regulatory approaches.

While beyond the timeframe of the data set I have been discussing, coverage of a later part of the whole Pusztai affair also has a lot to reveal about the discourse of science and its portrayal in and use by the media. In May, 1999, the Royal Society published the findings of a special group convened to evaluate Pusztai's work. Their opinion was that the research was indeed flawed 'in many aspects of design execution and analysis' ('Scientists doubt GM food research', *Guardian,* May 19, 1999). This contrasted with a statement issued in February by a group of scientists supporting Dr Pusztai. This group of scientists issued a statement saying that they had looked at Pusztai's work and 'found that his data is sound. We think it would pass peer review and be published and we are at loss to really explain why the Rowett Institution came to the conclusion it did' ('Research increases pressure for ban on GM crops', *Examiner*, February 13 1999). At about the same time as the Royal Society report, the British Medical Association also published a position paper on GMOs, entitled 'The Impact of Genetic Modification on Agriculture, Food and Health – An Interim Statement' (BMA, 1999).

Both of these developments represented the scientific community attempting to reassert its position in the debate. The BMA paper said for example that 'decisions regarding the environment and health should be evidence based' and that 'The moratorium [on commercial releases] should continue until there is scientific consensus (or as close agreement as reasonably achievable) about the potential long-term environmental effects' (BMA, 1999: 2,3). So these statements attempt to

reassert the validity of the scientific method – evidence, reasonable consensus – and thus imply that any current problems arise from failure to follow these correct procedures. The previous sentence from the group of scientists supporting Pusztai also supports 'correct' scientific method, saying that his work passes on this basis – the peer review test. The Royal Society disagrees – it tested Pusztai's work by putting it through a special peer review by 'six top experts in fields ranging from nutrition to statistics', and this group found flaws in the work and stated that the issue 'would only be settled by further, carefully controlled, research which should not be made public until it was independently vetted and accepted and accepted by a recognised scientific journal' ('Royal Society dismisses "flawed" GM food research', *Guardian*, May 18, 1999).

Interestingly, it is Puzstai himself who attacks the peer review as a basis for science assurance most of all, saying of the expert reviewers:

> 'Obviously I don't agree with them. Why should we trust these six unnamed referees?' he asked. 'Who the hell are they? As far as I am concerned they could be anything.'
> (*Guardian,* May 19, 1999).

This is a fairly fundamental attack on the whole basis of modern science. Even the group of scientists who supported him did so within a defence of the scientific system. Pusztai, despite a lifetime's participation in the system, says he has no faith in the peer review concept. Others also draw in funding and interests into the discussion:

> The report smells as if it was brewed up in the basement of some corporate lobbying form. It has no credibility whatever.
> (Adrian Bebb of Friends of the Earth, quoted in *Guardian*, May 19, 1999)

Apart from the connection between corporate lobbying and some sort of dark, satanic magic, the main point here is the connection of the Royal Society to the corporate lobbyists, simply because the Royal Society doesn't support Pusztai, even though it goes to lengths to point out that this does not mean it is expressing unqualified acceptance of the safety of GMOs. I will talk a little more about these kinds of credibility arguments in Chapter 7.

The Royal Society is more interested in a defence of science than any specifics of the GMO debate. At the time of the original Pusztai revelations in the previous August, it had issued a press release in the very first week of the controversy in which its president said:

> GMO research is a rapidly developing and controversial field in which rational debate based upon rigorously reviewed data is essential if we are to realise the full potential of this technology
> (Royal Society, Press Release, August 13 1998)

Now, in its press release announcing its review of Pusztai's data, it is again expressing concern about the damage to science from the Pusztai affair, and says that further experimentation in the area should be 'carefully controlled' and not made public until it is 'independently vetted and accepted and accepted by a recognised scientific journal' (see above), all clear criticisms of the way the Pusztai affair proceeded. It specifically asserts the system world logic (instrumental rationality) of the scientific method when its vice president states 'All of us make mistakes. We must make sure research is properly looked at by other people' (*Guardian*, 18 May 1999). This is a life world voice drawing a distinction between a life world mistake (by a person), and the assurance of the system world, instrumental rationality of science as a whole. And it also illustrates well Nelkin's comment I cited at the start of the chapter that much reportage of science, even when talking about supposed failures or mistakes, 'further idealizes science as a pure and dispassionate profession' (Nelkin, 1995: 26). We have seen above accusations of interests affecting the Royal Society's judgement and even a challenge by Pusztai on the peer review process itself. We have also seen claim and counter-claim by various scientists. The texts taken together reveal a failure to deal with uncertainty and the role of value judgements in deciding what precaution means and what to assume in the absence of conclusive evidence one way or the other. Despite this, the case didn't fundamentally shake science's position in this or related debates: the sceptics remained sceptical and the believers remained convinced.

Case Study 2: The New Ross Seven

Introduction

Over the past few years, several of the small number of Monsanto GM beet trial plots at farms around the state have attracted protest and, on a few occasions, some sabotage of the trial crop itself. One trial plot in Arthurstown, near New Ross in Co. Wexford, was the focus of a protest by about seventy environmental activists on a day in late June, 1998, and part of the crop was pulled up by some of the protestors. The incident eventually led to charges being made against seven of the protestors, and the ensuing court case attracted considerable media attention. In this analysis I will focus on the reporting on the opening of the trial and the arguments; and the reporting of the verdict. This case study is of particular interest due to its local Irish focus, which included considerable coverage in local newspapers that would not ordinarily cover the GM debate. The case study is also an interesting illustration of the workings of media frames, with the GM debate issues set in the context of a court case, and also of the striking differences that can occur among various articles discussing the same story.

The arguments of the trial

The trial of the 'New Ross Seven' (or Arthurstown Seven) took place on March 30th and 31st, 1999. All of the main national papers covered the trial, as did local papers in the region of New Ross, where the trial was held. By arguing a case of 'lawful excuse', the defendants used the trial to air some of the arguments around GM crops, and the range of witnesses from Nuala Ahern of the Green Party to Tom McLoughlin of the EPA and Patrick O'Reilly of Monsanto, ensured that a full range of arguments would indeed be voiced.

Several papers reported the arguments of the trial, most using a similar format closely adhering to a standard court report 'genre' (Fairclough, 1995).

A typical example of this format is as follows:

> Court told green group sabotaged genetic trial beet

GREEN saboteurs caused damage costing more than £60,000 to genetically modified sugar beet, a court heard yesterday.

In the first case of its kind in this country, seven environmentalists were charged in relation to criminal damage and forcible entry at the site in Co Wexford where the trial crop was growing.

The crop was owned by the US multinational Monsanto, New Ross District Court heard yesterday.

Before the court were food writer and organic grower John Seymour (84), Killowen, Dunganstown, New Ross, Dublin based environmentalists David Philips, Sackville Gardens, Gavin Harte, Grantham St, freelance journalist Adrienne Murphy, Wilton Place, Dublin Food Co-op secretary and developmental co-ordinator Pauric Cannon, Captain's Rd, Crumlin, and a New Ross publican, Richard Roche.

Radio documentary maker Caoimhin Woods, Cluain Aoibheann, Maynooth, Co Kildare, was charged with forcible entry on the trial site at Arthurstown on June 21 last.
('Court told green group sabotaged genetic trial beet' *Irish Independent*, March 31, 1999)

The format involves presentation of the charges, naming the defendants, and then reporting what the witnesses said, presented sequentially and without additional comment. The above extract illustrates the first two stages of this reporting process.

Despite its restrictive nature, adherence to a tightly defined genre in reporting the trial did not lead to homogeneity across reports; the analysis presented below will demonstrate that subtle variations across reports managed to portray very different versions of events, value-sets, and representations of the actors. This case study is of particular value in revealing that these subtle processes operate even in situations which may be expected to restrict opportunities for such discourse processes to occur.

One way in which variation can be observed is in the simple issue of emphasis and the order of presentation of information. Compare the opening of the Irish Independent article cited above with that of the article in the Irish Times on the same day:

> Seven environmentalists charged with sabotaging a genetically modified crop were part of a group of up 70 people, many of whom felt uprooting GM sugar beet was necessary to protect human health and the environment, a court was told yesterday.
>
> In the first case of its kind in the Republic, New Ross District Court in Co Wexford heard that many of the protesters were secretly filmed by security men employed by the US biotechnology company Monsanto in Dublin, before boarding a bus. They were again filmed as they arrived at a protest meeting in Duncannon, Co Wexford, and later as they arrived at a GM beet site nearby.
> ('Seven on GM crop charges part of group of up to 70, *Irish Times*, March 31, 1999)

In the Independent the protagonists are first introduced as 'green saboteurs', in the Irish Times they are 'environmentalists'. And while the Independent chooses to emphasise up front the cost of the damage and detailing the charges and the defendants, the Irish Times presents the defence of the accused, their pure motives, in the very first paragraph. In the second paragraph, the article also shows sympathy with the defendants by highlighting the fact that they were being filmed by a private security firm, even before they left Dublin. This obviously presents a picture of the 'victim' Monsanto in a much less favourable way than the tone of the Independent's article does. In fact, this contrast is even more stark with regard to a regional paper from the area of the incident, the New Ross Echo, where the coverage consists of an article entirely focussed on the issue of the secret filming of protagonists, under the title 'Monsanto Protestors Secretly Filmed' (*New Ross Echo*, 1 April 1999). This headline presents the 'protestors' as the victims of an act, as compared to the Independent headline positioning them as the criminals; 'green group sabotaged genetic beet trial'. The power of the headline in determining the tone is clear from these citations, and is further seen in the Irish Times where the headline is 'Seven on GM crop charges part of group of up to 70', again lessening the sense of the protagonists as criminals.

A second element of the coverage that exhibits variations across the publications is that of the presentation of evidence. For the normal court report genre, witnesses' arguments are presented systematically, paragraph by paragraph, obviously very much condensed (usually in the form of a soundbite). In this way to a considerable extent all witnesses are levelled, and evidence is presented with equal credence. This has both a raising and a lowering effect; they are all raised to the level of expert, but it's a low level in that no particular expertise seems to be recognised beyond others. What becomes important then is the next level of legitimisation: who or what the witnesses cite as credible evidence. What I see in the data is that anti-GMO witnesses gave their evidence as evidence in itself; they are against it, they believe it is dangerous or wrong. On the other hand, there is a pattern among the pro-GMO witnesses to use secondary citations to legitimise their claims, usually by referring to the general body of scientific evidence or general scientific opinion.

For example, on the one side:

> Dr O'Reilly accepted there was concern among opponents of gene technology about 'horizontal gene flow', but crossing of species barriers occurred in nature. The vast majority of science and scientific opinion favoured the technology, while concerns were being driven by emotion rather than fact, he said.
> (*Irish Times*, March 31, 1999)

or

> [citing Tom McLoughlin of EPA] Scientific opinion on gene transfer was divided but experts concluded that the risk to the environment was very low.
> (*Irish Independent*, March 31, 1999)

as opposed to:

> [Quentin Gargan] he was increasingly worried by the way GM foods were being introduced
> (*Irish Times*, March 31, 1999)

> 'The whole thing is evil and it is a mortal sin to mess around with God's creation,' he [John Seymour] said. 'And it is a sin not to try and stop it.' He decided to take the law into his own hands as government agencies were not protecting the lives of the people.
> (*Irish Independent*, March 31, 1999)

> The Wicklow based M.E.P. added that she had little faith in assurances that the beet from the trial would not enter the food chain.
> (*New Ross Echo*, April 1, 1999)

Once again the system and life world voice distinction is useful here. The system world voice can be seen in the scientists' referral to the consensus idea in science as assurance, as was seen repeatedly in the previous case study. The anti-GMO comments, on the other hand, are much more personal and emotional, about their own personal worries or faith and confidence, or even using words like evil and sin. In this case, both voices are being employed for their rhetorical value. The scientists are trying to reassure the court and the public that science is assuring the safety of these crops, whereas the environmentalists are essentially leaping over that part of the debate - they do not directly address the scientific arguments – and making more emotional appeals from themselves. The system world voice must appeal to the 'out there' system, the life world voice comes across as more personal and direct.

The trial outcome

On the day after the verdict and sentence were announced, the Irish Times published two articles on the case, which serve as interesting examples of how a narrow format, the court report genre, can still be utilised to present a particular point of view.

The first article clearly declares its sympathies in its title; 'Saboteurs with "honestly held beliefs" cheered'. The quote in the title refers to comments by the judge that he was being lenient with the defendants because he was taking into account Garda evidence that the protest was 'peaceful and good-natured' and because he was convinced that they were acting from 'honestly held beliefs'. This was taken as a significant victory by the defence camp, despite the fact that technically they lost

the trial. Emphasis on this element so early and prominently in the article clearly serves to imbue a tone of sympathy for this side.

Compare this with the opening of the article in the New Ross Echo:

> NEW ROSS District Court found the facts proven in a case charging six environmental campaigners with criminal damage to a genetically engineered beet plot, the property of giant multinational food company, Monsanto, last Wednesday.
> (*New Ross Echo*, April 8, 1999)

A very different emphasis is to be seen here; the saboteurs are found guilty of a criminal act, no mitigation is mentioned, and Monsanto is clearly positioned as the victim.

The first four paragraphs of the Irish Times article are dedicated to the arguments of the saboteurs' side, including quotes, and serve to give the article a clear sense of sympathy for this side. The article then follows with four short paragraphs citing the comments of Monsanto, before returning in the last three paragraphs to the reactions of anti-GMO actors . Sources in the article are the defending solicitor, one of the defendants, Monsanto, Quentin Gargan, Nuala Ahern, and a Green Party spokesperson. It isn't quite as one sided as this list might suggest, because the Monsanto citations take up four paragraphs, and thus a fairer share of the attention than one out of six citations. Overall the article is quite straightforward reportage, essentially presenting quotes from the various actors without comment or analysis.

The second Irish Times article is also in the format of fairly direct reportage, presenting a number of the arguments of witnesses in the trial. Once again, the positive comments of the judge are prominently presented at the start of the article. In this article, all comments and arguments are from the anti-GMO camp, Monsanto does not feature except when mentioned as owners of the field trial.

The Irish Independent article also follows the standard court report format, starting with the verdict, the charge, and a full list of the defendants. This article also mentions the judge's comments on the peacefulness and good nature of the incident quite early on. As with the Irish Times articles, the decisions about the order of the elements of the discussion tend to favour the defendants. What is quite

different about this article, however, is its extensive use of citations and quotes from Monsanto, which, as I said, received some attention in the first of the Irish Times article but none at all in the second. The first half of the article is standard court report, but the second half is entirely based on comments from Monsanto, such as :

> The company said GM crops has been subjected to a campaign of misinformation and scare mongering which often had much to do with those who had a vested interest in preventing their development in Europe (*Irish Independent*, April 8, 1999)

Comments like this from Monsanto are left unexplored by the article, and result in a much more 'pro-Monsanto' feel than the Irish Times coverage. The article then follows a classic format of ending with a background review of the big picture issues, such as:

> Last year the High Court judicial review sought by a founding member of Genetic Concern, held she had failed on all points on which she objected to an identical sugar beet trial in Co Carlow.

One is left with the strong feeling that these closing sentences also originate from the Monsanto press release, but they are not attributed as such. The omissions of referencing of the material serves to significantly increase its legitimacy since it is presented as the analysis of the disinterested journalist and opposed to the arguments of an interested party. This is most striking in the final paragraph of the article:

> Genetically modified crops had been developed after the most stringent scientific examination and evaluation over many years. They were subject to a multiplicity of national and international regulations and there had never been a single incident where it had been proven that they posed any threat whatsoever to human or environmental health.

In the format presented, this comes across as a definitive wrap-up of the story, the outcome being establishment of the safety of GM crops. However, if this paragraph is a claim by Monsanto, this is very different to an analyst's sum-up. The way the

information has been presented has created a very different outcome than a slightly different presentation would have achieved.

The Examiner article on the case on the same day is different again. Like the Irish Independent article, it is broadly in two halves; first a fairly standard court report, and then extensive citation from one source, but in this case the source is from the other side of the debate. After a standard opening of outcome, charge, defendants, and so on, the rest (about 75%) of the article is reportage on comments by Nuala Ahern, the Green Party MEP. The only other citation is a brief reference to a Genetic Concern press conference in the final paragraph.

Why does this article use one source so much? The fact that the Genetic Concern press conference is mentioned would negate the potential explanation that it was the only material available to them, and in fact the Irish Times articles, citing six different sources, show the range of people willing to offer their opinion on the matter. Thus a better explanation would seem to be van Dijk's idea of hierarchy of sources, mentioned at the start of this chapter. In terms of normal democratic representation and its inherent hierarchy, Nuala Ahern, an MEP, was the most senior person offering an opinion on the case.

Discussion

The aim of this case study has been to illustrate how even in a case where a range of media coverage follows very similar formats, there is always ample opportunity for different interpretations by journalists and for very different tones, portrayals and values to appear in the texts. Some of the central issues being portrayed in the articles covering the court case include representations of criminals and victims, the validity of protest, and the wide issue of GMO safety. In various accounts the defendants are portrayed as criminals, well thought out protestors with legitimate concerns, or even victims of covert and somewhat sinister surveillance. Their acts are legitimate protest in the face of bureaucratic and corporate sins, or else mindless damage that is anti-democratic, anti-science, and anti-progress. And the trial and its coverage also allowed for a fairly broad presentation of the whole GMO debate, as usual focusing on the issue of safety and trust.

The texts examined here were also interesting in revealing how different actors argue, for instance relating to system and life world voices. More than this, though,

I hope the analysis supports the argument that the news media must be seen as having an active influence on the debate, rather than acting simply as a passive forum for other actors to come to fight things out.

What might cause different coverage in different elements of the media? One point worth making is that we see the influence of all three levels of Dunwoody and Griffen's (1993) model of frames, organisational issues, and social context and determinants of media products. The court report genre is a framing device in itself, as are the slightly more subtle frames of legitimate protest in a David vs. Goliath style, or the legitimate business activity being sabotaged by extremists frame. All have historical and contextual resonances that can be tapped into to guide representations. Organisational issues can certainly be seen in, for instance, a comparison of the reflective (i.e. where interpretation is very explicit) style employed by the Irish Times with the local New Ross Echo, which employed a straightforward version of the court report (with local interest) genre. In general the reliance on press releases by all, and the potential this gives protagonists to guide their own publicity, is clearly seen. Social context factors can also be seen through a comparison of local and national media coverage, and also in the wider issue of how political protest is presented.

As a part of the public sphere, the media coverage of this case illustrates the actors' perceptions of the importance of media coverage. The sabotage itself was oriented towards publicity, and the trial explicitly used as a platform to debate wider issues than the sabotage incident itself. In the attempt to gain maximum coverage for one's position in the debate, pulling up sugar beet is much the same as issuing a press release, organising a debate, or camping in a bed outside Leinster House. In the absence of other well functioning public sphere arenas, the media is seen as the best objective.

Case study 3: Consumer information leaflets

This chapter is looking at subsets of the overall debate on GMOs that have taken place in media elements of the public sphere. As well as the news media, other public spaces exist for debate and persuasion to occur. If someone takes an information leaflet, at a supermarket or elsewhere, and reads all or part of it, then a communicative event has taken place. It could possibly be argued that this event is

not in a public sphere since it involves just the individual reading material, but I would argue that it is part of the public debate, firstly because the leaflet has been prepared for general consumption and is written as a public discourse, and secondly because anyone who reads the leaflet is taking part in the wider debate if only by informing themselves, but is also likely to be engaging in thought or debate processes elsewhere. In a debate that has been characterised by the struggle to create public spaces that were amenable to accommodating the debate in a way that various actors wanted, examining the diversity of these spaces seems appropriate. Thus looking at these information leaflets as a case study is worthwhile not only for their content and for the value of the discourse analysis, but also as an illustration of the range of the public sphere for this debate.

In the Activism chapter, I mentioned the range of positions taken by supermarkets, from initial caution or reserved support for GM foods to strong opposition and pledges to de-stock due to the perceived swing in public opinion against the technology. At various points in this process, a number of glossy leaflets were produced by various companies aimed at 'explaining' issues to the consumer. Many different approaches and stances are evident among this literature. Here I examine closely three examples; a leaflet produced by the Centra chain in Ireland which takes a pro-GMO stance; a leaflet from the Iceland supermarket chain, produced in the UK but also distributed in Irish shops, taking the opposite stance; and a consumer-oriented information leaflet by the FSAI. I will examine the language and presentation in each leaflet and then discuss some of the issue raised.

All three leaflets were distributed in 1998 and 1999. The Centra and Iceland leaflets were available in their shops, and the FSAI leaflet was distributed from the FSAI offices, available on request, and through their website.

'For' - Centra

Genetically Modified Food

Getting the Facts Straight

This is the shortest of the 3 leaflets I look at here; two inside and two outside A5 pages. Like the others, it is full colour and glossy, with considerable emphasis on design. The cover is a toned photo close-up of an ear of corn, with the title 'Genetically Modified Foods' and subtitle 'Getting the Facts Straight' on the right

hand side of the page, about half way up. The Centra logo is prominent at the bottom of the page.

Inside, the left hand page highlights the question 'Genetically Modified Food. What is it and how does it affect you?'. The right hand page highlights the phrase 'Consumers are our number one priority'.

The overall thrust of this leaflet is very clearly in favour of GMOs. This is argued on the basis of 'facts' (as featured in the title itself). Two themes emerge; the first is that GMOs are not very different from conventional crops and foods, except that they are better in several ways, the second is that the safety regime for GMOs is strong enough to protect the consumer.

The first theme, presented under a heading of 'Getting the facts straight', comes across as a common sense argument, essentially saying that all the controversy is fuss about nothing. For example, the very first sentence of the first paragraph is:

> Man (sic) has been altering or modifying foods ever since agriculture began.

Thus the leaflet begins with one of the common pro-biotechnology claims; that GE is not much different from other agricultural techniques. In this case the argument is brought further with what is clearly a rhetorical use of the word 'modifying' to imply that genetic modification is the same as any other modification. The word modified is repeated several times to position GM products as no different to any other: 'Modified food is a fact of life and has been with us for some time and it is frequently found in our everyday meals'. That GE is no more than an extension of normal (even natural) practice is further argued:

> Genetically modified food takes the process of natural alternation (sic) a step further...it can give the desired characteristics more accurately and rapidly than was previously achieved by other methods.

The second theme of the leaflet is that GM products are safe, based on the rigour of the testing and regulatory systems:

> Foods that have been genetically modified have been subjected to the most exhaustive safety assessments before they reach our plates.
>
> Foods produced using genetic modification are among the most tested foods ever.

References are made to the roles of the EPA and the FSAI in ensuring safety. So a clear message of trust in experts is being presented

Other elements of the leaflet include a commitment to information and debate:

> Consumers are our number one priority in Centra.
>
> wide-ranging and open discussions must continue so that all concerns can be properly addressed.

A commitment to labelling 'in accordance with EU regulations' is made, and the implication is that this closes the issue: GMOs are safe, labelling will ensure choice, and nothing else is required.

'Against' - Iceland

Important information for our customers

Genetic modification of food and how it affects you

This leaflet was from the UK stores, but was also made available in the Irish outlets in early 1998 (making it the earliest of the three leaflets featured here). Again the presentation is high standard glossy, but this is more text-dense than Centra, and considerably longer: 6 A5 pages plus the front and back covers.

The front cover has the Iceland branding at the top with the title and an image of part of a DNA molecule. The first inside page is a letter to the customer from the chairman of Iceland setting out that Iceland is against GM products and intends to remove them from their stores, but reminding customers that 'this is an issue about which you must make up your own mind'.

The headings used in the leaflet are:

- What is a gene?

- What is genetic modification?
- Is genetic modification safe?
- What are the risks?
- Aren't there regulations to protect us?
- Your choice?
- The soya bean
- You have no choice
- The Iceland brand name gives you a choice
- What's next?
- Our campaign

The first page describes what GE is, employing much scientific language in quite a negative tone, for example:

> Genes, and the proteins they make, have co-evolved together to form an extremely complex network of finely balanced functions, which scientists are only just beginning to understand.

> Unlike normal methods of reproduction, genetic modification works in the laboratory...

Then the leaflet moves onto the safety issue. Under the question heading 'Is genetic modification safe?' the first sentence is:

> Opinion is divided. Those involved in the biotechnology business insist it is safe...

Followed by the highlighted sentence:

> Many professional independent observers believe genetic engineering is unpredictable, unstable and dangerous.

The first point to note is that safety is in the realm of opinion, not fact, and, with unclear causality, those who say it is safe are labelled as 'involved in the biotechnology business', while those who say it is dangerous are 'professional

independent observers'. The claim that opinion is divided also challenges the scientific consensus assurance.

The leaflet then goes on to talk about examples of safety incidents that have already happened, including the Tryptophan case, the Brazil nut allergy story, and the issue of superweeds. Under the heading 'Aren't there regulations to protect us?' the text argues that the approval process for GM products 'is far shorter than the exhaustive trials required for new drugs'. There is no elaboration as to why this may be the appropriate standard, but the message that the regulations are insufficient (and not 'exhaustive') is clear. There is then the emotive message that GM soya may be in products such as 'bread, biscuits, baby foods, chocolate, ice cream, ready meals, and many vegetarian products' (this list is highlighted in bold). There is no way to avoid GM ingredients, except of course by shopping in Iceland, which makes the pledge to remove GM ingredients from all its own brand products (much debate took place over time as to whether they were able to make this pledge or not).

'Neutral' - FSAI

Food Safety and Genetically Modified Foods

This leaflet is glossy and full colour, produced, as are the others, to a high standard. This one is unusually long, 10 A6 pages, and much more text-dense than the others.

The opening sentences of the leaflet attempt to position the FSAI as a source of reliable, factual, information for consumers confused by the conflicting claims of 'interest groups':

> The debate surrounding genetically modified foods has left consumers confused and sceptical. Interest groups seem to produce experts whose views are so diametrically opposed that consumers simply don't know who to believe. Are genetically modified foods safe? Are they adequately tested and labelled? ....
>
> This leaflet aims to set out exactly what Genetically Modified (GM) foods are.

The headings in the leaflet are:

- What are genes?
- What is selective breeding?
- What is genetic engineering?
- What GM foods are on the shop shelves?
- Who regulates these foods?
- Are all GM foods and ingredients labelled?
- What are the potential benefits from gene technology?
- What concerns have been expressed about this technology?
- Is it safe?
- What about food allergies?
- What does antibiotic resistance have to do with this technology and does it make the food unsafe to eat?
- Is genetic engineering good or bad?

Thus the style is that of answers to consumers' common questions, i.e. addressing concerns and reassuring. These questions tend to lead to answers that say it is not proven to be bad, or so far it is safe.

This leaflet also makes the point that biotechnology is nothing particularly new, when it says that 'most of the food we eat today has been modified in some way'. Like the Centra leaflet, the use of the word modified to describe conventional practices serves to blur the distinction between old approaches and new GE approaches.

The FSAI leaflet uses a number of arguments to support the safety and legitimacy of GMOs, based on its successful history to date:

> This technology has been used for the production of medicines, pharmaceuticals and a number of life saving drugs now in common use.
>
> In the US there is a wide variety of GM whole foods on the markets including apples, asparagus... (followed by a long list of 22 food items)

and that the safety regime is robust:

> None of these foods may be sold in Ireland as they have not yet completed the approval process necessary before a product can be marketed in the European Union.
>
> Before any genetically modified food or food ingredient can be sold in the EU it has to be scientifically assessed by specialist scientific committees in each Member State.

The leaflet also supports the claim on the potential benefits of GMOs:

> the technology does have the potential to produce foods that could be of great consumer benefits....(followed by a list of potential health benefits)

and makes the usual claim about consumers' right to information:

> the Food Safety Authority of Ireland supports the consumer's right to know...

The final verdict is made clear:

> In the opinion of the Sub-committee the GM food ingredients currently on the market in Ireland are as safe as their traditional counterparts

This is a very carefully worded statement, and is particularly interesting for its specific use of the word 'opinion' to describe its assertion, unusual among the leaflets.

So the leaflet does put some work into positioning itself in a stance of neutrality and independence, but overall the result is certainly a verdict of (qualified) approval, and despite some qualification, the tone is one of setting out the facts and resolving the key questions.

Discussion of the leaflets

One element of the overall GMO debate that features strongly in the leaflet texts is the question as to how 'natural' genetic engineering is, and whether or not it is a simple extension of conventional agricultural techniques. Those that are in favour

of the technology argue that it is not very different (or not at all different) from other types of husbandry or manipulation, as we see in the Centra leaflet. Those opposed claim it is a significant leap, and try to position it in the realm of science as opposed to nature, in the laboratory not the everyday world. The Iceland leaflet, for example, has a DNA molecule image on the front (science, unnatural), plus other strong images such as a technical type with a face mask doing something technical, and a photo of a syringe next to a tomato. Compare this with Centra putting an attractive picture of corn on the cover (natural, wholesome), and using other such food images throughout.

So the question is framed as whether GE as nothing very new and therefore no need for concern, or it is new uncertain science, with unknown risks. The language difference among the leaflets in this regard is very stark. The Centra leaflet says that 'modified food is a fact of life and has been with us for some time' and GE is just nature taken 'a step further'. In contrast, Iceland says that GE is 'unlike normal methods of reproduction'. Where Centra talks about processes such as using yeast to make bread rise or to ferment cheese, Iceland talks of the introduction of an 'anti-freeze gene from an Arctic fish into tomatoes or strawberries to make them resistant to frost'. What is interesting about this debate is that there is consistency in the view that food production should not entail strongly innovative science. No-one tries to argue that GM food is good because it is based on the latest scientific techniques.

Another second comparison point among the leaflets, particularly between the Centra and the Iceland leaflets, is the tone of the language in terms of calming or inciting concern about the issue. It is important to remember the context of the production of the leaflets. The Centra leaflet comes a year after the Iceland leaflet. Where Iceland is positioning itself as being proactive by taking a stand, Centra is reacting to controversy and justifying a business as usual approach. Centra wants to justify a decision not to remove GMOs from its shelves, it wants to reassure and then close the issue. Iceland, on the other hand, wants to make a controversy of it, wants people to be concerned and then to come and shop in Iceland so as to avoid GMOs. So Iceland is looking for a more 'active' response than Centra. This is reflected in the language of a 'campaign', including a call for people to write to their MPs. The FSAI leaflet stands a little differently, but is certainly closer to the model of reassurance and issue closure than that of inciting action. As the state body for food safety, it wishes to convince people that it is doing its job in ensuring that food

is safe. It wants to show that it has looked at the issue and is reassured, and thereby can reassure the public. In this sense there is certainly a sense of closure; suggesting that the questions have now been answered.

Claims to rationality are very common in all of the leaflets; all three claim to be filtering out bias and ignorance to bring you the facts. All make reference to giving consumers full information so that they can make their own choices, and all possess a tone of aiming to separate fact from fiction. The example of the Iceland leaflet labelling those in favour of biotech as 'involved' as opposed to 'professional independent observers' has already been cited; positioning fact against biased opinion. The FSAI leaflet laments the confusion caused by 'interest groups' before declaring that it will 'set out what exactly Genetically Modified (GM) foods are' and whether or they are safe. The only deviation from this, as already mentioned, is in the final verdict on GMOs by the FSAI, which is presented as 'the opinion of the Sub-committee'.

A final word is merited on credibility claims used in the leaflets, to tie up some common themes of the case studies. Three key claims are used (both by Centra and FSAI) to argue that GMOs are safe:

- GM technology is not much different to other methods
- The regulatory system is robust and provided strong protection
- There have been no problems to date with existing products

All three of these claims feature in both the Centra and FSAI leaflets. An additional credibility claim used by all, as discussed above, is the claim to fact as opposed to opinion, a common rhetorical tool.

The other interesting credibility claim is seen in the use of the role of science as support for both sides. The fact that science is so involved in the issue is used both to reassure and to scare. As mentioned earlier, Iceland uses science imagery and language is a way that is meant to frighten, to appear as interventionist and unnatural. Centra, by contrast, portrays science as bringing good things to our lives and arguing that this issue is one more example of the successes of science. FSAI also uses this image, and additionally explicitly refers to 'specialist scientific committees' as a source of reassurance.

Conclusions – The Media Reflecting and Shaping

As a component of the overall public sphere for the GMO debate, the media is hugely important if only because of the extent of its reach. Far more people would have been exposed to the debate through media coverage than through all other public sphere elements combined. As a result, the media becomes a target for all actors in the debate; everyone sees positive media coverage of their position as a goal, as discussed in Chapter 4. The media is an important part of the public sphere in this debate, but this is not to imply it is a value free reflector of the debate as a whole. As with any other public sphere component, issues relating to access, discourse, power and normalising processes are at work to varying degrees, distorting its operation away from the ideal power free public sphere concept. If the media is to be seen as a good model of the public sphere in Habermas' terms, then what is desirable is a value free *tabula rasa* for actors to present their arguments upon and others to receive and assess. Again from Habermas' perception, evidence of power, of active mediation of the process of any kind, would be seen to corrupt the process and possibly undermine its participatory quality.

In this chapter we have seen power work in many ways. The first point is of course access. Editors decide on access criteria that influence the shape of the debate, relatively benignly if it decides which aspects are covered and which are not, less benignly if resources such as money or political power can help provide such access. Both sides were very comfortable with a public relations based approach where it takes effort to generate coverage, and skills, connections and money all help.

The focus on language in much of this chapter is justified by its illumination of another element of power at work in this corner of the public sphere. Discourse analysis reveals media frames at work that tend to see stories cast in certain ways. It also reveals some topics in the debate to be much more 'media friendly' than others. This again relates to the question of access to the debate and to audiences for one's arguments. Beyond this there is also ample room for power to operate through the language of the texts that do get presented. What is particularly interesting from the analysis in this chapter is that these kinds of language and framing issues can serve either side of the argument; we saw articles (and leaflets)

based in the same frames and on the same stories or information and yet supporting very different conclusions. Even relatively tight and constraining frames like court reports still allowed very different interpretations to be put on the facts.

The three case studies of this chapter are presented to illustrate some of the specific ways in which analysis of media discussion and similar public communicative events can reveal underlying assumptions and reflections on society more broadly. As communicative events in the public sphere they are examples of the debate of which they form part. Additionally, the analysis reveals some elements of the specific active role of the media in presenting these issues, beyond the conceptual passive role as a public sphere in the sense of a forum for debate. In all cases, the debates are mediated by practices, language choices, frames and other elements that influence the presentation of the 'facts' and the slant of the texts.

Another aspect I discussed was credibility and credentials – how are people presented, who gets called an 'expert'. One group of people and how they are represented are particularly important – the general public. When does it become possible to say 'people are concerned' or an issue is 'controversial', or 'most people think...'? And if a journalist says such things, what effect does that have? Media coverage clearly has the effect of normalising certain discourses, certain representations, and certain relationships between actors. The media calling someone an expert imbues them with this status. The media describing an issue as controversial makes it so. So media activity is biopower in action.

The media is not unusual among public sphere elements in containing many processes that shape its discourse. It is perhaps somewhat unusual in that it is the most centrally important element, and does seem to tend to be taken as *the* debate, not just one particular part of it. To take it as the debate is to ignore the active distorting processes at work, processes that are at work in all parts of the public sphere.

CHAPTER 6 DEBATE EVENTS

Introduction

This chapter focuses on the GMO debate taking place through public meetings and discussions, which I will generally refer to here as debate events. These debate events can be seen as a central part of the wider debate on the issue, a chance for members of the public to meet and discuss the issues that concern them. In many ways, these events should be the perfect embodiment of Habermas' ideal public sphere. The debates are also important because the situated, face to face meeting and discussion of issues by participants is what Hajer describes as 'a key moment in discourse formation that needs to be studied to be able to explain the prevalence of certain discursive constructions' (Hajer, 1995: 54).

As important elements of the overall debate, these events present an opportunity to further my analysis of the discourse in terms of content, language and other such factors. In addition, my observation of actual intersubjective interactions among speakers and between speakers and audiences allows me to consider other issues of debate in action in terms of the meeting of different perspectives, relative valuations of knowledge and legitimacy, and the 'quality' of debate, interaction and persuasion.

Detailed observation notes on the four debate events presented here constitute the core of the data set for this chapter. The discussion also draws on my observation notes from the national consultation process debates, which are discussed more fully in the next chapter. Since the data source is principally my own notes, presentations of the events will be somewhat paraphrased but will hopefully give a good overview of the events. I will explore the data content in more detail with reference to particular themes in the discussions that follow the overviews. For convenience, the four events are presented here in chronological order.

Growing Awareness Conference – Skibbereen

In the summer of 1998 a few people in West Cork involved in local environmental and food issues decided to form a group with a pro-organic, anti-GMO stance on

food and agriculture and to organise a public event in the area to raise awareness of these themes. This group called itself Growing Awareness. The event it organised was a weekend conference exploring the themes of food and agriculture, with particular focus on GMO crops and food, and organic farming. The event took place in one of the main hotels in the town of Skibbereen, West Cork, and attracted a substantial audience and many prominent actors as speakers.

The event was clearly marked from the start (in publicity materials) as an 'anti-GMO' event, and this was reinforced by the range of speakers scheduled for the meeting. In contrast to some of the more 'professional' meetings I will discuss below, this conference had a very relaxed atmosphere, including a jazz concert on the Saturday night, food and information stalls around the corridors, a number of children present, and almost a festival feel.

On Friday evening the conference was opened by speeches from John McKenna, the food writer, and Nuala Ahern, the Green Party MEP. John McKenna's theme was the need for food to be local, diverse and of a high quality, and that GE epitomises the faults of industrial, homogeneous, functional food. Nuala Ahern's comments focused mainly on food safety aspects, including a call for 'absolute non-risk' foods for children. These opening speeches were no more than broad introductions and the main conference started the following morning. There was some discussion about the absence of a speaker from Monsanto, who had been invited but was unavailable. A speaker from Bioresearch Ireland had stepped into the breach as one of the very few 'pro-GMO' representatives at the conference.

By Saturday morning, there were probably close to 200 people at the conference. The audience represented a very wide range of people, including farmers, NGO activists, academics and many members of what I will call the 'alternative lifestyle' community of West Cork. The first session of the day addressed the background and science of genetic engineering, with speakers Ricarda Steinberger, a genetic scientist and an active personality in the anti-GMO movement in the UK and Ireland (see Chapter 4), and Declan Cathcart, an academic geneticist. Both speakers attempted to explain the technology, but unfortunately, to my observation, both came across as very difficult to follow and seemed to lose the audience very quickly. Broadly, Ricarda Steinberger took a much stronger anti-GMO stance than Declan Cathcart, who argued that the technology was basically good and held significant promise if developed properly.

The speakers for the second session were Quentin Gargan and Nuala Ahern, and the session aimed to develop a more political theme. Quentin Gargan's presentation gave a broad overview of Genetic Concern's issues, including food safety and environmental concerns, and evidence relating to poor regulation and safety problems. His style was snappy and clear. Nuala Ahern also covered many of the same themes, concentrating on risks to humans and citing elements of the Green Party submission to the national consultation process. Questions in this session included a challenge to Quentin Gargan on some of his facts, framed as a challenge to his trustworthiness in terms of 'fair debate', which was met with some hostility from the largely anti-GMO audience. In general, there seemed to be little tolerance for expression of positions seen as favourable to GM technology.

The third Saturday morning session took up the broader themes of agriculture and economics, with speakers Richard Douthwaite, the well-known 'alternative' economist, and Colin Sage of the Geography Department of University College, Cork. The talks covered issues relating to industrial agriculture, globalisation and developing world issues. A number of questions and comments followed, all sympathetic to the anti-GMO point of view.

The next session, after lunch, was on the topic of animal issues in relation to genetic engineering. Speakers from Compassion in World Farming outlined the issues surrounding welfare, suffering and the ethics of animal exploitation. A number of questions followed including some around the theme of 'what can we do?', for example in terms of lobbying supermarkets, writing to politicians or even taking 'direct action' (often a euphemism for crop sabotage or other protest actions). Given that the bulk of the audience was in agreement on the issues from the very beginning, discussion on how to move forward and how to take action was common.

This was followed by another session with speakers Ricarda Steinberger and Declan Cathcart addressing risk issues, in particular health-related topics, and some environmental concerns. As before, the content was technical and the presentation poor. This was followed by a session nominally addressing consumer issues. The speakers were Nuala Ahern, Maureen Tatlow, a food writer, and Brian Crowley, a Fianna Fail MEP for Munster. Nuala Ahern made points on labelling, regulations and biopatenting and challenged Brian Crowley on his support of the

European Biopatenting Directive. Maureen Tatlow's speech followed a broadly similar line to that of John McKenna (see above), extolling food quality and local production. She also addressed the labelling issue. The third speaker for the session was Brian Crowley, who had already been defined as a pro-GMO person in earlier remarks by Nuala Ahern. However, he defended his broad support of genetic engineering as a stance in favour of the positive benefits, in medicine for example, and supported calls for labelling and information. Some lively debate followed, with virtually all questions directed as challenges to Brian Crowley on his supportive stance.

The next part of the conference took the form of a evening debate session, with four speakers giving brief presentations followed by a number of questions from the floor and ongoing response and commentary. By this stage, there was an audience of well over two hundred and the mood was lively and enthusiastic. The debate was structured as two speakers for each 'side'. The first speaker was Peter Jones, a plant geneticist from UCC, representing the pro-GE side. He argued that the potential benefits of the GMOs outweigh the risks, and that social aspects such as ownership and profits relate to the companies involved, not to the technology itself. The second speaker was Mae Wan Ho, a geneticist from the Open University well known for her active anti-GMO stance (see Chapter 4). Her talk was an attack on the reductionist science of genetic engineering, arguing that there is substantial evidence to indicate we know too little about possible effects. The audience received her speech very enthusiastically. The third speaker was Jim Ryan, head of Bioresearch Ireland, who argued that the benefits of the technology to Ireland could be great, that tough regulation will ensure safety, and that acceptance or rejection should be up to the consumer to decide once they are presented with choices and information. The fourth speaker was Darina Allen, well known celebrity chef (see Chapter 4 for more on some of the key activists). She read a well-researched and tight speech, calling for more information and expressing concerns about food safety issues.

A general debate followed with about fifteen questions from the floor and various responses and other comments from the panellists. The questions were a mixture of queries on detailed aspects of the science or regulation and general comments such as expression of personal objection to the issue. One interesting aspect was that several audience members referred to the two pro-gm speakers as 'the two scientists' and had to be reminded by the chairman that there were in fact three

scientists on the panel, but one, Mae Wan Ho, happened to be on the anti-GMO side.

The following summarises the questions and comments expressed in the debate session, based on the paraphrasing of my observation notes:

1. Who funds research?

2. What trans-national corporation funds research in Trinity College?

3. Safety assessment is normally based on control groups, but without labelling how can we monitor effects to know whether GM foods are safe?

4. Food was better in the old days

5. Is there any evidence of ill effects in the millions of people now eating GMOs?

6. [Socialist Party TD] The scientists are irresponsible in extrapolating from the laboratory to the world, also there is an industry-government alliance, also asbestos, parallels with Chernobyl, we need more people power [big round of applause]

7. The FDA (US Food & Drug Administration) was a good agency until Ronald Reagan, a recent survey showed 51% of recently licensed drugs have serious side effects, if it is not new, why so much money being put in?

8. How do we know GMOs are safe on such a short history?

9. Dr Ho, in Chapter 9 of your book you say it is unwise to eat transgenic food. Do you stand by that? [the answer is yes]

10. Is Bioresearch Ireland government-funded or funded by Monsanto?

11 How can you assure safety without human testing? [round of applause]

12 [Local Sinn Fein councillor] This is about the marriage between government and industry for profit, also the history of BSE and other food scares shows the problems that are there. Who decides on the regulations and enforces them?

13 What do the 'two scientists' think of the threat to biodiversity?

14 Mae Wan Ho, please say more on the way forward for growing the campaign

15 Dr Peter Jones, on your claim about toxic salamin in potatoes, I did famine diet for six months, I should be dead now. Moreover, potatoes sustained Ireland 1740–1840. I think we should go organic

The session ended with many participants retiring to the bar for further discussion.

Parish Debate—Stillorgan

This event was organised by a small parish church in the south Dublin suburbs as part of their own general programme of meetings on topical issues. It was attended by a mostly local audience, some of whom were actively interested in the topic but many of whom were simply parishioners attending a parish event. Of the debates analysed in this chapter, this was certainly the one with most participation of people with very little active connection with the issue. Of the 40+ people in the audience, approximately two thirds were women and one third men.

The first speaker was Dan Bradley, a member of the genetics department of Trinity College (his own speciality is cattle genetics). He attempted to explain the issue of genetic engineering and the science involved and addressed some aspects of the ethics of 'interfering' with nature. His comments downplayed the risk issue, hardly mentioned the theme. Overall, his language was technical and difficult, and the talk lacked clarity and seemed, from this observer's perspective, to lose most of the

audience. The second speaker was John Scally, a teacher with a background in medical ethics, who gave a somewhat unstructured talk on the ethical issues of genetics, particularly medical aspects. He ended with a call for more debate and discussion on the topic.

The next speaker was Quentin Gargan of Genetic Concern, who gave a presentation similar to others he has given elsewhere. He began on the topic of risk to human health, inferring possible links to a general rise in the occurrence of allergies among people. He also argued that there are two world views in the debate: an anthropocentric, exploitative one, and a holistic one. He stated that a survey carried out for Genetic Concern revealed wide opposition to GE among Irish people and asserted that people who claim to know more about the issue show a higher level of opposition. He then challenged the claimed potential benefits of GE crops and foods and argued against the reductionist model, the 'single gene myth', of genetic engineering. He mentioned some of the risks involved and challenged the trustworthiness of the companies involved and the rigour of the safety regulations.

The final speaker was a consultant representing Monsanto, Michael Fox. His well-presented talk started with a discussion of some of the potential benefits claimed for GMOs, including crop factors such as resistance to disease, resistance to stress and food factors such as edible vaccines and higher yields. Many of his overhead slides were Monsanto branded slides that were used by Patrick O'Reilly at other events. He argued that the concerns usually expressed centre on environmental risk, regulatory rigour, monopoly and patenting issues, ethical and moral aspects, and labelling. Concentrating on the environmental topic, he cited the large number of field trials and the substantial acreage now under GM crops as supporting evidence for safety. He closed by arguing that GE is an exciting science with significant potential, and that it is now a reality that is here to stay.

The discussion that took place after the speeches, which was chaired by the curate of the parish, was based around six questions from the audience, mostly exhibiting an unfavourable position towards GMOs. The event ended with tea and general chat. The following notes give a sense of the exchanges in the question session:

Question 1: I see a problem; GE has a utilitarian attitude to nature, manipulation, you need wisdom, but its driven by profit. I don't want it, something deep down inside me says I hate it [applause].

Dan Bradley: I respect your view but disagree. If you say GE is ok in some arenas you should say its ok overall. Also, farming is already utilitarian.

Question 2: Can you identify GMOs? Are there signs in supermarkets to say there are genes (sic) in products? There should be.

Quentin Gargan: There is a big problem with product segregation, labelling is a shambles.

Question 2: Will it poison us?

Quentin Gargan: We don't know.

Michael Fox: Food can't be sold unless its safe [snickers from audience].

Question 3: [Informed detailed question on Terminator seeds. Questioner calls Quentin Gargan 'Doctor Gargan' but is corrected]

Quentin Gargan: [Provides explanation of terminators]This raises ethical problems. We think its an abomination.

Question 3: So do I.

Michael Fox: Terminator technology has not been applied yet. Anyway hybrid seed can't be saved either. Yes terminator will make sterile seed but all seed in developing countries won't be GM. Also terminator enhances the environment by stopping outcrossing.

Question 4: Dr Fox, what would you say to reassure parents about GE soy. I'm a pharmacist; our union has taken it up. We're concerned about GE soy in baby food.

Michael Fox: To the best of my knowledge there is no evidence to show GE soy causes allergy increases.

[Questioner is not happy with the response]

Michael Fox: It will have to be looked into. The Department of Health can look into it: it's a question for the regulators.

Quentin Gargan: [Mentions the case of the brazil nut gene being used and subsequent allergies being found]. Now we are using genes from petunias—are we allergic? How can we know? 'Absence of evidence is not evidence of absence.'

Question 5: Is there an increase in stomach problems in recent years?

Quentin Gargan: It's down to what paradigm you live in. Organic food is great. Cuba shows high output is possible from organics. On the issue of feeding a higher population, we'll run out of water long before we run out of food. we're in an evolutionary cul de sac

Question 6: I think GE is here to stay. Society is creating the demand. The demand is created from demise of the full-time home maker and the need for longer lasting foods. [some murmurs from the audience]

John Scally: [lightly] I can't answer that.

More people had questions, but time was called and the meeting ended.

Joe Cummins Debate—Ormonde Hotel

Around the time of the national consultation events, Genetic Concern organised a visit by Professor Joe Cummins, a retired genetics scientist from Canada who has taken an active anti-GMO stance in the debate. He was visiting Ireland principally to speak for Genetic Concern at the second consultation day (which was cancelled because of the NGO boycott— see Chapter 7), but he did give a number of public talks around the country that were organised during the week previous to the boycotted consultation day. One such event took place in the Ormonde Hotel in Dublin, in front of an audience of about 30 people on a Monday evening (May 31st, 1999). Most members of the audience were recognisable as Genetic Concern supporters, but as quickly became clear , not everyone present was on the same side of the debate. Quentin Gargan introduced Joe Cummins , who then spoke for about twenty minutes, presenting an overview of the issues that concern him most. These centred on questions about the quality of the science behind genetic engineering and concerns about potential risks. His presentation was calm and considered, and the event looked like it would be quite unremarkable. Matters changed, however, as soon as the discussion was opened to the floor. It soon became clear that two young men in the audience were intent on making the event much more lively than expected, with one in particular making a number of challenges to the speaker on various points. He asked a number of questions and

directly contradicted a number of the speaker's assertions, adopting an aggressive tone, interrupting other speakers and clearly annoying other members of the audience. The main speaker answered his questions in a deliberate manner, and although some questions were asked by other people, the main feature of the event was a series of interjections from this one particular audience member.

The following is a more detailed synopsis of the event, based on my own handwritten notes. By necessity, most comments are paraphrased. Comments captured as direct quotes are marked as such, but still represent my hearing of the speakers.

Quentin Gargan introduces the speaker. Professor Cummins is 'a real treasure' because he's a well known geneticist but he's on the anti-GMO side of the debate. Joe Cummins speaks for about twenty minutes.

> What is Genetic Engineering? General background comments on the technology
>
> I have no objection to medical GE (while noting that for all the money spent it hasn't produced much): the ethics are well discussed for medical GE. In contrast, crop GE is being developed in an authoritarian way.
>
> The science of GE is still quite crude; planting a gene has been likened to tossing a statue through the window of a museum and hoping it will land in the right place. We don't know precisely where the genes are going and how they will act.
>
> The substantial equivalence issue is a problem. GMOs are not sufficiently tested because of claims to substantial equivalence. It is weak to argue that they are the most tested foods; they should be tested more than other foods, more like pesticides.
>
> The Pustzai issue. His evidence is that the test rats were starving because of lack of protein in the GM potatoes, so let that be a lesson: we might all starve if we ate only GM foods.

Ethics, EU, WTO. The regulations say the issue should be decided on scientific principles, so that leaves no room for important ethical aspects. Also, science is sometimes bad: it makes selective use of the evidence and anyway the public has never agreed that the decisions should be made by science alone.

My main concerns:

—spread of viruses,
—use of totally synthetic genes (used because natural version has been patented by another company),
—food allergies and auto-immune diseases,
—antibiotic resistance. Danish research has shown resistance transfer to animals, —'it has been proven in a laboratory now so it is scientific',
—spread of genes
—damage to insects, such as recent reports on the monarch butterfly, damage to the living web.
—side effects from herbicides, cancer among people exposed to glyphosate.
—creation of toxins, build up in soil, (reference to University of Oregon experiments on this issue).

That's a summary of my concerns, I'd like to hear your comments.

The following is a summary of the question and discussion session, with the comments of the particular challenger marked so that comments are grouped with speakers. Professor Cummins is identified as JC.

QUESTION 1	In GM maize there is insecticide in the cells. Is there insecticide in the food part?
JC	In most instances yes
CHALLENGER	The substance isn't harmful to humans: it's a lepidoptrin
JC	[goes into some detail] Stomach acids usually inactivate the toxin, but there is argument on proteins, numbers of genes etc., I think the testing is incomplete
QUESTION 1	(again) But we'll eat more of the toxin in the future than we have in the past.

CHALLENGER People say the cauliflower mosaic virus is to blame, based on Pustzai's research. How many plant molecular biologists would you have to ask to get one to support that ?

[hostility towards challenger from several people, interjections]

CHALLENGER Scientists are just trying to stop the spread of scientific misinformation.

JC Scientists should tell the truth as they see it—we seem to be seeing a scientific Vatican at work.

[challenger and his colleague both interjecting]

QUESTION 3 From 1800 to 2000 natural breeding went on. What controls were in place then?

JC They did it by breeding, not by grafting, [discusses the origins of agriculture].

[Challenger is interrupting constantly, much noise, someone calls challenger a smart-arse]

JC Talking about history of agriculture...

[Challenger still butting in]

JC ...GE is not a normal progression of agriculture.

CHALLENGER So what technology <u>is</u> a normal progression. There's nothing scary about a little bit of gene, a couple of thousand base pairs long.

QUESTION 3 [again, reading his questions] What risk management can be used to allow GE, or are you saying we should never allow it?

JC There's not enough testing, etc.,[mentions lectins]

CHALLENGER There's lectins in kidney beans.

JC More comments.

QUESTION 4 You have to boil kidney beans to make them ok. My concern is the narrowing numbers and ranges of foods and also the increasing allergies. 'I'm very much against messing with foods' e.g. spelt and wheat. I'm the first woman to speak here: I'm concerned there are not very many women speaking. I'm not going to have children, but anyone who wants to better not eat GMOs.

JC Wheat gluten gene is being put in other crops. But where does that leave coeliacs?

QUESTION 3 [again]) re. virus spread and hepatitis: what crops are involved and what are the viruses?

JC The cauliflower mosaic virus promoter.

[interjections from challenger's colleague]

JC [responds to challenge. Presents some details of the promoter and enhancer] New and unique viruses are being created—that's my concern.

QUESTION 3 But what crops?

JC Many crops.

QUESTION 3 But not in field crops.

JC Yes, in most field crops.

QUESTION 3 Is this virus gene the same as the hepatitis virus?

JC It's related.

QUESTION 3 But not the same?

JC The cauliflower mosaic virus attacks the human liver, 'bacculo virus'.

QUESTION 3 How is the virus killed?

[series of questions seem very leading towards pre-set ideas]

JC Baculo virus is hard to kill. There are dangers out there: people hearing about them don't go screaming into the streets in the real world. We need testing. I have no moral objections to GE though I respect those that do, but I have no faith in the safety.

QUESTION 5 I'm a scientist. We're not all brainwashed, we don't look down on the public. We have peer review, so how should we police GE?

JC I think these foods should be tested as much as pharmaceuticals or pesticides.

QUESTION 5 You were challenged on the radio because an example you used was 'only a small scientific experiment' according to the Monsanto man. I think you're balanced.

CHALLENGER When did you last do an experiment or publish a paper?

[some dissent from audience]

Clare Watson I'm watching this. Your carry-on is typical of what we see from scientists— you're so aggressive.

[Challenger is trying to interrupt Clare Watson, but she does not allow him]

QUESTION 5 He's (challenger) not a typical scientist, he's not balanced.

Clare Watson You shouldn't be so aggressive and rude.

QUESTION 6 [directed at challenger] I'm only a BSc, so you might dismiss me, but I say you should allow consideration of human aspects and not think of science all the time. [Mentions Monsanto and Clinton links, role of politics, says there are broader issues.]

CHALLENGER I'm not a plant molecular biologist— I'm an evolutionary geneticist. But I do know most of what Genetic Concern say to make the public swallow is nonsense.

[somebody in audience says 'mention one thing']

CHALLENGER Tryptophan

JC Oh yes, I will mention tryptophan now that you've brought it up. [tells the story], new method, not properly filtered, mysterious fire which destroyed all their records. it was a substantial equivalence problem.

CHALLENGER Is it not true that they used less activated carbon to filter, reduced from 20 mg to 10 mg, so the problem wasn't GE.

JC Yes, it was GE. It was substantial equivalence.

QUESTION 1 The point is mistakes are made, and once it's released we can't go back.

QUESTION 3 So if [the makers of tryptophan] set up again with the correct amount of carbon, would you accept it?

JC My point is it was the assumption of substantial equivalence that caused the problem.

CHALLENGER No, it was the filter.

QUESTION 3 [more assertively]So if they changed the filtering...

Quentin Gargan We're probably losing the rest of the audience here.

QUESTION 3 If that's the way you want it.

Quentin Gargan I think that probably the greatest indictment of the biotech industry is the destruction of the evidence.

[This is a phrase QG has often used word for word]

QUESTION 3 Well, that's a different story.

QUESTION 7 Because the US has no regulatory systems, the rest of the world has to accept GE; but there are good controls in Europe. But we're getting US soya etc., But you lost credibility for me saying that there are no regulations, because there is social–political stuff here.

JC I'd like to see a ban on substantial equivalence.

JC [speaks about genetic fingerprinting]

QUESTION 7 I had a lengthy discussion with the EU Commission regulatory agency in Blackrock. Their position is you can't test and identify the stuff.

JC That's wrong.

QUESTION 8 In Germany there are good regulations.

QUESTION 7 Well, Joe is saying there aren't.

QUESTION 8 There are no regulations here—that's why we're at risk. Commissioner Bergemann is promoting testing here because he couldn't do it in his own country.

JC The US will try to force you to accept GE, but it can be tested. Also, many GE crops are proving to give poor yields.

QUESTION 3 Should the Japanese have held on to the dangerous bug (referring to tryptophan case) so we could all know about it and avoid using it?

JC I agree. They should have gone to jail. They have a very bad record overall.

QUESTION 9 [Sadhbh O'Neill] This debate is about science and how it happens. But its also about food, if 80% of foods may have GM soya, even baby foods. There's a huge issue of the food chain, not just GE. I want to eat food that doesn't contain pesticides, that's grown locally etc.,

JC Growth of organics. Lots of proposals (science) are like 'Busang gold' case in Indonesia (false gold find), making dodgy claims to boost stock market prices.

QUESTION 9 Does this apply to some of the claims about benefits of GE?

JC For example, canola oil with Vitamin A for deficiencies in developing countries, but canola is a cold climate crop. If Vitamin

A canola gets onto first world market, Vitamin A supplements in a Vitamin A rich diet can cause problems in pregnant women.

QUESTION 4 It's because of cash crops, e.g., not rich in vitamin A.

JC [makes final comments]

[Quentin Gargan wraps it up]

When the debate ends, Joe Cummins approaches the main challenger and his companion and chats amiably.

Bernie Malone's Debate

This debate was organised by the outgoing MEP Bernie Malone (Labour) on May 7th, 1999, a few weeks before European Parliament elections. The meeting took place in Buswell's Hotel in central Dublin before an invited audience of many of the main players in the debate and many others less frequently seen at such events. Those attending would have included interested parties from different arenas, such as representatives of supermarkets, and a number of political supporters of the organiser. Within my data set, this debate represents the most controlled in terms of participation in that the audience was invited[8].

There were four invited speakers; Patrick O'Reilly of Monsanto, Pat Wall of FSAI, Quentin Gargan of Genetic Concern and Armin Michner of the Socialist group in the European Parliament. Bernie Malone herself opened the proceedings: her comments indicated that the European Parliament Socialists' position was cautious acceptance of GE, and she expressing a desire to 'bring some balance to the debate'.

The first speaker was Patrick O'Reilly of Monsanto. His talk began with comments downplaying fears about GMOs, saying that there is ignorance about the issues and emotive press coverage tends to convey a negative view. He sought to calm fears, mentioning the 'exhaustive' testing of products, and called for more education and information, possibly even a new EU-wide information agency.

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[8] Although people were admitted if they came to the event uninvited, as was my own case

Quentin Gargan was the next speaker, and he gave a very similar presentation to that of the Stillorgan meeting discussed above (using laptop versions of the acetates he had previously used). He claimed people are worried about the technology, argued against reductionist science and discussed some of the potential risks. He called for a precautionary approach and alluded to instances of companies such as Monsanto having misled regulators in the past.

The third speaker was Armin Michner from the Socialists' group in the European Parliament. His focus was on EU level regulation of biotechnology, and he gave an overview of the regulatory history, outlining the pertinent directives, and emphasising the role of the Socialist group in various achievements. He reiterated the Socialist group position as cautious acceptance, stating that the benefits outweigh the risks but safeguards are necessary, and asserting that the socialists are looking for a 'third way' between the 'pro' and 'anti' sides of the issue. The final speaker was Patrick Wall, head of the FSAI, who gave an overview of what he saw as the main issues of the debate. He stated that the current controversy had been precipitated by 'a chronology of food scares'. In his view, genetic engineering could not be seen as either good or bad, but simply as a technology, a tool. He outlined what he saw as the major concerns people had about the issue under twelve headings, covering the usual range of topics. Questions from the floor spanned a wide range of topics, including many science-related points of detail about statements made by speakers and participants and a number of consumer-related issues. Many participants and audience members called for more information and for more debate.

My summary notes on the range of the questions to the panel are as follows:

1:. I am a scientist (a virologist). I'm keen on labelling, but anyone eating any brassicas or potatoes is eating viral promoters. I'd like to ask Quentin Gargan should we label everything?

Quentin Gargan: There is a big difference between containing a promoter and expressing the promoter...

1: No there isn't [goes into some technical detail]

QG: [counters with more technical detail]

1: But the concern you expressed was about the promoter. If what you say is true you shouldn't eat coleslaw.

QG: There is a difference between nature and man-made—the problem is reductionist science.

[Questioner is quite antagonistic]

2: I'm disappointed that the main concerns haven't been addressed today. I'm a nutritional advisor for Superquinn. I wouldn't agree with Bernie Malone that scientists don't know best. There are many scientists we should be looking to, looking to geneticists who have credentials to speak. The speakers castigated experts and scientists— where does that leave consumer confidence? Also I'd like to hear Monsanto specifically address Quentin Gargan's points. Also, there are no consumer benefits in GMOs so far.

Patrick O'Reilly: Soy oil is an example where GE has conferred benefits

Patrick Wall: The FSAI sub-committee is issuing a report next week

3. On the comment about no benefits to consumer—this is also true of conventional crops so we can't castigate GMOs for that.

4: 'food is my concern, not science, having had a family, I know what goes in comes out' Too much fertiliser is being used.

Patrick O'Reilly: GE doesn't change fertiliser use or rotational practice.

4: But you will get build-up of pesticide in soil.

Patrick O'Reilly: No you won't.

4: Has that been proved over the years?

Patrick O'Reilly: Yes it has.

5. [Irish Farmers' Association representative]. We have an open mind now. Research should continue.

Bernie Malone: Does a farmer get incentives for allowing trials?

5: It's a 'non-issue', a private arrangement between the company and the farmer.

Quentin Gargan: In connection with use of other technologies, it is since the GM controversy that we've heard about use of mutagenesis etc. But two wrongs don't make a right—we're becoming a multi-allergic society, it seems the more we deviate from nature the more allergies we get.

6. [Teagasc representative] There is so much misinformation. Changing a gene is just the same as changing one name in a telephone directory, and radiation for mutation has done good. My concerns are these: we need legislation, you can kill someone with a pencil or teach a child to write—legislation controls it. Need better dialogue with the scientists, better education.

7. [Marks and Spencers representative] Who is responsible for educating the public? We need clear and concise information.

Bernie Malone: Education is crucial, that's why we're here.

8. [Consumer Association Council representative] Compared to the transparency of the BSE issue, the Dept of Health and FSAI haven't given enough information.

9. Patrick Wall had 12 concerns, but people today have only been talking science. But people have broader concerns, how do you address it? Specifically, what is a socio-economic study?

10. There is a consultation process underway, do the panel think its good? It seems to exclude many concerns. Also about education and ignorance: it is bad to say only the public is ignorant—experts are ignorant in social aspects of the issue. Also, citing Eurobarometer as a measure of public support is very weak; it is all about how the questions are asked.

Patrick Wall: I have to leave soon, but quickly, on the 12 concerns, we [FSAI] only do food safety. Fergal Quinn's [Superquinn] database of calls received says safety, health, quality (enjoyment), and price are the concerns. I don't know how to address it all.

Armin Michner: We must stop demonising the technology. A nectarine is a GM peach. On the information problem, we need combined efforts by all involved, starting in schools. I don't like to make a link with BSE, the issues have nothing to do with each other.

Bernie Malone: It's the public confidence issue that connects them.

Armin Michner: But people are mixing everything up. On the question about socio-economic studies, for each crop you say how it will affect

various groups—farmers, the Third World etc. The process is still in the pipeline.

Quentin Gargan: BSE is about a shortcut to save money, like lots of these issues. Farmers are pressured to produce cheap food, but price isn't everything. Myself and Patrick O'Reilly come from different paradigms—I don't think we can find neutral scientists. We think the consultation process is not broad enough, it should go beyond the remit of the Department of the Environment. It should be a consensus conference.

[Dept of Environment official in audience asked to comment]: We are trying to deal with Quentin Gargan's concerns elsewhere. On the earlier point about the range of the process, my minister's remit is environmental protection, consultation used to inform [Directive] 90/220 amendments, but also to inform minister for the interdepartmental group [on biotechnology] which is talking about the broader issues.

[Questioner] Can the public attend the consultation?

DELG Official: Anyone who made a submission, the numbers involved are very big.

11. [Health and Safety Authority official] I am on the EPA GMO committee. I would like to give a reminder that anything that's on the market has gone through regulations. The regulatory bodies are independent scientists: I defend their expertise.

Patrick O'Reilly: On the information issue, we [Monsanto] have a strong interest in this, but there is a question of where is there credible information. I disagree with Quentin Gargan saying there are no independent scientists. This issue warrants setting up an independent agency. On the Eurobarometer point, all I'm saying is consumers want information, not that once they have it they'll be happy. Finally on the consultation, I think its good, it will allow us to focus on environmental aspects.

Speakers, Audiences and Discourses

The debate events described above were fairly typical among those that took place during the period of heightened interest in the GMO issue in Ireland. It would be hard to put an accurate number on how many events took place in total: certainly fifty or more events took place, ranging from the bigger national events like the consultation process itself and the bigger conferences such as Skibbereen to many small events organised by parish churches, Irish Countrywomen's Association branches, and many other groups[9].

The events are a rich data source for analysing debate and participation in action. In particular, they offer a rare opportunity to observe speakers and audiences at the same time, unlike data sets such as media texts or leaflets for example, which do not allow us even to guess at their reception by audiences. To reflect this, I want to structure my analytical discussions between those relating to the speakers and those relating to the audiences. I do not intend to imply a distinct separation between these groups: instead, I will treat the language and discourse issues that do not particularly require audience-oriented data first and then address audience issues on the basis of this data cut.

In the first part of this analysis, I want to draw out some themes I have addressed previously using the textual data of the debate events as well as data from other cuts. Specifically, I intend to expand on my earlier discussion of the categorisation of system and life world voices in the discourse and to consider a theme that has been emerging from many parts of the data—credibility and legitimacy in arguments and citations.

Speakers and Language

A fundamental part of Habermas' theories of communication, and of deliberative democracy is the distinction between instrumental and communicative rationality and the corresponding distinction between system and life worlds. In my discussion of these concepts in Chapter 2, I argued for the usefulness of the system and life

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[9] Genetic Concern received regular invitations to provide speakers for such events, and it is based on conversations with the NGO that I make my estimate

world 'voices' categorisation. In the debate events and elsewhere, I have found an interesting language pattern in speakers' arguments in terms of system world and life world voices. As I have discussed, voices can be broadly seen as representing the underlying frameworks of how someone sees things. In particular, I see the notion of system world voice as against life world voice as centring on the claim that system worlds exist and can be appealed to for legitimacy (the steering medium concept to some degree). As I have argued earlier, the system world voice is often used to legitimise a claim by reference to the supposed instrumental rationality of a particular system, for example the argument that regulations can be trusted or that assertions of safety from the science community is ample reassurance. To a large degree then, the life world voice can be defined in opposition to this: system worlds do not exist and the pure action of an instrumentally rational steering medium operates nowhere. The life world voice will appeal to a much wider set of inputs than the system world voice, which will appeal specifically to the system in question.

I want to expand on these concepts using examples from the general data set before moving on to a specific discussion of the debate events cut. Across the data on this debate, the life world voice is particularly strong. It features strongly in discussion of nature and food:

> If you can't trust a spud to be no more nor less than it has always been, then something quite basic is under threat.
> ('The buyer should beware of miracles of biotech', *Irish Times*, 22 February 1999)

> The little plants were grown from seed I saved myself, picking them out from the pulp of a ripe tomato and drying them on a saucer: a pleasurable gesture. Their variety, Harbinger, is almost a century old, its genes carried forward from year to year because its flavour is so good. But it is not a supermarket tomato, having too fine and thin a skin to take mechanical handling.
> ('Dark harvest of the suicide seed', *The Irish Times,* 20 February 1999)

When a speaker expresses general unease, or claims a basic aversion to 'interference' with food, they are speaking with a life world voice. And yet GE is full of science and technology and so is replete with system world voices:

GM foods are scientifically developed and specifically adapted by scientists who pinpoint and develop certain genes. Scientists can identify the individual gene governing a desired trait, extract it, copy it and insert the copy into another organism. The idea is to make food more efficient—make it grow quicker, increase protein and vitamin levels, or reduce fat content.
('For and against genetic products', *Examiner*, 13 February, 1999 by Rebecca Allison, PA)

We carry out a stringent set of tests...if there is a negative effect then of course long term mammalian tests would be triggered.
(Patrick O'Reilly, RTE Radio 1, August 11 1998)

In the debate events, there were several instances of an audience member saying simply that they 'felt' it was all wrong, and they were instinctively against it. And then, in the classic fashion of Mishler's original analysis of medical and life world voices interacting in the doctor's surgery, the GE debate exhibits examples of the reframing of discourse from one voice to another. For example:

Q. If something goes wrong with a genetic food, say it causes a mutation, or a disease or, how, how can, might it spread?

DC. Do you mean could we take an antibiotic resistance marker gene into our genome?

(From Skibbereen debate)

This example is emblematic of much of the dichotomous debate: it is extremely common for system world voice speakers to argue that the debate should be confined to the discourse of science, safety and regulation. Other discourses are irrelevant, 'emotive' or imprecise.

Depending on the context, in particular on the target of the argument, either a system or a life world voice can be rhetorically valuable. The scientist challenger at the Ormonde debate takes comfort from the system world voice:

There's nothing scary about a little bit of gene, a couple of thousand base pairs long.
(Challenger in Ormonde debate)

Others in the audience don't agree that the system world voice is the appropriate one for the discussion:

> I'm only a BSc, so you might dismiss me, but I say you should allow consideration of human aspects and not think of science all the time.
> (a respondent to the Challenger from the audience at the Ormonde debate)

Similarly, the dominant language of science in the Bernie Malone debate was challenged by an audience member:

> Food is my concern, not science. Having had a family, I know what goes in comes out.
> (Audience member, Bernie Malone debate)

It is possible to categorise many of the arguments in the debate in terms of system or life world voices and, indeed, to observe their ebbs and flows in the debates. But if this analysis were no more than a categorisation it would be of limited value. However, the approach offers further possible insights. Consider the following statements:

> The best scientific evidence, supported by the vast majority of scientists, is that there is no evidence that these foods are unsafe and lots of evidence that they are safe.

> Cigarette smoking and driving a car after drinking five pints are far more dangerous.
> (Colin Hill, Irish Times Education and Living Supplement, 2 February 1999)

And also:

> You can't say anything is completely safe...You can say two and two is always four, because that sort of definition is built into the structure and nature of the system but you can't say, with 100 per cent confidence, that the sun will rise tomorrow. It is a pretty good working hypothesis...and at some slightly lower epistemological level, you can estimate the probability

that an aeroplane will fall on either you or me while we are having this conversation.

20 million hectares of GMOs are being grown in the United States and nobody is turning into a turnip.
(Sir Robert May, UK government scientific advisor, in the *Guardian*, 23 February 1999, 'They don't know, you know')

A third pair of examples:

There is a...possibility, very low risk of that gene hopping from the plant to micro-organism, ok? That is possible; however, the risk is low according to the published literature, and this has been reviewed. As late as 1998, there's a paper in a refereed scientific journal, which basically concluded that the risk in nature is vanishingly low.

At the end of the day, I suppose, safety is, I never heard of anyone, sort of dying from eating a genetically modified food, however, h-heard of, or even people getting sick.
(Interview with official)

The point is, of course, that for each pair the words are spoken by the same person in the course of the same discussion. In the first pair, a carefully constructed statement about the weight of evidence and balance of scientific opinion is followed by a weak analogy that surely addresses no-ones' concerns about GM food. In the second pair, a senior scientific advisor to government starts by talking in terms of confidence and certainty and epistemological levels and then uses the classic rhetoric of common sense and sarcasm to imply that fears are groundless and stupid.

Each speaker shows himself very capable of using both system and life world voices, presumably for rhetorical reasons. This, I suggest, supports my claim that the system world voice should be seen as a reference to the external existence of systems rather than as evidence of immersion in the system: all communication takes place in the life world by definition. Language invariably contains elements

that could be characterised as more life world or more system world in voice terms—complete polarity is rare.

The system world voice is very similar to Foucault's notion of the speaker's benefit (see Chapter 2); an argument or fact based in 'truth' and thus not part of power dynamics will be seen to be much stronger than a simple 'claim' on the part of the speaker. From the perspective of a decision-maker trying to weigh up validity claims, a discourse that is seen as a 'system' will be valued more than one that is seen as rooted firmly in the life world and thus subject to undesirable change and human influences.

A system world voice argument about food safety will need to establish that system world steering media exist, that they are working as they should and that their function is positive and valuable. For example, if someone were to claim that GMOs are safe because there is a substantial body of safety regulation surrounding them (a frequent claim), this claim is made on the basis of regulation being a system and therefore trustworthy:

> It is entirely possible that some genetically modified foods are unsafe, but those foods which are on the market are safe.
> (Colin Hill, Irish Times Education and Living, 2 March 1999)

This may be challenged by arguing that the current regulations are not sufficient and should be improved. This obviously reinforces the underlying claim that the regulations constitute a system and that systems are a good thing. On the other hand the challenge may be that safety regulation shouldn't be based on the system idea and that discussion, transparency and flexibility are desirable. This approach argues that even if safety regulation can be thought of as a system, it is not a desirable attribute. Finally, the argument may be that regulation can never be a system world domain because there will always be human influence.

So, in keeping with my assertion that the system life distinction is somewhat parallel to claims relating to how things should be or how things are in reality (the life world view on system world claims), this is analogous to the principle–practice dichotomy in people's opinions referred to by Potter (1996, 208). Consider two examples from the Skibbereen debate:

- A scientist claims that (Monsanto's product) Roundup Ready Beet reduces pesticide use and so is good for biodiversity, but another scientist (prominent in the anti-GMO camp) rebuts that claim, asserting that what actually happen in the fields is...

- A speaker states that 25,000 field trials in the US have not raised safety concerns, but the anti-GE scientist quoted above argues that when researchers looked at these field trials more closely, they found much sloppiness and error and argued that the regulators were too busy to check them properly.

Again we have a system world voice challenged by a life world voice saying 'what actually happens in the 'real world' is...'.

The most interesting system world voice in this debate is obviously related to the claimed position of science as an instrumentally rational steering medium for knowledge. As I discussed in Chapter 2, this speaker's benefit claim for scientific knowledge is central to the legitimacy of its role in society, and the basis is the claimed instrumental rationality of the scientific method. The challenge posed by the sociologists of scientific knowledge is that the knowledge creation processes of science are not really system world, but exhibit communicative (human, life world) characteristics (examples include Bloor, 1991; Latour, 1987, and many others). Most defences of science tend to be along the lines that the human processes alluded to by sociologists are 'breaking the rules' and are not 'good science' but 'good science' can and does still exist (see Chalmers, 1990, 82, for example). In simplified terms, the defence is that good science transcends the human through method and evidence.

Science is a major source of legitimacy in the GMO debate:

> The best scientific evidence, supported by the vast majority of scientists, is that there is no evidence that these foods are unsafe and lots of evidence that they are safe
> (Colin Hill, Irish Times Education and Living, 2 March 1999)

> It is as if science did not exist or as if it were perceived as a religion rather than what it is—the best means available to test a hypothesis by way of

conducting experiments under a predetermined scientific protocol with suitable controls.
(*Irish Times* Editorial, 18 August 1999)

Such issues need to be tackled on the basis of firm scientific understanding. This requires, in the first instance, independent scientific research of the type carried out in universities and government laboratories. The benefits of this information then need to be transferred to the public at large.
(Institute of Biology, UK, 1999; www.iob.org)

On the other hand, there are examples where people who normally use science as a source of legitimacy seek to challenge it on occasion. In the Ormonde debate one audience member mentioned that Joe Cummins' evidence was challenged by Monsanto for being 'only a small scientific experiment', and many similar examples were seen in relation to the Pusztai affair discussed in Chapter 5.

As with challenges to the regulations-citing defence of safety, arguments that challenge the legitimising role of science must do so on one of two levels. The first level is acceptance of the role of science but challenging the finding in question, for example:

There is abundant evidence that gene transfer vectors mediate horizontal gene transfer and recombination, spreading antibiotic resistance and generating new pathogens.
(Ho, 1998: 138)

We are strictly opposed to the unlabelled introduction of GE foods into the food-chain; because this disables the most basic prerequisite for epidemiological research.
(Dr U. Hild of Irish Doctors Environmental Association, POW)

Here we see the use of the science steering medium to argue against GMOs, thereby legitimising the role of the steering medium itself.

The second possible level of challenge is to directly challenge the steering medium role of science:

> Taking genes from viruses, bacteria, animals and plants and splicing them into the DNA of food crops may be a fascinating science, but do we want to eat such foods?
> (Genetic Concern, 1999)

> The men in white coats are scraping the bottom of the barrel for arguments to bolster a losing case.
> (Jim O'Connor, *Irish Times* Letter, 16 June 1999)

Both of these types of challenge face difficulties in their attempts to 'dislodge' science from its position; this thesis cites very many examples of the reproduction of science as the discourse of decision making in this debate. These difficulties explain anti-GMO actors' evident willingness to latch onto scientific findings or scientists that support their case. This is a strategic decision to work within the dominant storyline rather than to attempt the much more difficult and fundamental challenge to the underlying paradigm.

The debate events are interesting because of what they reveal about the theme of the system world and life world distinction in terms of knowledge and voices. The meeting of such varied groups of people at the events led to many intersections of the two perspectives.

For example, I mentioned earlier a questioner at the Skibbereen event asking a genetic scientist 'if something goes wrong with a GM food, you know, if it causes a disease...how can it spread?'. The scientist replied 'do you mean could we take an antibiotic resistance marker gene into our genome?. This is a very stark example of reframing a life world question in system world (scientific) language.

Also at Skibbereen, one part of the debate involved a discussion of the workings of modern science, who pays for it, the relationship between science and technology and so forth. This was punctuated by an audience member who said he was a local farmer and explained that in 1970 one could buy the *Cork Examiner* for a week for the price of a gallon of milk, whereas today the value of a gallon of milk will barely

get you one day of the *Cork Examiner*. This moved what was a very abstract discussion into an extremely 'real world' discussion of the realities of farming.

It is common for speakers to reframe risk issues into life world language, usually to diminish the risk element. One such occurrence, by no means the only one even among this current data set, was at the Bernie Malone debate in the speech by Patrick O'Reilly of Monsanto, where he dismissed the risk of gene transfer by saying that he likes to eat tomatoes but fortunately none of his children resemble a tomato as a result (repeating exactly an argument from a letter in the *Guardian*). This exemplifies a common debate tactic— diminishing an issue by reducing it to trivialities—but it also shows an interesting habit seen in the science-based speakers, who switch between system and life world voices as they consider appropriate.

Other examples of this can be seen in the Bernie Malone debate. One audience member challenging an assertion about viral promoters that occur in brassicas says 'but the concern you expressed was about the promoter. If what you say is true you shouldn't eat coleslaw'. At another point, one of the speakers (Armin Michner) states that 'we must stop demonising the technology. A nectarine is a GM peach.' In both cases, as above, the rhetoric moves from science and evidence to common sense, implying that any other conclusion is patently silly.

In the consultation debates in particular, there was a clear distinction between those who expressed faith in science and regulations and those who considered these elements open to challenge. The safety regulation debate, for example took place between those who said the regulations are tight so safety is ensured and those who wanted to look inside this claim and make points about the revolving door between industry and regulators, the understaffing of regulatory office or the potential for companies to mislead regulators. Similar debates took place over science: whether or not science could be taken as a system world and hence some kind of arbitrator for the issues.

There is a second aspect of the argumentation and persuasion process I want to discuss at this point: the claims about the credibility of the person doing the arguing. I have referred to this a number of times as challenges or supporting

claims regarding the credibility of a speaker or their argument are common. The debate events are a good context in which to develop this discussion.

Jonathan Potter (1996) presents an interesting discussion of credibility and claims centred on the concepts of stake and footing. These are devices that can be seen in texts and arguments when bias or legitimacy of a claim are at issue. The concept of *stake* relates to the interests or possible biases of a person making a claim, whereas *footing* is the claimed (or challenged) detachment of a speaker from their arguments or fact claims (see the discussion in Chapter 5 of the journalist's device of reporting someone else's statements as the story frame).

In argument or persuasion, these concepts are important because they can serve to either undermine or support the credibility of the speaker and their claim, as is argued even in Habermas' original discussions on communicative action. When a speaker presents an argument, they will very often want to assert that this argument is more than simply one person's opinion and that it is a fact, or at least the consensus view. This means asserting their qualification for making the argument, but at the same time avoiding the possible inference of bias on their part. Thus a balance is necessary. Stake in the sense of the qualification to speak on a issue can enhance a claim, whereas stake in the sense of interests can lead to a reduction in credibility. One can see responses to this dilemma in discourse. Potter (1996: 126,130) introduces the concepts of stake inoculation and stake confession as devices used by speakers to pre-empt bias challenges. Stake inoculation is the device of making claims that pre-emptively head off the charge of bias or ulterior motivation. This means saying something like 'I know I would say this but...' and then going on to argue that even though the speaker might be expected to take this position, the facts in themselves are so persuasive that that aspect is no longer relevant, and the listener too will be convinced by these facts. Stake confession —the construction that the speakers' argument is strong even when their stake is taken into account—is not dissimilar. This is obviously very pertinent to an issue where professional lobbyists play such a central role. One might expect that the claims of people paid to make such claims might be met with a certain scepticism, and so the claimant will need to pre-empt such a reaction.

Consider some examples from the GMO debate generally:

> I suppose this is a very biased view now but, it doesn't matter whether they're on our side or not, by just listening to what we have to say, they are quite swung over, generally, simply because there is so much information, and so much of it goes against the industry, like what are the opposing views?
> (Interview with activist)

> As a professional lobbyist, Declan O'Brien finds himself at odds with the stance adopted by the Government and the EU on rejecting hormone-treated beef from the US...Perhaps unsurprisingly, Mr O'Brien is also in favour of BST, a drug which increases milk yields in cattle.
> (Profile of Declan O'Brien, director of the Animal and Plant Health Association, *Irish Times*, August 20, 1999 'Putting affordable food on the table is priority.')

In the first quote, there is an almost reluctant admission of possible bias that is quickly counter-balanced with the assertion that the evidence on the speaker's side is overwhelming. In the second, the writer declares the lobbyist's interests up front, but in a kind of sarcastic manner that serves to minimise their relevance.

It is important to note that, according to my data, it has been very rare for speakers in the GMO debate to feel the need to resort to stake inoculation or stake confession, something which I think relates to the conflation of material and ideological interests, which I will discuss shortly.

The above examples are illustrative of where stake is tackled as a potential disadvantage because it shows possible bias. The other side of stake is the link between the speaker and the topic that gives them the right to speak, the qualification issue which Potter calls category entitlement (1996: 133). Being a member of a certain category might entitle a person to hold a view, or might give credibility to their knowledge, and so one might need to make a claim (or challenge) to such membership or to the right of such members to make the claims. For example:

...feels it is significant that 'more than 130 of Britain's food writers and chefs' have called for a ban on gene foods. This is as significant as 130 of Britain's top astrologers banding together to issue a statement about astronomy.
(John Brosnan, letters, *Observer*, 7 February 1999)

The writer is challenging the notion that membership of the food writer category entitles one to speak on the GMO issue. The astrology/astronomy analogy makes it clear that the writer believes it is for scientists to decide. This contrasts interestingly with a comment from an Irish Times editorial about Darina Allen's involvement in the debate:

A challenge from Darina Allen on the integrity of Irish food is one that the US company, Monsanto, may find difficult to overcome. She more than most captures 'the goodness of Irish food' and she has now articulated the concerns of so many consumers about genetically modified food.
(*Irish Times* editorial, February 11, 1998)

In this case, the argument is that it is the life world voice and its capacity to represent people that the entitlement is based on. As on many occasions, the dichotomy is about entitlement based on expertise versus entitlement based on representivity. Consider these examples from the debate events:

When did you last do an experiment or publish a paper?
(Audience member to Joe Cummins, Joe Cummins debate)

Food is my concern, not science. Having had a family, I know what goes in comes out.
(Audience member at Bernie Malone debate)

In the first example here, the challenge is to the person's membership of the category, specifically their membership of the qualified scientist group by implying they are somehow 'out of date' or peripheral. The second quote, which I cited earlier in the chapter, is an interesting example of a life world voice claiming that their qualification is their position in the life world; that this is the 'real' arena of importance rather than the abstract science discourse. The following is interesting as an example of a kind of reverse stake inoculation in the qualification sense:

> I'm not a plant molecular biologist, I'm an evolutionary geneticist. But I do know most of what Genetic Concern say to make the public swallow it is nonsense
> (from Joe Cummins debate)

In this case the speaker is admitting to a lack of qualifications, but implying that it is so self-evident that one doesn't need to be an expert to see that Genetic Concern is talking nonsense.

In the debate events, a speaker (meaning the invited speaker making a presentation) invariably has the status of expert in that forum because they are a speaker. In Stillorgan for example, a geneticist from Trinity was the authoritative speaker on the science of plant genetics and risks from GM foods, only to reveal during his speech that his field is in fact cattle genetics. By the same token, a teacher with a background in medical ethics was there to present the arguments related to the ethics of genetic manipulation of crops and foods. In all the debates, the speakers had authority because they were speakers and there was no discussion of their credentials, despite the fact that credentials and authority were common topics of the debates in relation to people who were not on the platform.

Potter also makes reference to Jayyusi's five criteria for judging category membership, what he calls 'incumbency criteria'. These criteria are whether people:

- look right for their category
- act right (speaking in an appropriately serious tone for instance)
- claim to be in the category
- have someone else claim membership for them, or
- show credentials (badges, documents)
  (Potter, 1996: 136)

An example of a person making their own incumbency claim is one of the NGO speakers at the national consultation debate, who started her speech on ethics with a statement of her academic qualifications in the area and the assertion that 'if anyone says I should know more about science, I say they should know more about ethics' (Consultation day 1). This was clearly a defensive comment presumably in anticipation of challenges about expertise and qualifications. More

generally, however, in the same way that speakers didn't tend to apologise for their position through stake inoculation, they didn't tend to assert their expert qualifications but rather who they represented. On the other hand, it was certainly very common for a speaker to claim the expert incumbency of someone they were citing in their arguments. This, I think, is similar to journalists detaching themselves from the material being presented, as discussed in Chapter 5, in order to imbue it with more the status of fact than opinion. Here, what we see is that the arguments of the speaker are valid not because of their own qualifications, but because of the qualifications of the source of their information.

One additional, and very interesting, aspect of the stake and interests issue is the notion of ideological versus material stake. Hjelmar (1996) makes this distinction to point out that in a debate between for example an NGO and a corporation, the corporation is defending a material interest whereas the NGO is not (necessarily) seeking financial gain, but rather the protection of a ideological or political objective. The interesting observation for the GMO debate is that the distinction between these types of interests matters less than one might predict. As I said earlier, one might expect paid lobbyists to suffer from a credibility problem, but in actuality this does not seem to have been the case in this debate. For the most part, interests were not disaggregated, for example:

> [the British Government] must act swiftly to set up an independent commission (and that means no industry representatives and no environmentalists) on the safety of GM foods.
> (*New Scientist*, Editorial, 20 February, 1999)

> So there you have it. You can either believe the world's most renowned plant breeder, with an incomparable track record, or you can believe the scaremongers, most of whom have a vested interest, commercial or political or both, and no qualifications in this area, or track record to speak of.
> (Tom Raferty, Letter to *Irish Times*, 12 May 1999)

This I think explains why stake inoculation and confession are rare; when all types of stake are the same then everyone is equally implicated. If someone with an material stake is seen as being no more 'tainted' by this stake than someone with an ideological interest, then everyone's credibility is the same. Ironically, in most

cases people trying to dissemble types of stake are doing so to de-legitimise ideological stake, arguing that ideological interests make one biased. In the Skibbereen debate, Jim Ryan of Bioresearch Ireland dismisses evidence about the flaws in safety trials because it is proffered by environmentalists, preferring instead to accept the word of industry. In the same vein, I will discuss in the next chapter the use of sources such as Technology Foresight, closely linked to material interests in biotechnology, as legitimate arbiters among the biased polar views of the NGOs and others.

Debate Events as Communication Events

Next, I want to examine what the debate events data set reveals about the audiences. Two particular issues are of interest. Firstly, the debate events offer a rare opportunity to evaluate just how close the debates on the GMO issue come to the ideal public sphere model of communicatively rational interactions. This type of examination is possible because I can observe speaking and listening at the same time and listen to audience responses to the main speakers. Secondly, I can further the discussion about the interactions of different storylines and discourses. Different speakers and various sections of the audiences who come to the events have a range of perspectives, value science in different ways, trust system or life world voices to different extents and, of course, have polar preconceptions of the merits of GE and the desired outcomes of the whole debate. The events thus offer an opportunity to see how this works in action and how it seems to affect practices and outcomes.

As I stated earlier, these debate events should in many ways be the closest to Habermas' ideal of the public sphere. However, central to this ideal model is the notion that people argue their cases, persuade each other through argument and reach a consensus on the basis of the 'best' arguments. These public events are the fora where debate and persuasion are meant to happen and consensus should be formed. However, my data strongly suggest that debate in this sense is not taking place. There is no evidence of real interaction or persuasion occurring, just routinised speech making with no-one moving from their positions. In particular, there seems to be a lot of talking, but little listening.

First of all, the format is not geared towards speakers convincing each other. Speakers invariably present their cases to the audience, in the form of written speeches covering a range of points that are essentially independent of the other speakers (with of course variations for different types of audience, meetings etc.). Speakers often do take up points made by other speakers at events, but even so it always seems clear that it is the audience that is the target of persuasion, not the other speakers. One element of the data that indicates that this persuasion process among the speakers is not taking place is the frequent incidence of repeated arguments. It is very frequent for a speaker to give virtually identical speeches at different events, using the same slides, the same content, often even the same jokes.

But the fact that the speakers are not trying to convince each other is not necessarily a major impediment to the events representing well-functioning public spheres. It is not surprising that the target of the speakers is the audience; they are the potential converts to the cause, and speakers take part in these events to gain access to people to persuade in the first place. So are these events good examples of speakers reaching audiences to persuade them?

The first point to make is that the total number of different people at any of these events is quite small. It is very common to see the same people at different events. In addition, the audiences are for the most part self-selecting, usually actively interested in the issue. So it is certainly not a debate process involving the broader general public. But perhaps this is inevitable in that people must always want to get involved in something, and it is arguably sufficient to involve what Beierle (1998) calls 'the active public'. In general the point I wish to make is that this set of public debate events doesn't constitute a large-scale national debate in itself. Despite claims that it was very contentious issue, at most a few hundred people ever attended a debate on the GMO issue. This is not to suggest that the debates are flawed in themselves in this regard, but that the notion of 'public opinion' being expressed and debated at these events has a weak foundation when one considers just what a small proportion of the 'public' is actually involved.

Secondly, in as far as my data allows me to understand the event audiences, there is no evidence of 'good' debate in the communicative action sense. Questions and comments from audience members across the debates are almost as repetitious and routinised as those of the speakers. Very many questions to speakers drew on

much wider information and themes than those spoken about in the event in question, thus revealing prior knowledge and interest on the part of the questioner. It is very likely that just about everyone in the event audiences had prior knowledge, and thus opinions, on the issue, and so were not there as blank canvasses to listen to two sides and weigh up the merits of the cases. This is compounded by the frequency with which unsubstantiated claims were made by various speakers, on all sides, and left unchallenged, as I will discuss further in the next chapter. Rhetoric was common and evidence for claims was rare. In other words, if anyone in the audiences was being persuaded by the speakers, this was happening on the basis of a very weak version of communicative rationality.

An interesting, related, aspect of the discussion, is the constant tendency for speakers in the events and elsewhere to claim representivity and the right to speak for the public more generally. Bourdieu mentions the role of the delegate as a common mechanism for the deployment of symbolic power in that it gives the speaker the opportunity to hide his or her own role in the discourse (Bourdieu, 1991: 209). It has been very common, for example, for a speaker to say something like 'these are the public concerns on the issue', or 'the following list covers what people are worried about' and so on. It was also very common for speakers to cite survey results, such as Eurobarometer or the opinion survey Genetic Concern commissioned in 1999, and there was always a statistic available to support any point of view. Speakers have been able to cite scientific survey evidence that people are worried, people are not worried, the more people know the more worried they become, the more people know the less they are worried or any other neat snapshot of the public's views on the issue. At the Bernie Malone debate, for example, three speakers in a row made their own assertions about public concerns and opinions. Patrick O'Reilly of Monsanto cited Eurobarometer to claim that the public are ignorant on the issue and also summed up the public's 'issues of concern'. Quentin Gargan then cited the Genetic Concern survey to illustrate the extent of peoples fears, and then Pat Wall summed up the public concerns through a long list of issues that they are worried about. All three speakers claimed the legitimacy and knowledge necessary to speak for the public or, at the very least, to present the public's position by proxy. In the same way, audience members with question or comments often made claims that they spoke for the public, by saying 'what people really want to know is...' or other similar comments.

Also worth noting is that even within these formats everyone tended to call for more debate, more information for the public and more participation in the process. Often it seemed as if people spent most of the their debating time calling for more debates. This is clearly part of a process of legitimising the events by establishing their importance in the whole debate. From my data, however, it is not at all clear that more events would particularly enhance the debate as a whole, either in terms of the scope of the audience reached or the quality of the arguments explored.

Storylines in Action

By discussing storylines in action, I attempt to focus more at the level of action; how rules get established, why they are followed, how storylines gets installed. When I introduced the discourse analysis approach of Marten Hajer earlier in the thesis, I mentioned that while his analysis serves as an excellent model of an *ex post facto* study of a discourse process, it is less useful in explaining exactly how certain discourses established themselves over others, in more action-based terms. How are story-lines, rules, discourses established, legitimised or challenged? Is it the chairperson of a debate event enforcing a storyline or doing something more subtle? How do people identify the dominant storyline, and why do they often accept it and work within it?

To discuss this, I find Pierre Bourdieu's theories of structure and agency most useful. I will not enter into the extensive discussion his ideas merit but will merely introduce some of his theoretical concepts in order to develop a framework for my own analysis. The first of these is the concept of *habitus*. Habitus, a disposition based on socialisation in early life, guides the individual in knowing how to act, knowing what to expect in various situations and, in essence, to 'knowing their place'. The concept is not entirely dissimilar to Layder's (1997) concept of psychobiography, a mixture of 'internal' factors, early life experiences and career influences:

> The dispositions of habitus predispose actors to select forms of conduct that are most likely to succeed in light of their resources and past experience. Habitus orients action according to anticipated consequences (Swartz, 1997: 106).

Habitus is a means by which 'structures' are reproduced, and is related in particular to the reproduction of class. Through people's understanding of the practices they see around them:

> competent performances are produced on a routine basis, in the process of which objective meaning is reproduced... it is a way of producing social practices and a way of perceiving and appreciating practices
> (May, 1996: 127)

But of course the 'rules' vary in different situations, and habitus must be seen in relation to the second concept I want to introduce—the *field*. Simply put, fields are social spaces where social activity takes place. In a field, a particular set of practices, or 'rules', pertains:

> different fields, like different games, require different skills, dispositions and resources from their participants. In this way they both shape habitus and elicit and constrain the actions which issue forth from them
> (Crossley, 1999: 650)

A person's habitus, formed from past experiences, in particular early life experiences, shapes their understanding of a given situation and guides their own actions in that situation. This process is field dependent, and within a field it is the implicit, invisible acceptance of 'rules' that legitimise them and guide behaviour in the field. Across fields there are homologies at work, i.e. similarities between fields that guide action in unfamiliar fields and assist the reproduction process.

Debate events can take place through different discourses, with actors from different fields, such as the science community or NGO activists, but there are also many overlaps. Participants come to an event and interpret the rules through their habitus. For the most part, rules are accepted and reproduced, but sometimes they are challenged. This theory is an action-oriented version of Hajer's story lines concept. At the centre of this is power and the question of how power acts.

In a similar vein to some of my comments on Foucault's ideas of power in Chapter 2, and in particular the assertion that power needs a life world, Bourdieu's concept of symbolic power adds considerable understanding to the practice of discourse and storyline transmission and their power implications. Symbolic power is the

'power of constituting the given through utterances' (Bourdieu, 1991: 170), i.e. transmitting norms, storylines etc. Importantly, symbolic power depends on the complicity of those on whom it is exercised, not in a constrained way but in an active, if not conscious, way through practices and language, through habitus. It is this that Bourdieu calls symbolic violence: the application of symbolic power in a way that imposes norms, hierarchies and discourses in a manner that is not seen as explicit domination but that happens through reproduction, or indeed challenging, of dispositions and language (1991: 51). I think this offers a clear link between symbolic power and symbolic violence and my discussions of storylines and specialist discourses. Indeed, Bourdieu asserts that power seen in interactions should not be seen as existing only there: a link to structural power is fundamental and essential (1991: 167).

My interest in this element of the data came from bottom-up coding of the debate observation notes. Firstly, I was seeing very smooth processes where tones for events seemed to be set from the start with little need for explication. Then occasionally I was seeing instances of where people's perceptions of the rules seem to jar, where a question from an audience member would strike me a 'not appropriate' to this event. This seemed to happen most often when I perceived that 'different audiences' were meeting each other, say academic scientists meeting local activists. I would now like to explore these observations in more detail.

First of all, how were discourses established at each event? Obviously it would be an oversimplification to say everyone agreed on a very specific and precise discourse through which an event would take place—it would be wrong even to suggest that everyone's understanding of the pertinent discourses would be exactly the same. However, the organisers of each event did have significant power to situate their event in a particular discourse. Bernie Malone's identity as an MEP would have guided the setting of her event before she even selected her speakers and audience, but these choices reinforced the placing of the event in a political discussion field. On the other hand, the fact that her audience was quite wide ranging led to different discourses impinging. Very few members of the audience, for example, saw themselves as operating in the same discourse as the speaker from the Socialist group in the European Parliament, and his desire to talk about the Socialists' successes in guiding legislation was of little interest to most present. The fact that a number of supermarkets and consumer groups were represented certainly guided the event into a discourse of consumer issues, and this sat more

comfortably with those present who saw themselves simply as consumers of food, or shoppers or mothers. Similar comments could be made about other events. The setting, agenda and audience for the Skibbereen event certainly guided the discourse there, one in which participants such as the Bio Research Ireland speaker did not fit entirely comfortably. The Ormonde debate with Joe Cummins should have been a discussion among like minded NGO people from very similar discourse approaches until it was intruded upon by 'outsiders' who, through their lack of willingness to accept the storyline in place, changed the tone quite considerably.

One interesting point about the Bernie Malone debate is that, more than in other debate events, the audience was particularly empowered in that it was a high-level group of well-educated people used to taking part in debates and many people were there to formally represent their constituencies and thus keen to speak out. We saw several examples of audience members trying to steer the discourse:

> Patrick Wall had 12 concerns, but people today have only been talking science. But people have broader concerns, how do you address it?
>
> I'd like to hear Monsanto specifically address Quentin Gargan's points.
>
> Food is my concern, not science.
> (Audience comments from Bernie Malone's debate)

The audience in the Skibbereen debate were as confident in their willingness to try to steer the debate towards their preferred discourses for precisely the opposite reasons than in the Bernie Malone debate. The latter was a high-level group of professionals, many of whom spent half of their lives at such debates and discussions, and this gave them the confidence to try to assert their own discourses despite the tendency of the chair and speakers to concentrate on science. With the Skibbereen audience, most seemed not at all used to attending formal debates, and I have already mentioned that many children were present and that the event had a much more informal air. And it was certainly the 'rowdiest' of the events discussed here in terms of audience murmurs and interjections (leaving aside the specific controversies of the Ormonde debate). The audience frequently applauded comments it liked or jeered comments it did not, and many audience members did not stand on ceremony in their accusations of bias, ignorance or

other forms of wrongness. I recorded many audience comments here that I could not imagine being uttered at the other events, for example:

> This debate is full of knowledge, but there's an absence of wisdom... I want to give you advice [to Brian Crowley, MEP] , use your heart, and be a better man and a better politician.
>
> Its frustrating to hear all this debate because everyone knows in their guts this is wrong, but companies and governments won't listen. We have to go out and do something. I'd be interested in talking to people about direct action.
>
> Animals are suffering now and that's really sad, because its against mother's nature (sic) is there anything we can do now, we should make it a law now, its awful.
> (Audience comments from Skibbereen debate)

Telling a politician to use his heart and be a better man and openly calling for direct action (i.e. crop sabotage) are not typical comments in 'formal' debate events, and it was because the audience were not used to such 'formal' events that this event went the way it did in discourse terms. Similar occurrences could be seen in the Saturday evening debate. Of the four panellists, three were scientists to doctoral level, and two of the three certainly were used to taking part in debates on this topic. The fourth speaker was a food writer, but her speech, tightly written, covered a fairly normal range within the overall topic. One might have expected the discussions to follow a particular line with this homogeneity among the speakers. But consider the range of questions the audience put to the panel, as set out earlier in this chapter: questions touched on issues from safety testing procedures, research funding and food quality to issues such as out and out anger against big business and a discussion on the benefits of a famine diet. Clearly the audience did not accept the discourse the panel might have preferred. Indeed, as I have mentioned several questioners referred to the 'two scientists' on the panel supporting GMOs and were not able to accept that an anti-GMO speaker could reside in a science field. Also interestingly, the NGO discourse allows accusations of corruption or dishonesty against companies such as Monsanto, whereas a science or regulatory discourse would not allow this. Speakers from the latter fields

were not open to discussions on dishonesty questions even when NGO speakers or other questioners raised them.

With the highest proportion of 'non-committed' audience members, the Stillorgan debate might have been in some ways the closest in the data set to Habermas' ideal public sphere event, people listening to arguments in a relatively open manner and not necessarily there to support an already determined position. However, it is difficult to interrogate the data in this regard, since the discussion part of the event was quite short, and I was not able to talk to many of the audience afterwards. It certainly seemed to me that the audience was more 'reserved' here than at the other events, but even so it was clear that many people were already firmly against GMOs (with a few people also firmly in favour).

If participants from different fields meet there will be a meeting of different discourses and to some degree a competition to see which discourse holds sway at this meeting point. It is interesting to see from the previous paragraphs that both speakers and audience can contribute to the setting of the discourse, demonstrating that the power of organising the event is not total. The national consultation debates are interesting in this regard, because (see next chapter for a discussion) the organisers found it very difficult to maintain control during the debates but managed to recover it in the final outcome documents. I see two main reasons for their difficulties. One is simply that the chairperson was not well enough informed on the issues to maintain control: more than once he seemed to flounder on what was meant to be happening, what was the range of the debate and other such matters. Over the course of the days the lack of control grew as the audience perceived the weakness of the chairing panel and sought to guide the events towards what they wanted or to guide them back toward the topics they expected if they perceived 'drift'. So the chairing panel did not capitalise on all the power that was available to them due to their position, and this certainly left a gap.

But the second, possibly more interesting reason, for the scattered nature of the events relates to the wide range of habitus of the participants and the varying perceptions on what discourse was in operation. Participants had very different views on what a consultation debate 'should be', and this guided their behaviour. Many audience members clearly felt this was an occasion for voicing all of their concerns and frustrations and did not feel bound by the nominal scope of the debate. Many members of the audience who were scientists clearly felt, and

demonstrated, annoyance with people who did not express themselves precisely or scientifically (in fact one might suggest there was a system and life world voices distinction in operation). Most of the speakers treated the event much like other seminars, delivering tightly prepared speeches and preparing themselves to take up arguments from others, i.e. a more classic debate model. The problem, to a degree, was that the whole concept of such a consultation was so novel that no-one was entirely clear what field or discourse it belonged to. When the chair didn't use his power to resolve the debate, a power struggle ensued among audience members to fix the discourse. This was never really resolved, and that is why it seemed at times as if parallel discussions were taking place. The chairing panel did use their power to define the discourse when they wrote their report.

Conclusions

Debate events are an important part of the data set in that they have been a forum for much argumentation and interaction of the protagonists in the debate. I have used this data as text to illuminate important aspects of the debate processes such as credibility and legitimacy claims, the operation of system and life world voices and the installation of discourses or knowledges as steering media or special arbitrators in the debate. All of these elements have power aspects that deviate from an ideal speech situation model of debate and persuasion. Different discourses will value different types of credibility claim, or assertion of qualifications differently or will treat interests in different ways. What I have shown in this chapter is that these kinds of effects are not necessarily the result of either structures or the subjective action of participants. This is the notion of habitus: that the careers and understandings of the participants will shape any new situation, i.e. that a unique intersubjective space will be created (Crossley, 1996), guided by the habitus of the people there. As Foucault argues, power operates at the intersubjective level, and it acts on actions (Crossley, 1996: 136).

The reason why looking at habitus as the means to mediation of debates is significant is because it is very fundamental—more fundamental than Habermas' notion of power as a subjectively applied resource or a corrupter of ideal communication. The evidence presented in this chapter supports my argument that this ideal ignores the inevitable multiplicity of discourses and the inevitably of power dynamics and hierarchies among them. A discourse cannot be power-free since, in

a world of multiple discourse and rationalities and a clear link between discourse-as-talk and (structural) power, relativities will always exist, and therefore strategies will always emerge in the struggle for influence. The debate events are particularly useful in illuminating this, since they very often involve a mixture of discourses, with different habitus and fields coming together. In each case, the balance of the various influences on the discourse will be different, and may even be different within various components of the same event or process. This point is of particular relevance to the next, and final, data chapter.

More than other communication channels such as the media, leaflets or other publications, debate events are directly interactive. Observing how the audiences behaved and what they said at the debate events has allowed me to consider the processes of discourses and intermingling in an action oriented way. More than more direct elements such as the power of the chairperson, habitus is seen to be the link between what happens in action and structural power. What makes the whole GMO debate so interesting is the intersection of so many different constituencies and interests, i.e. of different discourses, and how this has worked out in practice. Efforts to accommodate consultation and enhanced democracy in an expert-oriented system will lead to many such occurrences, and how they are handled will be a key element in success or failure.

CHAPTER 7 THE NATIONAL CONSULTATION PROCESS

Introduction

This chapter looks in detail at the national consultation process on GMOs, which was conducted by the Department of the Environment and Local Government (DELG) in 1998 and 1999. The process entailed the publication of an initial discussion document inviting written responses, then two days of oral debate leading to a report by a four person panel appointed by the Minister. The Minister also issued his own policy statement at the same time he released the panel's report.

This chapter describes the entire consultation process and then discusses a number of the more interesting and pertinent aspects in greater detail, linking the discussion to the main theoretical themes of the overall thesis. The data set for the chapter includes a large number of documents: the official documents, written submissions, and newspaper coverage; data from interviews with organisers and participants; and my observation notes taken at the consultation days themselves.

The chapter begins by establishing context through a brief review of the state of play regarding consultation and public involvement in Ireland. The full story of the consultation process is then presented followed by a discussion on various aspects of the process and the theoretical issues that arise from it.

Many subjective perceptions exist on the GMO consultation process, including that of my own direct observations. To these I am able to add the discourse of the texts, the institutional and social context, the media reportage, and the very valuable process of collating these various perspectives into one analysis. The result is, hopefully, a fuller revelation of the detailed dynamics and effects of the process and, most particularly, a revelation of the power dynamics working through it all.

The Context for Environmental Consultation in Ireland

Before presenting the details of the consultation process itself, it is useful to set the scene by looking at the history of similar processes previously conducted in Ireland. There has been a significant increase in the use by government of public consultations of all kinds in recent years. Examples include the National Crime Forum of 1999, and an ongoing consultative review of abortion policy. Environmental issues have received particular attention, with major policy consultations taking place through forums such as the Irish National Recycling Conference of 1993, or the National Environment Partnership Forum of 1998. As well as event oriented consultation processes, there has also been an increased emphasis on public participation through entities such as Area Based Partnerships and Local Authority Strategic Policy Committees (Broderick, 1999).

There are various interpretations of how genuine these processes have been, in Dryzek's (1996) terminology how much *authenticity* is involved. Broderick (1999) challenges the authenticity of many recent participation exercises, and points out their role in not only co-opting NGOs and other actors into policy decisions, but also in serving to stretch the resources of these actors to participate credibly, thus damaging their ability to carry out other activities. Skillington also views these exercises with scepticism, and interprets them as lip-service to participatory themes by actors who remain rooted in 'a structural system that is non-participative at heart' (Skillington, 1997: 510).

As well as these larger scale, generally more nationally focused, exercises, there have been a number of more local and specific public events on environment themes, such as planning appeals and oral hearings on specific developments (chemical factories for example). A number of analyses of these events have been undertaken (see for example Peace, 1993, Taylor, 1998a, and Keohane, 1998). The general consensus is that these hearings have not been successful in achieving genuine consensual participation and decision making, and have tended to disempower local actors in favour of state and economic interests.

Of course, in many ways the GMO consultation is without precedent, being the first time any environmental issue was presented for such a broad consultation, nominally open to everyone, with the specific objective of informing policy, specifically amending Directive 90/220. In format the process was also unique,

inviting interests to meet together, present their cases, and allow a general discussion, all with the aim of allowing a panel to draw policy oriented conclusions[10]. Most participants would not have been at any such event before, and would have come with many different expectations.

A number of the NGO actors would have experience, or at least awareness, of some of the environmental participatory events mentioned above (see for example Watson et al, 1997). This would have engendered some scepticism among these actors, and generally the position of the NGO actors at the start of the consultation was one of suspended cynicism (Interviews with activists).

On the other hand, any experience possessed by actors such as civil servants, and indeed the panel members, would tend towards the larger processes, or more legalistic hearings. Indeed, the word 'evidence' was often used by both the organisers and the panel to describe the arguments they were listening to and hence by clear implication 'adjudicating' on.

So there was a wide range of perspectives and expectations going in to the consultation process, based on various different types of background and experience. I will refer to such expectations later in the chapter when I discuss equivalent subjective perceptions on how the process went. Before such discussions, I wish to present a fairly detailed narrative of the consultation process itself, focusing mostly on the two days of oral debate.

The GMO Consultation Process

The whole story of the consultation on GMOs starts with the election pledge made by Noel Dempsey of Fianna Fáil while in opposition, before the general election that eventually made him Minister for the Environment. This pledge was to introduce a full moratorium on GMO commercial releases until more was understood about their environmental impact. However, the commitment was not kept in government, and instead interested parties encountered virtual silence from the election in June 1997 to the announcement of a consultation process in August

[10] This is also important in that the organisers had no experience of organising such events, nor did they recruit any expert support

1998. In this period, pressure had been building on the issues, with much media coverage, reporting the political events taking place in the UK and more widely, presenting the arguments of Genetic Concern and others opposed to the technology, and monitoring the growing 'public disquiet' on the issue. The consultation process was thus announced, and presented as 'a step in fulfilling a commitment by the Minister to review national policy following a full and open public debate in which all interests, including the biotechnology sector and the general public, will have an opportunity to participate and make their positions known' (DELG Press Release, 24 August 1998).

This context has relevance to a discussion on the expectations of participants. The explicit linking of the process to decisions on national policy raised the stakes, and certainly played a part in persuading the NGOs to take part in spite of their scepticism. I will also argue later on that the expectation of an opportunity to influence policy affected the style of debate that took place, tending to cause actors to present entrenched positions aimed at 'winning' the debate rather than seeking compromise or consensus.

The Consultation Document

A consultation paper entitled 'Genetically Modified Organisms and the Environment' was issued in August 1998. The Minister for the Environment launched it, saying:

> The purposes of the consultation paper, and the public debate which it is intended to stimulate, are to explain the regulatory process and the proposal to amend the deliberate release directive, identify the key issues of concern and establish the views of all interests, including the general public, non-governmental environmental organisations, and the biotechnology, industry, health care and agriculture sectors. On foot of this consultation process, the Minister for the Environment and Local Government will review national policy and practice to date in the specific area of his remit, i.e. potential risks to the environment arising from the deliberate release of GMOs
> (DELG Press Release, 24 August 1998)

It can be seen in the above passage that no specific commitment is made to take any comments or submissions on board in the policy making process, and that a strong role for explaining issues as well as listening to positions is declared. These points will come up in the analysis later in the chapter.

The other point of particular interest in the above paragraph is the specific bounding of the debate to environmental issues, which are the remit of the Minister. This shows that it was never the case that this process was meant to be a complete discussion on all aspects of the issues, although it was clear from the start that it was going to be the only consultation process on the issue.

The consultation discussion document mentions the following issues as those up for discussion:

Scientific/Technical issues	**Transparency/Public information issues:**
Antibiotic resistant marker genes	Labelling
Herbicide tolerant plants	Monitoring
Bt toxin issues	Public consultation
Toxicological and allergenic issues	Comitology procedure

(adapted from DELG, 1998)

Nominally, the consultation is closely linked to Directive 90/220 and its amendment, and this should define the range of the debate. However, this range is not adhered to consistently. Under the 'Scientific and Technical' issues, the usual concerns which have been raised about antibiotic resistant marker genes are mentioned, such as the possibility of compromising antibiotics for human use and the possible transfer of resistance to pathogens. It is interesting that all of the key points about herbicide tolerant plants are discussed, given that the EPA have stated that they do not consider these issues to fall under the remit of Directive 90/220 (Interview with official). Regarding Bt toxin, concerns mentioned include the possibility of insects developing resistance, and the 'possible effects related to the expression of Bt toxins in all parts of genetically modified plants' (DELG, 1998: 41). Toxicological and allergenicity issues relate to the risks of inserted genes possessing toxic or allergenic properties. So it can be seen that the normal range of environmental and

safety issues are mentioned. In all cases the discussion is framed in terms of concerns which have been advanced, and the sense of putting them on the agenda for discussion as opposed to imbuing them with any degree of legitimacy as such.

'Transparency and Public Information' issues are considered to cover labelling, monitoring of products on the market, public consultation on marketing notifications, and criticism of the comitology of Article 21 such that a product may be approved even if it 'does not have the support of a majority of member states' (DELG, 1998: 49). This particular issue would seem to be a specific concern of DELG themselves (there had been problems over it in some of the 90/220 votes), since there has been no public discussion on the issue, either before or since. It did not come up during the consultation process. Some of the difficulties in identifying and classifying the issues involved can be related to my comments in the Introduction chapter on the ongoing confusion over the distinction between technical and political issues.

Overall the tone of the document is fairly favourable towards GMOs, with the usual caveats about precaution, safety, and choice. It was certainly very different to the language of the Fianna Fail statement promising a moratorium. What had once been:

> We believe...that it is wise to be conservative and put safety first. The rush to market with genetically modified foods is unscientific, unseemly and premature. Prevention is wise because cure is impossible. Genetically modified organisms once released can never be recalled. Fianna Fáil supports a moratorium on the release of genetically modified organisms into the environment and on the marketing of any foods which contain any genetically modified ingredient, or which was produced using any genetically modified organism.
> (Fianna Fáil, Press Release, 26 April, 1997).

was now:

> Genetically modified products undergo rigorous research and assessment procedures before they can be approved for release into the environment for use in the production of food and animal feeds.

and:

> Ireland is well placed to compete strongly in this sector
> (DELG, 1998: ii, xi)

Critics were quick to draw attention to what they saw was the narrow focus of the consultation discussion document. It was considered by many to be overly technical, with insufficient focus on issues such as ethics, economics and politics. For example the NGO Friends of the Irish Environment argued that 'the paper fails to address ethical issues. It is vital that the serious issues of ecological and social ethics raised by genetic engineering be properly addressed in formulating policy' (FIE,1998).

The consultation document elicited about 200 written responses. Some were short letters stating a basic position, some were lengthy documents that had obviously taken some time to prepare (Interview with official). Genetic Concern, for example, took a decision to invest considerable effort in their submission to stake out their position very broadly and in much detail (Interview with activist).

Preparing for the Debates

Various delays occurred after the end of the submission stage of the process, but eventually the details of the rest of the process were announced. Two days of oral debate were to take place, and those who made written submissions would be invited to attend, along with representatives of various interested constituencies. Originally the proposal was for eight speakers from 'interest groups', four groups of two each from industry, NGOs, academia, and government. A panel appointed by the Minister was to hear all the arguments and draw up a report with policy recommendations. The aim was to complete the entire process in time to inform the minister in the negotiations on the amendment of Directive 90/220, scheduled for the June EU Council of Ministers. The NGOs objected to this format, and initially withdrew from the process. They were critical of the chosen format, calling instead

for a consensus conference[11]. They were also strongly critical of the confined agenda (*Irish Times*, 11 March 1999; *Irish Times*, 16 April 1999). Negotiation took place on the details, with DELG seeming to show considerable flexibility in their desire to ensure that the process took place with all participating. The Minister made concessions on the format, and the proposal was reformulated with no government speakers and four slots for the NGOs. The NGOs returned to the process, albeit still declaring their reservations.

The panel appointed by the Minister to draw conclusions from the consultation consisted of:

- Mr Turlough O'Donnell QC, a member of the Law Reform Commission and a former Lord Justice of Appeal in Northern Ireland.
- Prof Dervilla Donnelly, emeritus professor of chemistry at UCD
- Mr Sean Cromien, former secretary of the Department of Finance (the fact that he was a 'keen ornithologist' was oft-quoted)
- Ms Evelyn Owens, chairwoman of the National Centre for Partnership and former chairwoman of the Labour Court.

The NGOs did complain that the panel was made up entirely of 'establishment' figures, but the Minister held firm, and the panel membership remained as proposed.

Finally, at the end of April, the dates for the debate days were announced. The role of the sessions in closing the debate were clearly signalled:

> The debate will conclude the Minister's consultation process on GMOs & the environment.
> (DELG Press Release, 20 April 1999)

It is worth mentioning how the actual selection of speakers operated. For the business lobby, coherence was relatively easy, since virtually all parties were involved in the Irish biotech lobby group, the Irish Bioindustries Association (connected to IBEC), and others were invited to discussions (Interview with

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[11] Many people have called at many points for a consensus conference, usually saying that one such as took place in Norway should be undertaken. It has never been clear that everyone fully understood the details of this format, or in particular what was reputed to be so good about the Norway model.

company representative). So through this forum they could discuss their approach, select speakers, and develop their positions. The speakers considered themselves as representatives for the broad industry group. Much the same was true for the NGO group, since most were already in close contact with each other, it was fairly easy to convene a meeting and develop a common approach.

Things were quite different, however, for the academic group. For one thing, the definition of this grouping was loose[12]. For the most part, it was genetic scientists, with a couple of others. No meeting or general discussion took place. Some emails were exchanged across the list of addresses furnished by DELG, and from this two people nominated themselves, others sent emails supporting them, no-one objected, and thus they were selected. After this, no formal group discussions took place, and the two speakers essentially went about developing their arguments on their own, with no attempt to collate the positions of their group or to achieve any kind of formal representation. So even if it wasn't perfect democracy, the business and NGO speakers did at least represent somebody, and presented arguments based on collating positions and information. The academic speakers, on the other hand, had no claim to representation, they simply presented two individual positions, both strongly pro-GM. This issue becomes significant later on when it is seen how influential they were in the process.

The First Consultation Day

I will present the events of the two consultation days in some detail, based largely on my own observation notes, supported by points from media coverage, and interviews and discussions with other participants. The days, Tuesday May 25th and Thursday June 3rd, 1999, took place in a hotel in the north Dublin suburbs, with a shuttle bus provided between train stations and the venue.

On the first day, people arrive and assemble, many know each other and chat amiably. There is a considerable media presence, with many radio and television interviews being recorded outside before the proceedings commence. People then

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[12] As an example, I myself was not included, while another researcher in a very similar position was. Other such anomalies also existed.

assemble in the room for the debate. There are probably about 120 present, including some media observers seated around the edge of the room.

The day starts with some formal welcomes and speeches from DELG officials and from the Minister for the Environment. The Minister states that his aim is 'balanced and robust policy making' and that the values underpinning this are the precautionary principle, maximum transparency, and full information. He discusses the Fianna Fáil pledge on a moratorium and states that when he came to power he was informed that such a move would be illegal, and this is why action was not taken. He also cites recent reports by FSAI and the Technology Foresight panel supporting GM technology (I will mention the role of these reports again). Finally, he states that he is hoping that the session will be based on 'open discussion', as opposed to 'advocacy'.

The chair of the panel then takes over, talking in terms of a 'historic attempt to bring democracy to the people'. There is also a, rather dry, speech from the principal officer of DELG describing the background and aims of the process. The chair then starts the session, but it is not clear that he is fully aware of the details of the process and how it is going to work. The organiser from DELG is always in the background keeping an eye on things.

The first speakers are those representing industry[13]. The first speaker starts by welcoming the whole event and hoping that it will be informed by 'sound scientific argument', a clear attempt by a particular actor to install a particular discourse for the debate. He talks about scaremongering in the media, downplaying the fears surrounding the issue and stating that 'all new technology makes people nervous'. He gives some background on biotechnology, talking of the possible applications, stating that millions of acres are currently planted without problems, and that biotechnology is important for Ireland since it is knowledge intensive (like information technology), and is key to many Irish sectors, such as food. These arguments appear frequently in many debates, and I will not dwell on them here.

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[13] The two speakers have obviously prepared their presentations together; they work together setting up their laptop, and many of the slides of the first speaker are those that have been used by the second speaker at other events.

The second industry speaker follows a similar approach, concentrating on four themes; environmental safety, benefits vs. risks, access to biotechnology, and public trust and confidence, including a call for an new information agency to interpret everything for the public.

The next speakers are the four NGO representatives. The first speaks on ethics, beginning with the stark declaration that they know a lot about ethics and if anyone says they should know more about the science of the issue they reply that they should know more about the ethics. The presentation is quite an academic piece on technology and ethics, with many quotes from ethicists and philosophers. The speaker claims that biotech is based on philosophies such as profit motive and reductionism, and that a shift to organic agriculture should be the thrust of future policy.

The second speaker, a TCD academic, declares himself to be an 'ecocentric scientist' who is 'well qualified' to talk about pollen issues (note that the first two NGO speakers both represent rare examples of a self-claim to expertise category entitlement as discussed in Chapter 6). His presentation, on biodiversity, is certainly less polished than those of the industry speakers, but the thrust is that further development of modern agriculture will be very bad for biodiversity, and that we will end up with all our flora and fauna recorded digitally and viewed on video screens.

A coffee break takes place after this speech. Generally so far the meeting has been fairly chaotic and the chairing has been quite vague. After a coffee break, the third NGO speaker, the main Genetic Concern spokesperson, gives a presentation on the concept of Ireland as a GMO-free zone, and also challenges the way the research is currently done. On the first issue, he talks of the great potential of going organic nationally and argues that Ireland should market itself as a GMO-free zone for commercial reasons (this was also the thrust of Genetic Concern's written submission, which was entitled 'Ireland a GMO-free Zone: Niche Markets and a positive alternative').

On the second issue, he argues that regulators assessing safety of new products tend to just read the documents sent in by industry in their applications, as opposed to carrying out any independent tests, but there are many recorded incidences of breaches of protocols, flaws in data, and even deliberate misleading. Thus the

regulation is weak because it is based on trust that is not merited (a life world voice challenge to system world voice claims for the instrumental rationality of the regulation system).

The speaker also directly addresses the minister's statement that a moratorium was not legally possible, arguing that many other states in the EU are doing so, and putting it in terms of having the courage to fight for the issue.

The final NGO speaker is a representative from the NGO VOICE, who talks about risk issues, stating that the consequences of something going wrong are huge, arguing that substantial equivalence does not hold, and raising a number of risk related concerns. A group of people sitting near me, scientists from one of the main universities, have by now taken to scoffing to each other at arguments they don't favour and generally acting dismissively towards the anti-GMO speakers.

The final presentations are from the two academic speakers. The first states that the regulations for biotechnology are good, and that he has faith in the EPA in their regulatory role, i.e. makes the system world voice counter claim on regulations. His main presentation starts with background on the science of genes and the techniques of modification. He argues that we have always interfered with nature, and the overall thrust is that there is nothing to be afraid of once you understand the issues. He suggests that there are lots of potential benefits, and makes some points on the ethical aspect. He also suggests that organic agriculture is no panacea, and that there is evidence to suggest that there are 'killer bugs lurking' in organic vegetables[14]. His final conclusion is that more biotech education is needed so that people can make up their own minds about the issue.

The second academic speaker makes broadly similar points, arguing that biotech can make an environmentally sustainable world, and that it is well regulated and has a good history. At this point all of the speakers have presented their positions. No particularly new arguments have come up, and more or less all the main elements have been raised. The range has been a little wider than environment,

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[14] This claim circulated among pro-GMO commentators for a period, the origin being revealed as a dubious analysis by the right-wing lobby group, the Hudson Institute, see 'The scare campaign against organic food is a stunt too far', *Guardian Weekend*, 16 October 1999.

but everything has really only been mentioned, as opposed to discussed or debated.

The chair then states that the panel's aim is to determine the agenda for the second day by agreeing on four topics for fuller discussion. Members of the audience are invited to suggest what these topics should be, or to raise issues with the speakers. It is not clear that many people were aware of this format (no-one I spoke to was), and there is certainly some confusion about how it is going to work, and what exactly the process of selecting four topics will mean.

Many audience members are keen to say something. Some points are raised with the speakers and responses made. Mostly, people want to make their point, state their position. As this proceeds, the chair repeatedly tries to get people to state their suggested four issues for discussion and no more, i.e. he will interrupt someone and effectively say 'we don't want the details, just name your four topics'. There is much ongoing confusion about this distinction between simply naming topics as opposed to engaging in substantive discussion.

Over the course of the session I count nearly forty different people saying something, representing a wide range of perspectives and positions. Mostly though, people are just making statements, no real discussion takes place.

A few particular events are worth mentioning:

- One of the earliest speakers from the floor is a representative of an animal welfare NGO wishing to raise the issue of animal suffering associated with genetic engineering. The chair immediately responds by saying this is outside the scope of the discussion, despite the speaker pointing out that Directive 90/220 covers this issue. The chair is obviously not familiar with the details of the directive. After lunch, the chair states that he has been informed that the animal welfare issue is within their terms, and allows the NGO representative to make their point. This is not the only time during the day that the panel gives the impression of not being fully in touch with the issues under debate.

- One particular audience member says that the meeting should address every aspect of the GM issue, not just environment, since this forum will be

the only chance to do so. The panel chair responds that they don't want to stifle anyone, and that everyone can make their point. Consistency in the terms of reference is lacking, although as I will discuss later allowing all topics to be raised does not automatically mean they will be considered in the final report.

- When one of the NGO speakers takes up the tryptophan story, which I have outlined elsewhere, there is much unrest among some of the audience, with lots of 'tut tuts', interjections, and one of the group of scientists near me saying 'shameless'. This is one of the clearest examples of the 'pro-science' constituency showing an unwillingness to listen to certain arguments they consider invalid.

Over the day there is much point making, little discussion, and considerable confusion. As the day goes on, some contributors do get the chair's message and simply stand up, mention four topics, and sit down, but many others make longer points. The representative speakers occasionally take up points from the floor, but many points made are left un-addressed. It is notable how difficult the chair finds it to direct the content of the debate towards his issue-raising objective.

At the end of the day, the chair thanks everyone, particularly 'you the non-experts' in the audience, and says that the day has been open and civilised. He says that a lot of issues have been raised, and that their hope of seeing a clear consensus on four topics has not worked out, so the panel will have to discuss the issue and choose these topics. Everyone will be contacted soon with the agenda for the second day.

The Second Consultation Day

On the Monday after the first day, participants received the agenda for the second day by post (the speakers had received it on the Friday). The agenda for the Thursday session was entitled 'Balancing environmental and economic concerns' and set out four topics for discussion on the day:

- Environment (safety, ethical issues, impacts on biodiversity)

- Economy (commercialisation of science and technology, economic growth potential)
- Procedures and Processes (risk assessment, proportionality, including moratorium issue, EU and national regulation)
- Information and Education (consumer choice, transparency and labelling, advice and consultation)

The first thing to note is how wide this agenda is, certainly much wider than the original consultation document, and indeed comments from the Minister, would have implied the debate could be. The environment, supposedly the extent of the remit of the process, is now officially just one of the four topics for the debate. So the debate seems to have opened up. But the next point to note is that each speaker is allocated just five minutes for each topic. A speaker must present their arguments for example on all aspects of risk assessment, proportionality, a potential moratorium, and EU and national regulation, in five minutes. This is supposedly the basis for a thorough and comprehensive debate leading to policy conclusions. Earlier I mentioned the importance of the subjective perceptions of actors, and this is a good example of how such actors can become sceptical about the process. When people saw how much material was to be covered in these five minute speeches, many became suspicious of the integrity of the whole process; it is difficult not to become sceptical of the value being placed on your arguments when you are given so little time to present so much.

It is also interesting to note that the concept of a moratorium is indeed on the agenda. This is despite the NGO claims that the Minister ruled it out in his opening remarks. But, in connection with a discussion I will expand on later in the chapter, the fact that an issue is on the agenda for discussion does not automatically mean that it is up for consideration by the panel and the minister.

The stated aim of Day 1 was to measure the range of issues involved and select four key topics for fuller discussion on the second day. Instead the narrowing process was very slight, with a wide range of issues left on the agenda. The NGOs were not happy with this result. One leading NGO member commented afterwards:

> We went into it with good faith, we worked very hard on our submission. Day 1 was so chaotic but I thought they must have some secret way to do it. The agenda came very late and was so wide, it was an insult
> (Interview with activist)

The day before the second consultation session, the NGOs held a press conference to say that they had met to consider the agenda and had decided to withdraw completely from the process in protest, mainly on two points; that the debate for the second day was far too wide and couldn't be addressed properly, and that the Minister had effectively ruled out a moratorium in his opening remarks on Day 1, thus undermining the whole purpose of the debate. The Irish Times reported:

> The NGOs' spokeswoman, Ms Iva Pocock of the Voice environmental group, said they were led to believe the debates were about GMOs and the environment. But the second day's debate was broadened and had, for example, included economic issues but not health concerns on the agenda, she said. Because of these 'and other valid reasons', the 'unfortunate decision' to withdraw was taken. 'He ruled out a key issue which NGOs wanted to debate [the moratorium].'
> (*Irish Times*, 3 June 1999)

The argument of the NGOs was that they had prepared for the topics related to the environment, had even brought in a particular expert from Canada, but were now expected to discuss so many topics, with so little time to prepare. One NGO member told me that 'we knew that we were being judged as just being flaky NGOs, we were trying to get experts in', and so they were afraid of looking foolish in trying to talk on topics they were not ready for, as well as being very sceptical that such a discussion could be meaningful at the level of depth now possible. It is worth remembering that more than one of the NGO speakers on the first day was very defensive about their qualifications to speak on their topics, and that a general feeling of concern about being taken seriously by the scientists and others did seem to be present. And indeed I have noted my observations of scientists in the audience being intolerant of 'unscientific' arguments.

At the same time, it is difficult to balance the long history of the NGOs calls for a debate covering a wider agenda than just environmental issues and then their

protests when they finally seem to get their way. It is also worth looking at the language of what the Minister said about the moratorium on the first day. His point was he didn't act on his old promise because he discovered a moratorium wasn't allowed. Was this ruling it out for the future? Not exactly, and the agenda did have it on there for discussion. On the other hand, as I will discuss below, the final outcome regarding the moratorium issue does seem to back up the NGO position well.

Some people were very critical of the NGO stance, accusing them of cynical strategising, of pulling out simply because they were well beaten by better arguments on the first day and they did not want to stay in a process they were losing. Whether or not this was the case, comments condemning such strategising reveal the value placed on the symbolic nature of the consultation process. Objection to 'strategising' suggests that everyone had to be seen to be taking part in an honest and open way, strategies were not allowed[15]. In the spirit of an ideal speech situation, the claim was that the process entailed arguments being put before the chairing panel with the best of these arguments winning. If the NGOs were thinking strategically and politically about their interests in participating, then they were not following this communicatively rational procedure. The hint that people were making strategic decisions about their involvement was seen to taint the process.

Many of the NGO people were present for Day 2 of the debate, but in the form of a protest at the gate of the hotel. The crowd inside at the meeting was much smaller than the previous week. The chair opened the session by expressing his regret at the withdrawal of the NGOs, but asserting that their views would nonetheless be taken into account through their written submissions and their contributions on the first day. The NGOs were going to participate whether they liked it or not, and if they thought they could undermine the legitimacy of the process by withdrawing they were wrong!

The chairman also stated that he was satisfied that the first day's debate met the Minister's objective of 'open and democratic debate', and that the agenda for the second day was fair. He said that in the first week the chairing panel generally didn't get too involved, but that this week they would be asking more questions. He

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[15] Recall that the minister made the distinction between 'open discussion' and' advocacy'.

warned that people should not read anything into their questions about their views, they were simply aiming to tease out issues (in fact it seemed as the day went on that their questions had been decided and allocated among them in advance of the day).

At this point, representatives of two animal NGOs spoke from the floor, saying that they had not joined the NGO boycott and requesting an opportunity to use the gap to make their case. The chair indicated that this should be possible at some point during the session.

The first topic was then opened, that of environment. The first speaker for the business group spoke of the principle of substantial equivalence, defending its efficacy and rigour, and cited WHO and OECD as legitimisers of the approach. He also made the point about 70 M acres of GM crops planted and no ill effects observed. On ethics, he cited a number of 'independent' groups, such as the Nuffield Committee on Bioethics, who support GM technology[16]. He also went through quite a long list of independent studies on biodiversity, using lots of acronyms that were probably impenetrable to most of the audience (they were to me at least). This talk was a strong exemplar of the approach of citing third parties as the source of legitimacy for one's arguments.

The second speaker, from the academic group, started with some general points unrelated to the specific topic, but left over from the previous meeting, such as a challenge to the tryptophan argument, a reassertion of the argument about the jobs potential of biotechnology, and a citation of James Watson, the founding father of genetics, as a legitimation of the pro-biotech position[17]. On ethics, he cited the general guiding principles of beneficence and non-maleficence, as ways of assessing a technology, asserting that GMOs passed on both counts. Regarding

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[16] This compares interestingly with the Guardian columnist George Monbiot saying that Nuffield was a credible source until it came to this position, which undermined its expert status ('Feeding the hunger machine', *Guardian*, 3 June 1999)

[17] Watson has also been quite vocal on the GMO controversy, making some strong statements such as "[greens] tend to be ideological, intolerant and uninterested in the facts. It is another form of fundamentalism." ('Dr. James Watson: the scientist who launched the DNA revolution', *Daily Telegraph*, 25 February 1999)

biodiversity, he suggested that seed banks could be used to protect species[18]. He also introduced the argument that organic agriculture is actually bad for biodiversity since its lower yields would mean a larger amount of land needed for a given output of crops. If higher yields are attained through input-based agriculture, then the 'spare' land thus saved can be given over to wildlife, and hence protect biodiversity. This speaker frequently attacked organic agriculture on various grounds, although this particular argument was new.

After this speaker, following a short pause in which the chair seemed to be waiting for more speakers, the chair invited questions from his colleagues. One interesting event during this part of the proceedings was the introduction of completely new evidence by one of the chairing panel, citing figures they were aware of on the risk of cross pollination from GM crops. These figures, representing a defence of GM crops' environmental performance, were never mentioned by any speaker or audience member, and never discussed further. The same panel member who introduced them also introduced more new evidence, again essentially to the defence of biotech, at two other occasions in the day. This is a very important issue, and I will discuss the influence of the dispositions of the panel later on. It also won't have helped the perceptions of many of the audience to see a panel member taking a strong position like this.

It is clear most of the panel questions have been set up in advance when one of the panel says that most of his questions have been answered. At this point, questions and comments are taken from the floor, including a challenge to the anti-organic arguments. The process is generally questions to the speakers and responses from them. So this is the first time there is any kind of real interactive debate, but it's still a bit haphazard, and there is still no direct verification of arguments or claims.

The second session starts with the speakers from the animal NGOs. They give a good presentation on ethics and welfare issues, and then some questions from panel and floor are discussed. The chair ends the session by saying that we are not likely to have a meeting of minds on the issue, but its been 'fascinating'. The

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[18] This is hardly an argument to convince an ecologist. It also shows interesting resonance with the NGO speaker on Day 1 who spoke of the fear of ending up having to view our flora and fauna on video. These are two very different world views.

whole discussion has seemed like a good exchange, but one can't escape the feeling that its all an aside to the main purpose (see discussion of the outcome).

The second agenda topic, Economy, is then opened. The industry speaker talks of investment and business issues, the threats of a moratorium, and cites the Europabio (the biotechnology lobby group) claim of a potential 3 million jobs in Europe from biotech. The academic speaker mentions the same figures as the previous speaker regarding jobs and money from biotech, and also suggests that there are lots of potential benefits from GMOs, e.g. bioplastics.

The panel then pose questions, specifically on accountability within the biotech industry. The industry speaker cites the presence of strong regulations as protection in this regard. There are some more questions from the panel, and responses from the speakers. There are also some floor points and responses, on both sides of argument. If points made are against biotechnology, the speakers make responses, but there are no speakers to respond to pro-biotech points.

Over lunch, the NGO representatives demonstrating at the gate hear a detailed resume of the mornings proceedings, with the usual frustrated reaction to arguments they feel are weak.

Opening the afternoon session, the chair says that anyone can send comments to DELG in the next few days if they have any further points to make. Some further discussion takes place on the economy topic, and then the debate moves onto the third topic: processes and procedures.

The industry speaker describes the current regulations, defends the safety procedures, saying its all scientifically based and robust, and argues for a case by case analysis of risks and benefits. The academic speaker argues that it is an improvement on conventional techniques. He says that people listening may want to argue this point, but 'scientifically it is virtually impossible to disagree with that', a clear suggestion that the scientific verdict is the one that counts. Most of his speech follows similar lines to the industry speakers. The panel then poses some questions, points are made from the floor and some responses given. Once again, reasonable exchanges take place within the confines of the set up.

The fourth topic is information. The chair opens the discussion by saying this topic is important for 'ordinary people', not the first time he has made a distinction between experts and the rest. The industry speaker states that good information is important, there is a need for an independent agency, and a need for good labelling. The academic speaker states that consumer choice is the most fundamental issue of all, there needs to be more biotech education in schools, better media coverage, and calls for a national biotech ethics committee with scientists, ethicists, theologians, lawyers (note how elitist his proposed committee seems to be).

Again there are questions from the panel and responses, and a wide range of comments from the floor. There is another occurrence of one particular panel member showing a clear bias towards one way of looking at things; when possible contamination is discussed, the panel member states that this is not relevant for pure products, that 'sugar is sugar is sugar'[19], and then says that they 'understand this is difficult for non-scientists'.

The chair ends the day thanking everyone for their participation, saying that it was a good debate in which many 'ordinary citizens' participated, and expressing regret about the NGO boycott. The panel will now proceed to take all of the arguments on board, in both oral and written submission, and consider their report.

Overall, in my view, there has been some reasonable discussion, most people present who wished to speak were able to do so, and there were some exchanges and debate. However, there were certainly problems with balance, the lack of systematic debate, no verification of claims, and a weak format. The day suffers from a lack of balance since all the speakers are strongly pro-biotech, so anti-biotech comments from the floor get responded to, but pro-biotech comments don't. Sometime there were even leading questions from the floor, seemingly designed to allow the speakers to make further points. Of course, this problem is created by the NGOs through their absence, but the process certainly suffers.

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[19] Such an argument stems from a system world voice, in that it is certainly an oversimplification of the actuality. Since the argument only holds if laboratory conditions were to exist in the "real world", it can be seen as an example of the tendency of science to try to force the external world to conform to its

Consultation Outcome – the Report of the Panel

The principle outcome of the consultation process is the panel's report, released to the public, with very little ceremony, on October 9th, 1999 (a Saturday). The report is about 40 pages long, printed to a high quality of presentation and design. It is available on the website of DELG, and was also posted to all consultation process participants. Copies are also available on request from DELG, or at locations such as ENFO. The format of the report is a 6 page executive summary, followed by the main body of the report which is split into two parts, a short overview of the process followed by a longer section called 'Conclusions', where most of the major issues are described and discussed.

Put in simplest terms, the report is very strongly pro-GMO, supporting a 'positive but precautionary national policy position, based on scientific risk assessment and management' (GMO Consultation Report, p.6).

The panel recognises that ethics is 'not an exact science which comes up with exact answers' but concludes that they don't believe GE 'would be likely to conflict with the ethics of the vast majority of the population' (p.23). The report expresses support in principle for labelling and segregation, but wonders how this can be done in reality in the context of free trade and current practices (p.27).

A moratorium is rejected, both for reasons of merit and also specifically because it is not possible under EU law (p.15). It is unfortunate that so much debate was permitted on the moratorium issue for it then to be rejected on technical grounds (which were not discussed), which could have been established in advance. This is just one of many examples where discussion was permitted on issues that were subsequently ruled outside the terms of reference. Another example is the discussion on animal welfare issues. The report does make some statements on protection of welfare concerns, but on the broader issue of opposition to vivisection and the exploitation of animals, the report states that the panel members 'understand and respect this point of view' but consider it to be outside the terms of reference (p.23). The DELG policy statement following on from this report,

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laboratory conditions in order for scientific knowledge to spread through space (see Clark and Murdoch, 1997)

discussed below, does not even mention animals once. One of the animal NGO representatives later said that 'if you go to whole process and you stand up and talk for I think for about half an hour, and you are prepared to answer all the questions and state your case and argue about your case, and they still ignore you, I don't know what it says for any of it really' (Interview with activist).

In general the report presents a much narrower picture of the terms of reference than the consultation days themselves. Specifically:

> Our terms of reference confined our examination to environmental issues. The effects on food or human health are not included, although some of the considerations raised in the course of the debate will apply in any examination of these issues.
> (GMO Consultation Report: 23)

This statement renders a considerable portion of the debate that took place out of bounds, and raises the question as to why it took place at all.

The report also clearly demonstrates its allegiance to certain 'world view' storylines (see later for fuller discussion), i.e. to certain paradigms of knowledge and politics such as capitalism, and science. For instance, the executive summary says that while many people talked about the profit motive behind biotech, all companies have this motive, and so it is not relevant. This is a valid point within the current capitalist model, but precludes a wider debate beyond the bounds of this model.

There are many problems in the report regarding balance, representation of arguments, and the use of evidence from certain sources. The report says the NGOs withdrawal was unfortunate, but that the panel read their submissions, and also that 'many contributions from the floor on day two gave voice to their concerns' (p.12). Of course, the panel can have no way of knowing that any arguments made on the second day represent those of the NGOs unless they make presumptions as to what the NGOs would have said. Overall, there is a worrying reliance on oral arguments from the second day, which of course do not represent the full spectrum of interests. Despite their claims that they would look at written submissions and take NGOs into account, my reading is that most of the discussion is based on citing arguments from the speakers on Day 2, i.e. when one side wasn't represented.

For example, the panel express faith in procedures and testing so far, but I would argue that this statement can be based only on faith; pro-biotech speakers made claims for the rigour of regulations, but no attempt was made at verifying these claims. In the written submission of Genetic Concern, the weaknesses of current regulatory approaches are discussed at great length. Despite the panel's claim to have referred to written submissions, absolutely no mention is made of this entire area of debate when they accept the word of the speakers as to the reliability of the regulations.

The panel also argue that there is 'an absence of any scientific evidence of damage to human health and/or the environment' from GMO releases. Again, the written submissions of many of the NGOs argue against this point of view strongly, as did many of their oral submissions on the first day. They cite many scientific studies that would suggest risks associated with GMOs. However, the report does not mention any of this in claiming the absence of any evidence. In fact, the report's discussion on safety seems to rely very heavily on points made by the speakers on Day 2, such as the WHO and OECD legitimation of substantial equivalence, and the citation of 30 years of history and 70 million acres currently planted as safety assurances (p.19). Additionally, two sources that are cited more than once in the report to show the economical potential of biotech are Technology Foresight and Europabio (p.16). But both of these sources are strongly pro-biotechnology (see below). Bioresearch Ireland, the agency specifically mandated to promote biotechnology in Ireland, is also cited as a legitimator. The pro-biotechnology speakers themselves are cited with regard to whether moving away from biotech would harm Ireland's competitiveness (p.18), with no questioning of their qualifications to judge this and no real discussion of the other side of the argument. Again, written oral submissions of the NGOs on the concept of promoting Ireland commercially as a GMO-free zone are not addressed. All in all this discussion comes across as very one sided.

Another disturbing example of the faith exhibited in certain sources of evidence emerges in the discussion of organic agriculture. On page 20 of the report, the evidence on the impact of organic agriculture on biodiversity is discussed through the 'completely opposing views' of an academic from the NGO group and an academic from the academic group. The NGO academic argues for the positive impacts of organic agriculture on biodiversity, but then 'the contrary view from the

Academic Group was that commercial organic farming was the greatest threat to biodiversity because of its lower level of output' (p.20). But it is most important to remember that the NGO academic cited is actually working in the field of biodiversity, while the two academic group speakers are geneticists, and their fields of expertise are not in any way connected with this issue. And yet all expertise is seemingly treated the same; if two academics (from whatever area) contradict each other in this manner, the result is inconclusive. The two academic speakers, who were not formally representing anyone but themselves, were in this and many other cases able to strongly influence the panel's report on a range of issues beyond their own core expertises.

Consultation Outcome – The Policy Position Paper

The Minister for the Environment received the report of the panel at the end of July. He then took time to consider his own policy position and subsequently publicly released both the report and his own policy statement on October 9th, 1999. The basic thrust of his policy statement was full acceptance of the panel's report and its recommendations.

Again, the bounds of the process are strongly reasserted, when the minister states that it is understandable that the debate widened beyond the environment, but that he must bring it back to within his remit (but the current interdepartmental committee on biotechnology will consider what the consultation process said on the wider issues). He also states:

> I place primary emphasis on precaution well grounded on scientific risk assessment and management.

But while adopting a positive position on biotech, he says that Ireland won't support any more releases until the procedures in Directive 90/220 are tightened (this is in line with the new common EU position). This is a discussion that didn't really take place take place in the consultation process, it is essentially a separate development.

On who should be responsible for providing public information on the issues, the minister agrees with the recommendation of the panel when he states:

> I am satisfied that the EPA is best placed to disseminate information on the implications of releasing GMOs to the environment. I will ask the Agency, in consultation with its GMO Advisory Committee, to identify a programme of information dissemination on environmental aspects of genetic engineering.

So overall this policy position paper signals that Ireland has adopted a favourable position regarding GMOs and biotechnology more broadly.

Expectations, Claims, and Debate Quality

In this and several other chapters, I discuss the arguments and discussions, and attempt to deconstruct them to some extent, in particular to try to isolate elements that pertain to discourses and power. In the remainder of this chapter, I will be talking about what arguments 'won' attention or seemed to convince (as measured largely by their influence on the outcome report), who influenced the process and how the panel seemed to reach their conclusions. Essentially I will be discussing whether or not the stated aims of actors such as the Minister, DELG, and the panel, of having a 'reasonable' debate based on persuasion of the best arguments, were met. However, as I have attempted to do throughout this thesis, I am resisting the temptation to apply any kind of over simplified framework to evaluate debate quality in normative terms. Nonetheless, the ideal models of democratic debate I discussed in the theory chapter inevitably presuppose the possibility of some incarnation of a 'good' debate ideal, usually free from contaminations such as power, or strategic use of rhetoric, and usually involving actors open to persuasion and looking for consensus and agreement. Most classically in this context, Habermas makes a distinction between action that is oriented towards success and action oriented towards reaching understanding, in his definitions of strategic action versus communicative action (Habermas, 1984: 286). The communicative action concept can be used as a standard model by which actual processes are judged. Arguments can be tested under four categories; comprehensibility, sincerity, legitimacy, truth; and an instance of communication that passes these four tests can be called an ideal speech situation. So someone who argues something asserts the legitimacy of their arguments regarding these four claims, and these claims are contestable, and such is the action of argument. Importantly, power does not influence an ideal speech act. This is obviously very much an 'ideal

model', meant to be a normative position from which to judge 'real' speech acts (Keohane, 1999: 80).

Against communicative action stands strategic action, which is specifically oriented towards success, i.e. 'winning' an argument as opposed to reaching consensus (such that the actor is not open to persuasion by others, but sets out to convince others by whatever means). Such action can be either open or concealed, and concealed strategic action can be further categorised as either conscious deception (i.e. manipulation), or unconscious deception, which Habermas calls 'systematically distorted communication' (Habermas, 1984: 333).

Strategic action is contrasted to other forms in that it 'relies upon given institutional-intersubjective norms or resources (money or power), rather than agreement, for its effectiveness as action' (Crossley, 1996: 102). A significant problem with Habermas' approach is that, although it does make reference to creation of elements in the lifeworld, ultimately it does not give sufficient regard to the construction of discourses in their intersubjective spaces (Crossley, 1996: 124). By distinguishing between conscious and unconscious strategic action, he is painting a picture of individual actors subjectively and knowingly strategising in quite complex ways.

But Habermas does state that 'communicative action takes place within a lifeworld that remains at the backs of participants in communication' (Habermas, 1984: 335). Furthermore, he acknowledges the role of 'implicit contextual knowledge' in this process (1984: 336). This makes the connection to the construction of communication, and its rules and norms, in discourse, where the lifeworld itself is shaped, and also to the role of elements such as storylines, habitus, or even governmentality in this process.

Ultimately then my test of 'good' debate is not based on a normative definition of 'good', but rather a test of the gap between the ideal and the actuality. In particular, I am arguing for the inevitability of a gap between the ideal and the actuality when the ideal fails to address discourse-power issues. In other words, I argue that Habermas' ideal speech act can never be observed in actuality, but that it remains a useful yardstick for describing, and to some extent evaluating, actual observed processes of communication, debate and persuasion.

The actors in the consultation processes also have their own norms and criteria for evaluation of the debates. As I discussed earlier, participants went into the process with a range of different expectations and, effectively, corresponding ways of evaluating their own judgements on 'good' and 'bad' debate. Their reactions after the events can then give an insight into these approaches.

Obviously, NGO representatives were not at all happy with the process. One told me that the first day came across as chaotic and, amateurish, and the lack of effort and resources put into it all revealed the attitude of DELG:

> I think they just, I think they didn't rate it as important enough.
>
> Tuesday was an insult, like I just sat through it, I couldn't even participate, I just felt sick.
> (Interview with activist)

Other NGO members made very similar comments. Genetic Concern's newsletter described it as a 'flawed process' and said they had no regrets about their withdrawal (Genetic Concern, 1999).

Dick Ahlstrom, science editor of the Irish Times, was also very critical of the process:

> no debate occurred...as one entrenched speaker was followed by the next. Some hours were given over in the afternoon to allowing the rest of the 'public' to be heard, but these were little more than unanswered expressions of concern
>
> This is not a consultation debate, this is not a way to help people come to grips with the issues
> (*Irish Times*, 3 June 1999)

Equally obviously, people on the other side of the debate saw things very differently. One industry representative said:

> We thought that it was balanced, that it provided a route for applications of technology in a precautionary sort of way, protecting the interests of the consumer in our view.
> (Interview with company representative)

There is nothing surprising in that people who felt they 'got their way' were happy with the process and those who 'lost' felt it was flawed. This only reflects the fact that the whole process was entrenched and argumentative, and it is hard to imagine that both sides would ever have been happy with any outcome. At this level, this evidence would seem to belie the idea that there was a widely adhered to notion of what constituted good and bad debate. Subjectively, people who 'got their way' thought the debate was good.

I wish to move on now to discuss some of the particular issues that arise out of my interpretation of the process and are important in terms of the analysis, in particular the analysis of power. The overall questions I am chasing relate to the interaction of discourses, what discourses seemed to 'win', and how power operated in the process; specifically issues such as relating the outcome to the inputs, the influence of the set up on the process, and access to the process. To look at these core questions I will discuss four particular aspect of the consultation process. These issues are:

- Setting up the process, and the fluctuating terms of reference
- The types of arguments used
- The use of evidence
- The role of the panel

My aim is to look at inputs and outcomes, and the roles of actors. Most centrally, at the end of a long process involving many actors and much discussion, the final outcome is very one-sided and entirely predictable. How did this happen? Could it have been otherwise?

Setting the Terms of Reference

It is clear that there is considerable power associated with the setting of the debate agenda in the first place. Including or excluding topics will obviously have a bearing on the whole process. Conversely, the success of the initial agenda setting, in terms of whether it was adhered to or not, is a good test of power. Discourse analysis considers 'the question of what definition is given to the problem' (Hajer, 1995: 43) to be as significant as the outcome of the subsequent debate on the problem. The consultation document attempted to limit the debate to environmental issues, the remit of DELG (but even the definition of what comes within this range is contested; see Chapter 1).

But if there was an attempt to set a restricted agenda in the consultation document, it was not adhered to in the course of the consultation days (nor in the written submissions). On the other hand, I have shown that the debate range was narrowed considerably in the panel's report, and even more so in the policy document. I will mention just a few examples of this occurring in action in the process:

- The minister's opening remarks at the first debate included a statement that a moratorium was not possible under EU law, yet the topic is discussed nonetheless, in fact it is even explicitly mentioned on the agenda for Day 2. In the end, however, the panel's report comes right back to the ministers position, saying 'our conclusion is that unilateral action involving any form of general moratorium on marketing releases of genetically modified products is not an option open to Ireland' (GMO Consultation Report p.15).

- The agenda for the second day was based on four substantive topics, only one of which was specifically environmental aspects. Yet the final report states that 'our terms of reference confined our examination to environmental issues.' (p.13). This statement does not even fit with the rest of the report, which covers more material than environmental questions alone. In his policy paper, the minister reasserts the range of the remit to be environmental questions, so adding to the confusion as to what is in the debate and what is out.

- I have already spoken of the confused treatment of the animal welfare issue in the process. When first raised, the chair of the panel tried to rule it out, until he was

informed that it did indeed fall under the range of Directive 90/220. The position of the issue was enhanced by the presentation of the animal NGOs on the second day, but this position was not preserved in the outcome. The report does make some statements about animal welfare, but also states that 'an anti-vivisection argument was raised in this context and, while we understand and respect this point of view, it fell outside of our terms of reference' (p.23).

- One of the original stated aims of the entire process was to inform people about the issues, and to 'explain the regulatory process and the proposal to amend the deliberate release directive' (DELG Press Release, 24 August 1999). However, this element was completely lost in the consultation days themselves, not least through the apparent lack of detailed knowledge of these issues on the part of the panel. Instead, the discussion is probably better described as 'one entrenched speaker ... followed by the next' (*Irish Times*, 3 June 1999). The distinction the minister made, in his opening remarks, between 'open discussion' and 'advocacy' certainly applies, but it was the latter which came to characterise the proceedings.

Two features stand out under the heading of agenda setting, one is the dramatic change in position on what was open to debate, in particular regarding the agenda for Day 2, and the second is, following on from the first, the gap between what was considered within the range of the discussion at the days themselves, compared to what was considered pertinent for the final report.

My impression is that the wide range of the agenda for the second day, despite the nominal restriction of the process to environment (i.e. Directive 90/220) issues, came about simply because the panel saw it within their power to determine the agenda as they saw fit, and they chose to reflect the range of issues people were trying to raise on the first day. In one sense this was a loss of control on the part of DELG. On the other hand, I have also explained how strongly the range of the discussion was pulled back in the outcome of the process; the report itself. This lack of clarity about the terms of reference, as well as undermining perceptions of the quality of the process, also had the important effect of rendering a significant amount of the debate that occurred irrelevant. In their report, the panel state:

> We gave everyone present an opportunity to offer such evidence as they wished, and to express their concerns and anxieties.
> (GMO Consultation Report: 2)

I think that this is true, and it is to their credit. However, if a large amount of these concerns and anxieties were simply considered outside the terms of reference and thus not taken into account, then what was the point of engaging in this discussion?

This of course relates to the issue of what the various actors expected of the process. On the second day, the panel chair made the point that he thought the first was successful in that it gave everyone an opportunity to have their say. The fact that the forum was efficient could be seen as one measure of success, possibly the key measure of success for some. There is no specific reason to assume that people were seeking a democratic forum or were expecting all points of view to have impact. Skillington argues that 'a political culture oriented towards dialogical consensus-building with the general public does not have an effective institutional base in Ireland' (Skillington, 1998: 468). The panel were very much of the dominant institutional base, and if the culture of this is not oriented towards a particularly strong model of participation and consensus building, there is no reason to assume that the panel understood or sought these elements in the consultation process. I will say more about the role of the panel's dispositions later in this chapter.

Peace (1995) describes an oral hearing process where a panel of adjudicators was installed, gaining legitimacy from their much stated independence, but who then went on to effectively guide the debate into one discourse and to exclude certain types of arguments and arguers to the extent that an outcome favourable to the state was inevitable. There are certainly parallels with the consultation process I am discussing here. While the process Peace describes explicitly ruled out certain discussion during the process, the GMO consultation panel allowed a much wider debate, but then narrowed the range right back down when drawing up its report. The process of raising expectations of openness only to revert to a narrow discourse is much the same in each case, and this demonstrates that a genuinely participative process requires more than simply asking some people to gather together to speak and to listen, and in particular the need to avoid taking the listening component for granted.

The Types of Arguments Used

In the previous section I discussed the guiding of the debate in terms of *content*, but there is also an important discussion to be presented in terms of *type* of argument taken into consideration. The types of argument heard during the two days were wide ranging. They included the citation of scientific studies, economic arguments, ethical positions, political manifestos, personal challenges, and many statements beginning with 'I am just an ordinary person, but I think...'. Were all types of argument, and arguer, treated with equal regard? I have noted earlier that more than once I observed people in the audience scoffing among themselves at arguments they did not support, most commonly scoffing at 'non-scientific' arguments. I have also noted that there were many calls for 'science-based decision making'. On the other side, there were certainly many audience members who pronounced their scepticism at the role of science in the debate, making calls for the use of 'common sense', or labelling science as cold and unfair in its decisions.

The most important observation, however, is what arguments had an influence on the outcome. The most revealing evidence on this question comes from a statement in the panel's report:

> A point was made regarding the importance of human intuition and instinct, and we recognise this but decisions have to be taken on the basis of existing evidence as assessed by human reason.
> (GMO Consultation Report: 25)

So 'human reason is superior in policy making to 'human intuition and instinct'. Interpretation of the exact distinction between these two categories will obviously give the panel considerable power to decide what arguments to consider and which to ignore. The citation of 'existing evidence' as a basis also closes off a much deeper debate on the oft-quoted principle of precaution, and seems, in fact, to somewhat undermine it.

At the end of the previous section I cited the panel's statement that they gave everyone a chance to 'express their concerns and anxieties'. However, if one considers these to be in the domain of 'intuition and instinct' as opposed to 'reason', then there is a clear distinction between the panel giving people a chance

to express their views as opposed to the panel considering these views as they drew their conclusions. It seems that 'reason' was taken by the panel as the steering medium for the debate, and life world voices were considered too vague and imprecise to be allowed shape outcomes, again a very close parallel with Peace's study of a planning public hearing in West Cork, mentioned above. Among the diverse discourses and storylines aired in the debates, a certain discourse was selected after the fact by the panel, and others were filtered out of their considerations.

My discussions on the boundaries drawn regarding both the content and type of arguments that were allowed to influence the panel deliberations set the context for the next two topics of discussion. I am now able to look more closely at who and what did seem to have an influence, and why this was so. I can do this at two levels, firstly by examining the quality of the debate and the use of evidence and arguments, and secondly by examining the role of the panel itself.

The Use of Evidence

The next discussion point is how to view the process in terms of its stated goal of essentially sifting through evidence and coming to conclusions based on an evaluation of this evidence. As I have stated earlier, I am trying to avoid a normative assessment as to whether the process was 'good' or not, but instead present my analysis based on the perspectives I can bring together through my data. I am also able to assess the process in terms of comparison with claims made about it by organisers and participants, which I will do in the following paragraphs.

It has always been difficult to tie down exactly what the process was meant to achieve. It was stated that everyone would be listened to, but did this mean that everyone would be considered in formulating the outcome? Obviously, not all arguments would be received in the same manner, but that is not the same as a systematic process of allowing some to influence and not others. What was the role of argumentation in the process? Were the panel trying to count votes or be persuaded by good arguments? Not the former surely, due to problems of representation, and anyway the outcome certainly didn't reflect this. The latter? Then how would they be persuaded?

There are two things that need to be discussed here; firstly, what kinds of opinions got listened to, and what did the panel take on board; and secondly, what kind of evidence was used, what claims were accepted, what were the sources of legitimacy and credibility for arguments. The first of these has been discussed in the previous sections. Now I will address the second issue; the citation of evidence and claims, and their support and verification.

I have already made some comments about the use of evidence in the report in the section dealing with the outcome of the process. I gave some examples where one side of an argument was cited and accepted, while no reference was made to other arguments that had been made on the point. In particular, the speakers' comments on Day 2 seemed to be by far the most common source of arguments.

Looking over the days and looking at the outcome, it is striking how casual the use of evidence and claims was. There was absolutely no process of checking evidence, verifying claims, allowing counterclaims or debate. It was simply one point made after another, and it is very hard to see how it all could have fed into a process of decision making in any systematic way. One participant commented that 'there was no backing of the facts from any side you know we could have said anything there and then we began to think this is just going to go down to the gut reactions of the four chairs' (Interview with activist). I will consider the idea of the 'gut reactions' of the panel soon, but first I want to look at the use of evidence a little more.

Consider the following example. The final report states:

> Notwithstanding the concerns of those opposed to the deliberate release of GMOs into the environment and their total rejection of claims by industry and the academic world regarding the safety record of genetic engineering over the last 25 years or so, the fact remains that the marketing of genetically modified products is highly regulated.

The tone of this sentence is clear; 'those opposed' have 'concerns' and reject claims, i.e. argumentative elements, but ultimately there is a *fact*, and this fact is that marketing of GMOs is highly regulated. Where does this fact come from? Certainly several speakers made the claim, but little was produced by way of

support for the claim, nor was it sought by the panel. On the other hand, Genetic Concern for example devote considerable space to the evidence that regulation is in fact quite poor in practice in their consultation submission, a document the panel assured us would be taken into account as part of their policy of including the positions of the NGOs. No mention is made of this side of the argument at all.

I have already mentioned several other examples in the sections above, such as the debates on organic farming or on environment damage from GMOs. In addition to these arguments, the one point that can also be clearly made is that the two days were quite chaotic, and it was very difficult on either day to see a process of reasoned argument and debate taking place. The second day was a bit better in terms of organisation, but of course by then many key actors were absent. My point here is not to make judgements on the panel's decisions as to which arguments to accept, where to assign credibility, but rather to show that certain constituencies of argument and arguer seem to be considerably under-represented in the report's discussion. The general trend in the report seems to have been that the pro-gm arguments are accepted at face value whereas the counter arguments are either presented as opinion or ignored completely. Sources such as Europabio, Bioresearch Ireland, and Technology Foresight[20] were all used as legitimators of arguments, even though they all have strong material or ideological interests (or both) in the promotion of GE, and also have strong personnel overlaps among themselves and with those citing them as sources. Throughout the debates, both sides of the argument tended to cite sources and receive legitimacy unchecked, but it was the pro-GMO side that succeeded in this regard in the considerations of the chairing panel and their report.

The main point of the above is to demonstrate that among the large amount of evidence and argument put before the chairing panel in the consultation process, the selection of evidence on which to base their conclusions was rather unsystematic and, put baldly, one-sided. Many statements were made from many different perspectives, on many different elements of the debate. But in the end, quite a limited range of these arguments were considered. Firstly, the terms of reference were certainly narrower for the report than for the consultation days. This

[20] Several Technology Foresight panels were set up by the government agency Forfás in 1999. The life sciences panel counted Prof. David McConnell, Patrick O'Reilly of Monsanto and Jim Ryan of Bioresearch Ireland among its members.

would imply that much of the discussion was being listened to by the panel really as a kind of counselling for people who wished to have their say. Thus it is very hard to see what purpose the days themselves served, other than to let people feel listened to, and of course only those who 'got their way' would feel that after the fact.

Secondly, because of the polarity, and because people saw the process as one of setting out positions, putting points of view on record etc, there was no process of debate and argumentation among the speakers and the audience, no sense at all of anything resembling Habermas' notion of communicative action. People were there not to be persuaded, but to persuade. What about the panel? Essentially these four people were the target for everyone's arguments, these were the people to be persuaded. But since so much evidence was put on the record without any process of verification or any opportunity to evaluate and compare claims and counter-claims, this persuasion process could only come down to the opinions of the four panel members based on their own philosophies and outlooks. I am not suggesting that the panel came into the process with their own pre-determined viewpoint and were not open to change. But I do intend to argue that the pre-dispositions of the panel had a huge influence on the process, and it was probably this factor more than any that made the outcome inevitable.

The Role of the Panel

The panel members had to make a number of judgements about the evidence put before them, and this they seem to have done in a relatively unstructured way. Often when they state their position on an argument, as I have shown, it is based very closely on arguments made by certain speakers, but makes no reference at all to substantial pieces of evidence for the contrary case. Specifically, this is invariably done to favour the pro-biotech case.

I have also cited evidence to show that the panel seems to be of one particular 'world view', i.e. regarding science, business, policy and the state. Some of the examples of this include the introduction of pro-science evidence by one member of the panel, the dismissal of a challenge to the profit motive of corporations as the basis of an anti-GMO stance, and of course the types of evidence they have chosen to rely on. In addition to citing speakers from the pro-biotech constituency,

in my view much more frequently than the other side, they also tend to rely on sources such as Europabio, Bioresearch Ireland, and the Technology Foresight panel. It seems clear that it would have been very surprising for them to come to a different conclusion.

Interactions between lobby groups such as Europabio and IBEC, biotechnology advocates such as Technology Foresight and Bioresearch Ireland, and the decision making processes and institutions, conform closely to Beck's concept of subpolitics. Indeed, given that Technology Foresight and Bioresearch Ireland are government initiatives, and given that the Government appointed panel of the consultation process then cites these as prime sources for its facts and arguments, governmentality is clearly in evidence.

It is most important to point out that I am not arguing that the panel came to the process with fixed views and were never open to influence. I still maintain that the discourse created its own environment and conditions, and within this I suggest that the panel brought their own elements to this discourse. Among all of the elements of the discourse, analysis can reveal the interactions and relative influences. These arguments merit some elaboration.

Hajer states clearly that he does not favour an analysis based on a 'background of deeply held beliefs or belief systems' (1995: 59) because he argues that these beliefs are created in the discourse. He goes on to argue that his model does not mean people fit new things into their own deeply held beliefs, since this would imply language as fixed, but rather that 'discursive interaction (i.e. language in use) can create new meanings and new identities, i.e. it may alter cognitive patterns and create new cognitions and new positionings' (Hajer, 1995: 59)

In line with this perspective, I do not suggest that the views of the panel were fixed, but the possibility of them being persuaded by certain arguments was limited, mostly through two elements; their view of the aims of the process, and their favouring of certain kinds of argument. On the aims of the process, the panel would have been fully aware that their task was to write a report that could be the basis of immediate policy decisions. Their vast experience would have informed them very well as to what this meant in terms of what recommendations could quickly become policy decisions, and what would be considered too radical or contentious to be acceptable.

In other words, I am arguing that the *habitus* of the panel members was central to the processes and outcomes. I also argue that governmentality operated here through the habitus of the panel; the means of transmission of the norms of the state (the Minister) into the process.

On the types of argument that would persuade, it seems fair to assume (as seemed to be revealed), that the panel members were not subscribers to radical green philosophies or such like, but were instead closer to the mindset of the dominant paradigms in terms of policy, economics and science. Within this, radical green arguments are unlikely to sway them, unless they somehow overwhelm them with the force of argument of the persuasive power of the speaker. This is not impossible, but it is rather unlikely. Closely paralleling Hajer's model, the arguments that were by far the most likely to convince were those that came from within the story-lines adhered to by the panel members. This would clearly favour the outcome that resulted in this case.

The minister had control over the development of the original consultation documents, setting the way the consultation debates were to occur, and appointing the chairing panel. As minister, he had the structural power to do this. However, as I have discussed in Chapter 2, power needs a lifeworld. Specifically, the operation of the Minister's power to guide the consultation debate depended on its acceptance by the participants, either directly by compliance to the rules or more subtly through habitus. This did not happen; when everyone came together for the consultation debates DELG's and the chair's attempts to guide the process in a certain direction failed, the participants did not accept their model. Likewise, various attempts by various participants to guide the discourse, to enshrine the place of scientific argument for example, failed. On the other hand, the structural power component successfully re-established itself in the outcome determining stage of the process – the writing of the report. This happened because the actors in this arena, the panel, accepted the steering of the Minister and reasserted his terms of reference and his discourse.

As I discussed in the previous chapter, every debate can be analysed for its particular patterns of credibility and legitimacy as components of the discourses or story lines, and reproduction of these patterns will come through a mixture of structural elements, and more action-oriented elements based on the

understandings of the participants. The consultation process has proved to be a most illuminating example of this. During the debates themselves, the structural power components were overwhelmed by the meeting of so many discourses, actor from so many fields and habitus, that it was not possible for DELG to impose a storyline or discourse. Neither the guidance of the consultation document, the opening speeches from the minister and the principal officer, nor the action of the chair, managed to retain control of the discourse. However, after the debate days themselves, structural power found it very easy to reassert itself. The panel seem to have been very much of one type of discourse (and habitus), and so their appointment by the minister seems to have been a key determinant.

Conclusions

Of all the elements of the public sphere for the GMO debate, the consultation process represents an attempt to create an 'official' public sphere, where 'public opinion' can be collected, aired and condensed into one official recorded version. And indeed it seems to have been the case that the full range of opinions and arguments were aired during the course of the debates and through the written submissions. However, what was then produced as the official record, the chairing panel's report, represented a far narrower range of views.

Irwin analyses an exercise in public consultation on bioscience policy in the UK in 1998 and 1999, based on a number of workshops and interviews for information provision and opinion research. He finds the following points of particular relevance in shaping the success of the exercise:

- The institutional location of the exercise
- The balance of information and consultation
- The extent to which the agenda is pre-framed
- The degree of activity, or passivity, accorded to citizen groups
- The significance or underlying social and technical assumptions

(Irwin, 2001: 15)

All of these elements were seen to be relevant in this chapter, and they all relate closely to the action of governmentality. For each of these key elements, the state has opportunities to shape the process through pre-existing practices and norms,

and through the specific practices of the consultation process itself. While I have not explored other consultation experiments in any details, it is interesting to note that exercises such as the Irish consultation process and the UK one I just mentioned reached broadly similar, conservative conclusions. This contrasts with the Citizen Foresight exercise I mention in Chapter 2 (*Expertise Science and Governance* section), where many of the above elements were more under the control of the citizen panel for the duration of the exercise. This would seem to suggest that even with governmentality processes operating over time, people are able to at least partially recapture the ability to shape the discourse in a specific exercise.

More than any other element of the public sphere, the consultation process can be analysed for the interaction of different discourses and different power elements. As I have shown, the state's attempt to guide the discourse struggled until the final stage of the process, the writing of the final report, where structural power was able to reassert itself through the panel. In the end, despite the breadth of the discussions that had taken place, the final report was narrow and strongly pro-GMO. One question is then whether the whole process was one of deliberate containment of the issue on the part of the state. Beck argues that the typical bureaucratic response to risk society issues is 'the intensification of technocracy' (Beck, 1995: 166). He suggests that when faced with a ecological hazard the state will try anything to manage the issue and control the information around it, 'a policy of absorption' (Beck, 1995: 63). They will study the subject, have commissions of inquiry, release reports, (even have consultation processes?), anything rather than allow the core paradigms of bureaucracy, technocracy, and modernity to be challenged. As part of this defence, political institutions also serve to legitimate business' position of control (Beck, 1992: 214).

Instigating a consultation process and then setting the terms of reference and appointing the chairing panel is obviously a process of governmentality. The consultation outcome favoured existing technocratic approaches, and indeed resulted in a policy position essentially the same as that in operation before the start of the controversy (see Chapter 1). The efficacy of regulations was strongly asserted, and indeed cited as a reason to have faith in the safety of biotechnology. The role of the EPA was not just defended, but extended into public information actions. The small circle of closely related institutions such as Technology Foresight, IBEC, academic science and others repeatedly cited each other as

legitimation of their interchangeable arguments. At the same time, within the process, the consultation instigators at least hoped to demonstrate a process of inclusion and participation, but judging by reactions this attempt largely failed.

Looking back on the process, it is hard not to feel empathy for those who saw it as a cosmetic exercise, where people were listened to more as therapy rather than as genuine inputs into the process. Expectations were raised by the fact that attempts to keep the debate narrow and technical failed, and therefore the range of the discussion was very wide. However, the report represented a strong return to the narrower remit of DELG, the steering media of 'reason' and science, and the strongly influential roles of a small number of experts (or those imbued with official expert status), and thus disappointment with the outcome was wide and deep. So for many people the government's policy position on the issue was less legitimate after the process than before, the reverse of the clear objective of the process. On the other hand, the process certainly helped achieve closure, and on a political level the issue has effectively 'gone away'. So the consultation represented a period of opening up in terms of participation but then a very strong closing down again in the end. Does this make it a failed experiment or a cynical exercise? I think one would have to give it credit for being an authentic attempt in itself, but the radical ambition that would have been necessary to follow through on the openness of the process at the start simply wasn't present, and it would have been extremely surprising if it was. Ironically, expectations would not have been so high, and thus disappointment so strong, if the process had seemed less open and less ambitious from the start.

CHAPTER 8 CONCLUSIONS

More than I could have hoped, the GMO debate in Ireland has proved to be an excellent case study for the issue of democracy in environmental decision making. The debate featured strongly technical elements alongside issues of economics, agricultural practices, globalisation, ethics and indeed debates about democracy itself. The interaction of these elements of the debate, and their prioritisation, was a central feature. During its peak, the debate over GM foods in Ireland featured in the media almost daily, and much of the discussion was about how to allow for further debate and communication to flourish. My evidence reveals the struggles over accessing the debate, creating new public spaces for it, setting the range of the debate, setting the language, and determining the outcomes themselves. All of these come together to form the wide discourse of the issue and reveal the far more subtle processes at work than simply argument and counter argument leading to persuasion and victory.

Habermas is 'asking how a truly democratic society is possible under contemporary conditions' (Dean, 1999: 167). His model of discursive democracy is based on communicatively rational deliberations in a network of public spheres. Certainly, the GMO story is characterised by attempts to create and access the public spheres of the debate, and my analysis has been based on considering the performance of these spaces in terms of the ideal. How did the actual debates compare with the ideal theories?

The ideal model of the public sphere and deliberative democracy assumes the pre-existence of healthy public spaces, or at least the possibility of easily creating such spaces. It also supposes ready access to these spaces. Most importantly, models of communicative rationality or idealised argument and persuasion tend to assume either the existence of only one rationality or an equality between all rationalities and discourses. The theoretical arguments against this assumption are strong, as is the empirical evidence. The GMO debate is an excellent example of struggles over competing rationalities and discourses, and the central importance of these to the overall story.

The key issue is power, seen in the ideal as a corrupter of the communicatively rational ideal. My analysis revealed the presence and influence of power in all

elements of the public sphere. If I can use the delineation between structural and discourse power elements, we saw structural elements such as the need for resources to generate publicity or fund court challenges, in the media we saw access rules and the influence of the media actors through choices on coverage, mediation of content and so forth. Most interestingly, we saw the intermingling of various power elements in the consultation process, where the government set the agenda and format of the event, had difficulty controlling these in the debates themselves, but saw their influence fully restored in the reporting and policy setting phase.

In terms of discourse power, the operation of storylines was ubiquitous; with different amounts of power associated with science discourse, models of credibility and legitimacy, the operation of frames in the media, the fights for expertise status or the challenges of qualifications or interests. All of these divert the discourse from the simple operation of a 'best argument wins' ideal model. Most importantly, through governmentality, we saw the link between structural power and discourse power. One may be able to excuse, say, storyline patterns of credibility and expertise if one saw them as simply part of the discourse to be fought over by the actors. But when the evidence clearly demonstrates that structural power can lead to influence on the patterns of discourse power, it becomes a much more serious issue. Be it through 'background' elements such as education and decision making processes, or through the more directly related issues such as control of the consultation process, governmentality processes influence who is considered an expert, how powerful a system world voice can be, and how wide a debate may become in terms of range and content. The national consultation made governmentality very visible because the key steps in the process were so identifiable – the writing of the discussion paper and the appointment of the panel in particular. However, one should also see these events as part of a much wider normalising process (try to imagine the appointment of four radical environmentalists to the panel to consider how normalised the wider processes are).

An ideal model that is unable to address the inevitability of power in debate and discourse will always be limited in serving as a connection between actual practices and a desired objective. In his mediating model of deliberative democracy Habermas is interested in bridging the gap between ideal and actual, but my

evidence suggests that key questions remain unanswered in the ideal for this bridging to be conceivable.

Mason (1999) argues strongly that environmental and democratic values fit very well together. This is a common theme in environmental writing (see for example Broderick, 1999). However, I don't view the connection as automatic. Beck's eco-dictatorship is much more plausible in many ways. Eco-modernity, with strong roots in reinforcement of a system based approach, is very much a business as usual scenario in terms of legitimacy and decision making techniques. Since environmental discourse currently depends strongly on science and systems, the difficulties of making a strong surge towards democratisation in the area are clear. But Beck (1999) also argues that any kind of attention drawn to legitimacy arrangements offers the potential for opening up, and he thinks this may well be happening in the modern environmental crisis. If a normalising process is rendered visible, the legitimisation process is open to scrutiny and thus possibly open to change. Thus even a relatively conservative response to the ecological crisis will present opportunities for significant change. Beck's risk society thesis represents considerably more possibility of societal change than does the eco-modernisation thesis.

In terms of theory, a better treatment of power patterns in discourse is essential to a better (more attainable) model of democratic debate. The recognition of multiple rationalities and multiple and diverse discourses at work is the first step. A *pluralistic* response would then be to allow all discourses and rationalities to 'fight it out' and see who wins. A more *corporatist* response, and one closer to the common good concept in deliberative democracy, would be to strive to minimise the connections between discourse power and structural power, thus aiming for outcomes that are believed to have been achieved through argument rather than deployment of resources. An ideal that accepts the inevitability of power but that can distinguish between essential discourse power and corrupting structural (or resource based) power would surely stand a better chance of making a connection between current actualities and ultimate objectives.

What are the implications of this in practice? Assuming that one's objective is enhancement of democratic participation, then I think that the short term goal is some kind of separation of resource power from debate processes. Or rather, I should really say a minimisation of the influence of resource power, since the

connection is fundamental. Thus I would argue for a process of opening up science to more 'post-enlightenment' modes and look for ways to utilise experts in the face of uncertainty rather than to defend claims of certainty. In some ways this would probably diminish the power of traditional expertise by questioning its legitimacy, but it could be seen to have the potential to enhance its efficacy in terms of quality of outcome. At the same time, institutions wishing to foster democratic participation could consider providing resources and contexts for counter-expertise to flourish and empower life world voices. The aim here is for active rather than passive design of public spheres, where the state intervenes to try to ensure a balanced pattern of power rather than leaving it to fate.

As always, simplistic assumptions about the irrelevance of power effects tend to favour existing patterns of dominance. Claims that democratic participation in a debate such as this is working well obviously favours those who are currently benefiting from what I believe I have shown are the clear defects and consequent imbalances. In a risk society context, knowledge becomes more central to society and to decision making, and so interactions of knowledge and discourse become crucial. Only through a more active engagement of the problems raised here can any goals of democratic enhancement be attained. Good democracy doesn't just happen by itself.

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APPENDIX 1 ABBREVIATIONS

BMA	British Medical Association
DELG	Department of Environment and Local Government
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
FSAI	Food Safety Authority of Ireland
GE	genetically engineered
GMO	genetically modified organism
GM	genetically modified
IBEC	Irish Business and Employers' Confederation

APPENDIX 2 DATA SET OVERVIEW

Interviews

	Interviewee	Description	Category
1	Owen Ryan	DELG Official	Official
2	Fiona McMahon	FSAI Official	Official
3	Tom McLoughlin	EPA Official	Official
4	Bernie McGonigle	Genetic Concern Activist	Activist
5	Jack O'Sullivan	Environmental Activist	Activist
6	Clare McQuaid	Environmental Activist	Activist
7	Clare Watson	Genetic Concern Activist	Activist
8	Jo Goldsmidt	Genetic Concern Activist	Activist
9	Kevin O'Sullivan	Journalist	Journalist
10	David McConnell	Academic Geneticist	Academic
11	Patrick O'Reilly	Industry Representative	Company Representative
12	Mary Ann Bartlett	Animal NGO Representative	Activist

All interviews (except Number 10) were recorded to tape and then partially or fully transcribed as word processor documents. Interview Number 10 was recorded by hand written notes.

All interviews were conducted during 1998 and 1999.

Interviews 1 to 3 were conducted in connection with the ELSA Project mentioned in Chapter 1.

Interview 11 was conducted jointly with another PhD researcher .

Interview 12 was conducted by another researcher and the transcript was made available to me.

Debate Event Observations

Event	Description	Date
Bernie Malone Debate	Debate organised by Bernie Malone MEP, Buswell's Hotel Dublin	May 7, 1999
Joe Cummins Debate	Event organised by Genetic Concern, Ormonde Hotel, Dublin	May 31, 1999
Skibereen Conference	Growing Awareness 3-day conference	February 1999
Stillorgan Debate	Parish discussion event, Saint Brigid's Parish Hall, Stillorgan	April 29, 1999
Consultation Day 1	National Consultation, Sutton Castle Hotel, Dublin	May 25, 1999
Consultation Day 2	National Consultation, Sutton Castle Hotel, Dublin	June 3, 1999

All debate events were recorded as handwritten observation notes and then partially or fully transferred to word processor documents.

All media articles, official documents and leaflets are as referenced in the text.

APPENDIX 3 SAMPLE DATA

Sample Interview Transcript

Interview with Clare Watson, Dublin, July 1999

I Well thanks for taking the time but em I was explaining last time what I was doing I'm kind of interested in what started out as a road of expertise in the debate and how what you would call non-experts would perceive experts and stuff like that but obviously as time goes on it's a bit fuzzier than that in a sense and you can't clearly define various groups like that and you can't even define experts that well depending who you talk to but really I'd just like to talk to you to get kind of the general background of your role in the issues and I kind of have a few questions some are about the history of the movement or the issue and some maybe a bit more about just your personal interest and how you came to it and stuff like that. So maybe we'll just start at the very beginning I know you were an active environmentalist before this issue came along, so were you an environmentalist by morality?

R By birth I think (laughs) I was brought up on an organic farm in Cork so from an early age my parents would have indoctrinated us and they were very involved in the setting up of IOFGA, the organic movement and then they were kind of key in the campaign against Sandoz down in Cork which is now Novartis and I guess I don't really know where it emerged initially when I was a kid I had more interest I always wanted to be a nurse and had more interest in kind of social issues and I went to college and did social work and then I went travelling for about three years and I was working in different jobs in different countries and then when I came back I was working for five years in AIDS education projects and then drifted I think probably more than consciously moved into the environmental world I ended up getting a job with Green Peace in Ireland and em I was still doing some AIDS work but then it just, that kind of peetered out and I moved into working in local campaigns I was involved in Dunlaoghaire Harbour Action group and the incinerator group in Ringsend.

I Through Greenpeace or just....?

R No actually I mean Greenpeace had in fact started laying off people and because I came in last I was out first and about six of us actually the office was quite big at that stage it's changed totally so there was a huge cut-back financially

in Greenpeace International so we were all laid off so then I went back to work on another AIDS project and then in fact that was only a six months one so I ended up working on a Greenpeace ship for a while and when I came back, it's a very convoluted story my mother was very ill she had leukemia and I was looking after her and then I did some work with the Arts Council kind of while I, and I went away to England for another year. Oh yeah I then thought like I suppose I always had a social leaning and I try to balance the two and my kind of like my kind of the balance of the two was working in a residential care home, it was a Steiner run home in England I did that for over a year and what interested me there was it was a combination of the two so they workman very strong environmental principles and they feed the children with organic food and they grow it themselves and there is maybe a little more of a religious ethos which I didn't really link into so much but I went there to learn how they were using the environmental principles with kids and then I had to come back for family reasons again but em then I decided I wanted to work on environmental projects and I was asked by a friend to work with the Dunlaoghaire action group and that kind of overlapped with the Ringsend thing em and I suppose you know as you kind of move through your thirties maybe that's it, you know you start to realize what is important to you and what issues you really want to focus on and I realized for me the environment was the one because it kind of takes in other things with it that if you look at socially deprived areas they're the ones that are suffering the most pollution generally and they're dumped with an awful lot of the nasty factories and projects and that if you don't kind of fight for the environment the socially deprived areas will not survive anyway you know that it's almost an underlying principle in all social change.

I Yet the environmentalists in Ireland would have the perception of maybe being a bit middle classy.....?

R Yeh and Protestant (laughs) like someone did a research on that down in Cork and like something like 70% of people she talked to were Protestant and yeh and I am I was brought up in a Protestant family and I think maybe it comes from the old ethos I don't know em we are kind of individualistic and we don't lie down easily and we don't like being told what to do but I think it's maybe a little bit more we have this work ethic as well. I don't know I haven't analyzed it strongly enough but it's certainly there ; the middle class yeh maybe that's emerged probably they had time, you know in the middle class, and maybe the middle class like maybe we owned land and we were the landowners and we were maybe closer to nature and we weren't living in the kind of social ghettos but I think it's changing now but it still is like if you go into an area like Ringsend when I worked there on the incinerator

campaign people were very much behind, I mean the locals were livid they already had an incinerator in the area and they really felt like they were getting like they already had trouble with that one and they were getting that one but like it was a huge issue because it was in their area but if you ask them now what is the pressing issue it's drugs or it's, well employment was at the time but it's not anymore you know that they have far more pressing issues than the environment on their doorstep.

I So it's local stuff basically.....

R Yeh yeh and

I It wouldn't be abstract themes

R That's right, I think it is like the environmental area is seen as a bit of a luxury still you know I mean I don't know if it's still as middle class but it is why be fussy about the environment we should be looking at the economy we should be looking at jobs you know social reform community development and very often people looking at those areas forget about the environment and I think there needs to be some sort of movement that links the two and if you look at social and environmental theorists there is a mixture of the two I don't know if you kind of read like there is a melding of the two the two em theories I think now which is a change and it's probably only in the last five or six years that people are realizing and environmental movements like Greenpeace would have been criticized in the early days for being very single focused like the environment to the detriment willl fight for the environment to the detriment of anything else and I think they are realizing that you can't say environment to hell with people you know that you do have to look at the environment within a social context and that's a challenge.

I When I was in Africa a few years ago this concept of environmental justice had just taken off as a way of linking the two....

R Which has come through the Church in some aspects I think.....

I And it was post apartheid out there and it started with cases of incredibly toxic mercury factories next door to town-lands and that but there was a strong linkage of the two like environmental quality as part of your set of rights you know.

R I mean the Ogoni people in Nigeria and that the whole Shell campaign was a good one in that it brought the two together as well.

I But looking at the various things you did coming up to you know deciding on environmental issues they were all kind of what you might call public service or social service

R always been a sucker

I there was never any sense of settling into a nice accounting job.

R Yeh and you know I chastise myself every so often for that because it has left me like I am 37 now and I would sometimes say golly I haven't actually achieved very much you know in the conventional sense of what achievement is and I do feel and I have felt like there has been well not that much pressure but every so often I would feel a bit of pressure that I'm not settling down or I'm not conforming in a sense but I know in my personality I couldn't you know if I tried to I'd get very restless and I never ever thought of going into a bank job or becoming a Solicitor I just knew I wouldn't stick in it basically and then you know I have questioned like it's chicken and egg do you go into social and environment movements because you can't settle into society and you know I mean I think people may be more extreme on the edge, find it very difficult to fit into society as it is so therefore they are on the edge and therefore they fight for things on the edge but I actually do think with me I have had the benefit of being in both systems you know I was brought up in a fairly middle class kind of culturally not financially, background and yet my parents were quite radical in their environmental activities but on other levels they were quite conservative so I kind of saw a bit of both and made my choice you know accordingly and I wouldn't necessarily see the way I work now as being completely on the fringe I try to, I mean I'm always saying that the environmental movement has to somehow move more into the middle you know obviously you need I mean there's always a you need people right out at the edge battering the door down, Greenpeace used to perform that function now there's probably more radical direct action groups doing it so you know somebody batters the door open and then the other groups fit the gap and they're the ones that liaise with Government and with statutory bodies and with the public but if you don't have the radical at the edge it's harder for the people in the middle but there is a danger that environmentalism is still seen as being very off the wall and being you know not relevant to the general publics needs and somehow that is a fault of ours and it may come about because we are made up of people who have in some

form or other stepped outside of the system and I think I'd include myself in that respect because I haven't taken a conventional job you know. People who are very valuable in our movement are people who have moved out of conventional life into environmentalism and so they have experience and the contacts from their previous life although there aren't many of us.

I They know what its like to be normal is it....?

R Yeh I mean I like to think of myself as normal but I'm sure from the outside I look as if I've just been in everything you know and this woman is jumping all over the place.

I Well I don't know my perception would be that Genetic Concern is very highly regarded in its professionalism and all that and just what you're saying there about the philosophy there of engaging in stuff you can see that in the way Genetic Concern works and its engagement with the body politic and all that kind of thing.

R That's good because I think from the beginning we were very conscious of that you know when we were setting it up we wanted to be a group that could be talked with and that we could debate the issue with anyone who wanted to talk about it and we were out there to highlight our concerns and we'd highlight them to anyone you know and discuss and I think another thing we made very clear from the beginning was that we wouldn't em we weren't there to denegrade anyone personally or to slam kind of individuals per se I mean we would be quite strong in our views about systems and about the decisions that are made by companies or bodies but that we wouldn't go for people personally that it wasn't a personal fight so consequently like it's quite funny we'd go to debates and we'd have dinner afterwards with Patrick O'Reilly or the EPA and you know in the court we were laughing about sharing our cushions with the people on the other side you know we felt we could do that like it wasn't that we were all going to stab each other in the back you know.

I So can you remember the very very first moment you heard of the concept of you probably get asked this all the time.....?

R No but I can remember it in that em, I was trying to set up you see I think, my life I had come to a stage about two and a half years ago where I realized that campaign work is both energizing and it saps your energy and it's a type of work that's very unpredictable and I had come to a decision that I was going to actually

draw back from the kind of cold face of campaign work because I was a bit tired and so I was in the process with a couple of friends of setting up this organization called Eco-link and we'd just written a book about how to campaign and .....

I Yeh I have it actually...

R And we figured that it was a way for us with our experience to kind of step back and maybe help other groups to kind of take the issues forward and the Eco-link idea was that we would be an advising and a training and a support body for environmental or other groups and we were in the process of kind of structuring that when I got a call I remember it instantly I was kind of working from my bedroom at home little table in the corner and a fax and phone and I got this call saying you've got cause we were building up a database of organizations and I got this call how's your database coming along would you ever circulate this it's very important it was from the Cork Environmental Alliance they had got word of Monsanto's first application and I said okay fax me up the stuff and I read it and it was almost like I had no choice and I knew at the time this is not what I want to do I'm moving back I'm not but I'll just do a little bit we have to do something about this so I circulated some stuff to groups I was in touch with then listened to a few things on the radio I think at the time there were two main kind of debates I remember one of them was on Morning Ireland and the other was on Pat Kenny and it came out very badly on the concern side and it was really obvious that Monsanto had I think it was Monsanto and Dave McConnell that both of them had their facts and their act together and the other side didn't....

I Who was speaking for the other side?

R There was Greenpeace it was Sean Bowler (?) from Greenpeace and the guy from the Consumers Association what's his name the top fella.....

I Not Dargan, was he there?

R Yeh Peter Dargan and it was obvious that they hadn't had time to prepare that this issue just whacked in on us and that no-one was ready for it and I mean while they did their best in the interviews it didn't come across that they really knew what they were talking about and I mean I think they knew that themselves em they did the best they could and so then em I rallied a few friends together and said listen maybe we should try and track down a scientist here and just em bring someone over and put a bit of scientific slant because at the time that's what the

media wanted and it was very obvious there needed to be a geneticist up against Dave McConnell and, Patrick, or it was actually Sidney Reid at Monsanto at the time. So I just asked around and I just happened to be at an East Timor meeting of the women who had they had been involved in battering the missiles in England and I was just talking to them and said you don't by any chance know of any geneticists in the UK working on Genetic Engineering concerned about and they immediately gave me a name and said yeh Ricarda's being going around she's been very vocal why don't you try her so we rang her and she came over then and we organized a press conference and at the time it was a very small affair, I mean the press came but it was hard to get them there and I do remember being told by one of the major well the major TV station ah sure genetic engineering isn't an issue you know what are you talking about and I was saying unless we make it an issue and you help it won't be an issue you know ah no stop asking us....so we had this press conference and we invited Ricarda we invited all the representatives of the different organizations to a think tank meeting a strategy meeting in the evening and Ricarda was telling us what was going on in the UK and at that Genetic Concern emerged there and Quentin came to that meeting he had been at the press conference and he had been doing his own work within the health food association and on the health food level checking out GMO free sources of foods and things and had done quite a lot of campaigning with the em suppliers and so a lot of them at that stage weren't supplying genetically engineered Soya to the whole food or health food trade so he was really gun-ho and he came to the meeting and there were a few others and so the nucleus of the group emerged from there and we just decided I mean, at the meeting probably it was, you know all the organizations admitted they were bowled over with their own work on other issues you know particularly Greenpeace and Earthwatch they had so many at the time had so many different angles and em my thinking like a few of us said we really realized and I'd learned from other projects that I had been involved in that particularly if you're setting up something new it should be single focus that there's a real danger in setting up an organization and saying it's an environmental group because what you do is you attract every little environmental problem from around the country and you obviously disappoint people because you can't do anything properly if you take on too much so we decided pretty much at the beginning that we would be genetic engineering and that's that and so we had a strategy meeting early on we spent a day kind of working out what we were campaigning for what were our boundaries you know and I think that happened a few months into the campaign because we realized the enormity of the issue itself never mind looking at other issues so we made it very clear at that stage we worded this we aim to highlight the dangers of genetic engineering in food and agriculture we weren't

looking at medicine we weren't taking on cloning we weren't taking on animals so we actually took what was, was feasible to campaign on and at a stage we did a bit of work on the patenting directive but after the first kind of tranche around on that we realized well that we didn't have time to look at that properly and Voice at that stage had emerged so they took on the patenting issue.

I And would those priorities reflect your kind of moral political priorities as such that food was more you know like that it was worse to mess with food than medicine or something like that?

R Yeh I mean I think that the thing about medicine is that you actually have a choice as well you know that if I'm sick, okay if you're sick your choice might be limited in that you take whatever's coming but like I do have the choice not to accept a xeno-transplantation or I don't want that particular type of medicine because of how it was produced you know and the testing procedure seems to be well a lot more rigorous as well and it's more independent so from those two points of view medicine is actually different whereas food is literally being pushed into our food chain that we as individuals can't avoid it you know we don't even know it's there to start with and then it's kind of difficult to avoid and then I personally I suppose if I was to look at the different concerns I mean like there's different there's health there's environment there's socio-economic power of multi-nationals etc there's the effect on the developing world and I suppose the strongest one for me and maybe it's because of my organic background is my environmental concern em but I know for Quentin for instance for him it would be the health concern it would be the biggest for him and for others in the groups would be really the effect on the developing world and then the power of multi-nationals actually I'd see that as well and globalization but the environmental one for me I think is key because it's so irreversible if it goes wrong, I think ok a health problem is a health problem and some people unfortunately if they get whacked with a toxin if it's created will get ill but you can withdraw the food off the food market like it's difficult but it can be done but if you screw up the soil micro-organisms or if you have cross pollination with wild species like short of shaving the earth I can't see how you can actually amend the problem that's created. I think from an organic perspective as well this whole element of choice is so important like my parents very early on and I mean really early on they were the first Irish farm on the English WWOF, willing workers on organic farmers list and we were probably the first Irish like it's a small holding it's 15 acres but we were the first Irish family kind of involved in the setting up of IOFGA the other people were all German or Dutch or English and so from a very early stage they made the choice to step outside of the agricultural system

knowing what they were doing I mean obviously there were other farmers doing traditional farming without chemicals but they weren't actually doing it with a political kind of educational aim, my parents were very clear that they were trying to educate people and people thought we were bats you know but they've chosen to take that route and with genetic engineering for people if it becomes widespread you won't have that choice anymore to avoid genetic engineering you know and that to me is a fundamental right particularly around food as you say cause food is so intrinsic you know I mean there's food air and water and if we screw either of those three we're..... up the creek

I You can curse on the tape

R Its not live radio anyway can I just get the tea I'll keep talking I mean the interesting thing is they say world wars are going to happen around where water is possibly but I mean food security is going to be another thing you know control of food I'm sure is going to like it already is with famines and political upheavals food is inevitably the one that kills off the general population but the power of multi-nationals is a much harder issue to grasp but from a political perspective you just see how it's eroding the individuals choice again because you vote in the politician and if the politician isn't having much power because the companies are taking it over where can the individual have his or her say and I think that for some reason genetic engineering which is quite fascinating it brings all these issues together you know it em it covers whole spectrum of different issues and it really does probably it's one of the most obvious environmental issue that looks at the affect of globalisation, and I think that's a real challenge to Governments and you see it with the Irish Government at the moment I heard this very interesting lecture don't know if you heard it Thomas Davis lecture two nights ago and it was Edward Walsh talking about Science and Technology and the need for em more research and development and his whole thing was about how important it is for us to have American multi-nationals in the country you know and the em.....

I That he was saying it was good to have them?

R Yeh I mean he was saying how great it was that them came in in the sixties like it was interesting for me to listen cause it kind of gave me a better understanding of where these kind of, the pro-genetic engineering people are really coming from in terms of history they went through the Irish psyche you know after independence and he felt that we were totally introverted and culturally obsessed so we didn't take advantage of the technological leaps in the sort of after the war

and what we did was we waited for the multi-nationals to come in and we enticed them in and they gave us all jobs but basically we were the serfs still by giving cheap labour and that was what we were offering and then he said was what we had now was the problem that multi-nationals are very mobile and they'll go for cheaper labour and what Ireland has to do is produce well skilled labour and not just cheap labour which we can't anymore em so we should go into research and development and the two key areas within science are information technology and biotechnology and he said I have reason to believe that the Government has committed themselves to this approach i.e. I mean they were giving funding or whatever but I mean he felt that we needed now to continue harnessing the power we need to keep to multi-nationals here whereas our theory is that the multi-nationals are part of the problem you know and that they are fuelling globalization which is taking away the power from the people and that that is not what's gonna keep the Irish economy going we need to look at indigenous employment indigenous projects think local eat local buy local and that's where we are going to become independent even if we have the most skilled workers in the world if biotechnology collapses and we have got 10,000 phds working for Monsanto, you know that's no good to us cause we have no control over that we are still being controlled by the world market whereas if we look local and look within our country then we can survive any future disasters so if oil does disappear within the next 100 years then we may have set up a system that can deal with that whereas if you go with the multi-nationals you're not looking far enough ahead to be actually able to deal with any problems that like I would believe that they are going to I can't see how we are going to avoid them. And what was interesting was that he didn't say like I mean I was listening to him and I was there oh fuck biotechnology why is he not saying alternative energy or lets look a little bit further ahead you know we're just following the posse and alternative energy is where Ireland could really make a mark you know because, but again we'll buy in from Germany at high cost and you know we won't have actually we kind of seem to only look ten years ahead rather than saying okay lets be really radical lets go organic or go local or maybe it doesn't have to be purely organic it could be a mixture but phase out and look at thirty or forty years down the road.....that's not possible.

I But then you're saying that you know the GM issue raises all these things, which makes it interesting and I love studying it, but from your point of view does that mean that if like you're not just saying get this off the shelves you're pretty much saying lets completely redo the way we run our world.

R Well I think it's a very hard one because you have to give a simple message to the public like if you come out with something very complicated like genetic engineering is so complicated and we're have a real problem trying to translate it into useable language for the public and if you start putting in all the different angles then it is very difficult, but on the other hand you can't avoid them time again we hear from people maybe more in the middle of the road to be honest what we get in our public meetings is a lot of people who are very much against and it's from a gut reaction and they're saying just don't like it don't know very much about it but don't like it and in Mallow garden festival last weekend it was incredible the increase in people who actually knew what they were talking about they weren't asking what is it they were saying it's in the soil and maize and oh God, and they were rushing to sign our petition but they're coming from a gut perspective but what we need is sorry so they're kind of on this edge they're the 10% they're moving the critical mass hopefully 10% who are moving away from it. The people in the middle will say to us and you see them more the kind of the University lecturers and we meet them I don't know sometimes if we're out in the streets and they would say well not against genetic engineering I do think it has benefits but very often some of them will be scientists but I am worried about the power of multi-nationals and what we say is well you know you can't have one without the other at the moment they are stuck together like glue and scientists have to address the power of multi-nationals you can't just trundle off with genetic engineering that the two they're going hand in hand and there's no way at this stage that they can be extricated because there's money for a start and the multi-nationals are way ahead of any potential government research so em you know the challenge for us is to try and get that message across but it is difficult and I don't think that we've really hit it and you know and we are looking at the moment in genetic concern we're kind of spending the summer doing a rethink and we have got Jo and Sadhbh and we're kind of developing the campaign expanding a little bit so we're looking where we should go with our message and do we stay there or do we widen a little bit the trouble is what we would love is another strong campaign group to look at globalization and then we would work with that organizationm I mean in an ideal world that's what should happen so that we can continue focusing on the specific issues around genetic engineering that would concern people and then there would be a globalization campaign and we would then link in with them and share information and that where appropriate they would mention genetic concern, and genetic engineering and we would mention globalization but there is a real danger you see if you campaign on globalization with everything else that you totally confuse people you know it's a hard one but you can't avoid it either, so we're trying to work that one out I mean the other one is the affect on the developing

world and we have been in touch with trying to get the developing agencies kind of moving on that one and they have they did produce a joint statement last year but again they're all so busy with other things but they are now it's interesting if you look through their literature they are it is certainly there as an issue for them and it's a possibility that we've actually got a grant from NCDE to do some sort of a public information on the link with the developing world so I think we're going to be working with the developing agencies on that early in the new year but that's another issue I think that does grab people and it's an argument that's used by the other side that we're going to be feeding the world and it just needs to be nipped in the bud and I think it has been to some extent but they're still saying it.

I They do seem to have pulled back from it a little bit.

R I mean it was Patrick O'Reilly said he knew it wasn't a runner and I think he's been told to say it, but anyway

I Yeh and of all of those kind of categories of issues between developing world environmental health and so on and in terms of relatively non-involved people who come up to you at petitions relatively not involved or totally not involved or anybody you meet what are the issues that click with people?

R I think probably health first and environment second, seems to be, like it is interesting there are some people who would say you know I don't know about this health thing but I really do worry about getting it out in the fields but probably the majority it would be me fein how am I going to get sick from this you know my children like the fascinating thing and it was very evident in Mallow that it was women signing the petition and it was and there's no doubt probably more-so I mean in the environmental movement per se there would be a majority of women but it's not I haven't seen it as obvious as in this campaign and it's almost like we come up with a gut response to it you know and we are the ones that are feeding children and responsible for producing food at the table still and em it's an instinctive thing like I wasn't at the stall in Mallow when this happened it was one of the other women told me em a husband and wife she led the way to the petition sheet and he said don't sign that, don't sign that and she had already started her name and she finished her name put her address and walked off and he really didn't want her to sign it but she did anyway.

I We were talking about that last time I was here people in Ireland have an aversion to signing petitions in Ireland don't they, putting their names down.....?

R That's why I was so amazed and the other thing was they took our car stickers it was quite fascinating we could not for love nor money get rid of our car stickers were kind of oh I don't know it was almost like they expected to get a stone in the back window if they had one on you know and em all our car stickers that we had there a whole roll practically went.

I And people going to Mallow were they organic people or just gardening people?

R Gardening people like it was a mix because it ended up I mean I think probably it ended up like the first few days I think it was the gardening enthusiasts and the ICA like there were groups of women emerged and one of them I was just talking to and they came with the ICA so I presume the ICA groups from around the country went and there was a few bus loads of mainly women to start with and there were a number of farmers but em by the over the week because it became the thing to do I mean by Saturday and Sunday it had become just another show you know everyone was there mothers sons grannies and the kids and there was a lot of different things going on so it was actually a festival event which I think drew many, everyone so by the Sunday it wasn't just the gardeners and on the Sunday we got loads of petitions on the Sunday it was very interesting and for us it was a real eye opener like I must admit I went down you know standing at a stall you get one out what is genetic engineering, genes, and we had none of that they all I mean we had conversations like where is the court case going to go oh yeh and the soya and the maize and like they had it, it was very interesting and they all went like we had our petition at the corner of the table and we did have signs one of the days we didn't and the other days we did have signs you know sign our petition, and it was the same amount going to the petition regardless of whether we had the signs up or not it was quite interesting they saw it there and a B-line you know and you could hear like genetic concern ah I must sign here, and some of them scrutinized the wording but some of them they just went and signed and we talked to those and gave them membership forms and things eh but it was interesting I think there has been some of a sea change but it was predominantly women.

I Are you finding that it's a general trend over time that awareness is better and people are more clued in?

R Yeh, I mean I don't think by any means like if you went down Capel Street there would still be a high ignorance but I think they know what the word genetic

engineering means now I think there'd be very few people who would have not heard of genetic engineering which is a start and then you would have you know there's this what's the theory I always forget the name of it you know when you have 10% of a given group thinks one way then everyone else will follow...

I Okay like early adopters

R Yeh I'll think of it eh Critical Mass I think we're almost its interesting I think its almost we're nearing that 10% in terms of people whom actually know the issue and are really concerned which we thought we'd never get to in the beginning because it was a bit of a struggle but the other interesting thing about Mallow they had em the stands were very mixed and it was a decision of the Cork Committee em and I mean off the record one of their decisions, because we asked them there were no chemical companies there and it was very interesting and we didn't know any of the organizers I mean as it transpired there were a few people there that we realised were on different committees that we did know but this came to us out of the blue that this was happening and they had invited all the NGO groups and there was a special tent and there was an Eco village sort of thing set up where they had all the crafts people where they were making the patches and all this coppicing and they were all doing their home trades in a particular area in the show ground they had a huge craft area they had I mean one thing which was just set up by a bunch of artists it was this tunnel that you went in and it was so funny it was a real piss take on science actually and it was very much focusing on the potential of genetic engineering so you walked through this sort of huge flowers all over the place made out of sort of aerated plastic and then you came into another area and they were growing trees with human ears on them and then other flowers that grew money like we don't have to worry about working anymore because we can now create money and for them it was just a thing that they were putting out cause we talked to them afterwards it was a challenge to people and they said that some people were really annoyed because they thought they were pro-genetic engineering others were really annoyed because they thought they were denegrading science but they felt they needed like it was an issue on the day and they felt they wanted to put it out there and challenge people to go you know and we don't even know who they were like we got the name of some artist who did most of the props but em then there was in the garden stands area there was a tao (pronounced tayo) garden made out of wood and you know there was it was just a real mix and the chemical companies weren't invited which was very interesting cause we thought they'd all be there with their weed killers you know not one of them was there and it will be very interesting to see if they can sustain that

because it was such a big festival it was huge and they lost no money on it, it was amazing they thought they would lose quite a bit in the first year they em it'll be interesting they'll get hounded by people wanting stands next year so whether they'll be able to sustain that policy like they did tell us off the record so I don't think it was a clear written down policy that they've told people so anyway we found it interesting.

I Which might come up now that people have noticed it?

R Yeh that's it.

I Can I ask you about you know one of the angles like we were just talking about what issues clicked with you and what would click with people one of my interests is you know when people are debating the issues and trying to persuade one another what kind of works and what doesn't work and what things people respond to or even how do find a process of debating with someone who's off a completely different view and things like that you know?

R It's very hard I mean I think that's why we were so disappointed with the government process you know I've talked to a view conflict resolution people I mean there's a company in Dublin and em obviously the place out in Wicklow em what's it called the Glen...yeh I've been there for workshops but they do a lot of conflict resolution work around the North and Peace and Reconciliation and things and we are fully aware that genetic engineering is polarized you know we are on one side and there's the industry and science, some scientists on the other side and em we were fascinated I mean we thought the best brains I mean naively while we were quite cynical about the length of time it was taking this process to actually happen somewhere in the back of my brain I was thinking it must be because they're thinking it through and the cynical side of me was saying it's because they're fobbing it off and they're hiding but maybe, lets give them the benefit of the doubt and maybe they're working out some clever process to get us all together you know and it is no easy feat like we go to debates and it is one side against the other and it's up to the public to make their own decision and it's pitted, and that works for debates and people can ask the questions off both sides and then they can go home and make up their own mind but in terms of trying to get a consensus of where Ireland goes forward, it's a much more difficult process and em what we had on that Tuesday was an insult like I just sat through it I couldn't even participate I felt sick you know it was I just thought this is amateurish this is shite you know someone piping up and saying my child is aagh and someone else from

Monsanto saying ugh and I mean listen if we'd done that like everyone could have stacked thee audience you know they weren't even clear on how many people each group could take like we were clear we didn't stack it like we were told we know you're a big organization you're leading the thing you know bring a few you know okay there's no limit we did put it out but we made a decision ourselves we didn't want to bring any loolas you know so we wanted people who were going to participate responsibly there so we didn't have a hell of a lot of people and em it was em I just.....there was no.....like I don't know who's fault it is I don't want to blame any people I think there was just such a limited amount of thought that went into it and preparation and probably finance I mean I'm sure it all comes down to the good old pound that they weren't given a proper budget but I did think, and even at the end of Tuesday I was thinking these chair people must have skills that are going to bring us all together I'm amazed that we've come to five thirty and we still haven't got our issues but we were told we would have our issues by the end of the day which we need to prepare for the next day so they must have some amazing way of doing this so when they said fuck off and go home and we'll let you know that was it you know fuck that we had put so much work into our document, that was just, we had just dropped everything and put our document together and we did sit down as NGOs and we said we can't withdraw from the process when we were given really Mickey Mouse structure to start with we must be responsible about this and we went through these stupid meetings that were uggh anyway we came up with a compromise and then we were landed with that on the Tuesday you know it was just you know I think it was very sad because I don't think that the department realized how insulting they were they don't know where we're coming from I think they think we're just balking at anything they do and they're really livid with us now because we then gave out about Dempsey going to the meeting you know but I mean our point was he had two and a half years to prepare and we're the only country that doesn't have a stance you know the usual bloody Irish stance that we don't have a policy, but its not, and he's blaming us well you held up the process you know but we held up the process because what they offered us was so awful that they didn't put any thinking into how to put together a good process you know I mean they know or they should know where we're coming from you know where NGOs come from they've been dealing with them for long enough but maybe they haven't been dealing with them maybe they've never actually really tried to look into how we operate or how we think.

I Well I don't know that they've ever done a public consultation like that I think that's certainly an issue you know that they've never held a consensus conference you know what I mean call it that in the sense that they were looking for

consensus em you know I think you could certainly see that, you know people were new at this or whatever.

R But listen don't lets practise on such a serious issue I mean Dempsey is now saying I don't know if you saw his press release we can em well there's only one copy but I can show it to you he was saying that you know how dare we be so hypocritical and so I don't know was it if it weren't that this issue is so serious it would be laughable our approach is what he was saying that's exactly what we're saying that their approach is laughable and this issue is so serious you know and I mean I would have thought you do something first time then you draft in experts you know there are other people who have organized and in other departments they have organized fairly you know I mean look at what's going on in the North there's been huge brains involved in that whole process you know and so there is expertise and skill around I mean if you can get people in the North sitting down around a table and getting a peace agreement you can get people around the issue of genetic engineering but I think they just I think they didn't rate is as important enough and they didn't put the budget to it and somehow or another they couldn't get the budget together to put towards it and they dumped poor old Owen Ryan with the job of organizing and it's obvious he's never done it before. But I mean with half a brain after Tuesday in mind would have seen that it wasn't going to work you know and then when they came out I mean we had to hassle them to get the agenda by Friday night you know most people got it on Tuesday in the post.....

I Yeh I got it on Tuesday or Monday .....

R Yeh and when we saw it a. the enormity of it was just cause we had been told and I know what we had done which people could criticize us we did make the point that you can't just hone it down to environmental stuff so in our talks the first day we did find it hard so we did bring up other issues but we knew.....we did that just to make the point that there are wider issues here and they have to be discussed but we did it in the knowledge that it was all going to the directive, discussion focusing then on the directive and on environmental issues so we felt that they would take out of that what they felt was relevant for those two areas you know and we when we looked at the agenda we realized that the speakers we had lined up were totally wrong you know nothing for Joe Cummins to do or very little for him to do in it you know we should have someone with a good economic background we knew that we were being judged as just being flaky NGOs we were trying to get experts in you know this thing of who's an expert and em you know like

Friday night giving us the agenda after us hassling to get it you know what can you do.

I Even looking at the second day I don't think their idea was that you were going to being in experts to raise new substantive debate I think it just seemed designed for the sound bite you thrash out a few issues again and stuff like that.

R That's right. Which is actually like what hasn't happened in Ireland is an in depth evaluation of all the issues and all the research that's around and that this was the opportunity to get all sides to being their evidence with them and have it totally cross-questioned and em, what, Quentin was livid with they weren't even given a chance on the first day to respond to comments that came from the floor on things they said there was no recourse even to that little extent, but there was no backing of the facts from any side you know we could have said anything there and then we began to think this is just going to go down to the gut reactions of the four chairs you know and that that's the real danger and we all know what happens we're all in here because of gut reactions as our people on the other side, we work in paradigms and my paradigm is you know look go down the think local act local em blah paradigm not eh...holistic thinking and the scientists and the industry that we come up against would be very anthropocentric, and man has the power over nature like depending on which paradigm they come from that's how they're going to make their decision and that to us is arseways and I think, we made the decision that like we pulled out and we were very clear that we were possibly going to get egg on our face because people would say that you didn't even sit it through and Monsanto did say well cause it's not going your way you pull out but we felt that we were representing the public and we analyzed the process so far and we said is this reflecting the publics interest and we said definitely no and the other thing was if we continue to the end are we really like by finishing the process then we are really going along with the process we are almost giving credence to the process by being part of it so by those two counts we realized we had to stand up and say we can't continue it's too much for it like and I think some people like the department felt that we should have continued with it and now what they have done is interesting they said you're still in the process.....so much for choice you know we'll take your submission and we'll take all the points you made on the first day you know which is a fucking joke cause we said well the submission was written a year ago a lot more stuff has come up lets be honest and realistic look at all the research the Monarch butterflies, the this the that, the list of things that have come up in the last year like you can't do that and the other things they've said in Dempseys press release or no it was a Dail question from Joe Higgins now that

dialogue has broken down how do you feel that you can come out with a realistic report or something from the consultation process oh no dialogue hasn't broken down we are still in dialogue , em Genetic Concern...and that underlines their attitude which is actually quite patronizing I think oh yeh yeh we hear.....

I But I suppose from their point of view they just want the process to have that sort of legitimacy to have credibility but what you were saying there that you know one of the reasons you didn't pull out was that it didn't reflect the public view how do you gauge that or how do you.....?

R Well yeh I don't think it was that it didn't reflect the public view it was that the process didn't do justice to the publics involvement that it wasn't a process that actually included the public effectively and the public probably at that stage through us like we've always said that we wanted a consensus conference which again you know all these things are a risk like it could go either way but you would picking complete members of the public over age range or whatever or however they work it and that you would be giving them all the information and its done over a period of time and that they assimilate it and they read stuff and they have their few weekend workshops and it's a protracted sort of occurrence but we felt from the beginning that this wasn't an easy one for the public but then we decided well the public would have to be represented through us and that, we would continue with it in that guise but when we realized we weren't happy with it and that we would be doing a disservice to the public by continuing you know but it wasn't necessarily the publics opinion but in a sense like the interesting thing you see there was no NGOs emerging supporting genetic engineering, you know there never is but if there was a huge movement from Joe soap on the street about this issue what's to stop them setting up their own NGOs and they would participate in the process you know like it's all coming through establishment and industry so I suppose we can't but say we're reflecting public opinion as it is formalized you know.

I Well I suspect that has worked in your favour in terms of public perception to see that you're standing up to the Goliaths and there is certainly power imbalance I think by any measure except maybe in the messages you have very strong messages that may have resonated on people like as you say mothers feeding things to their children and things like that which is a very strong message to give to anyone, I mean the amount of times I've seen Darina Allen start a speech with I'm a mother and that kind of thing.....

R And people can immediately identify with her.....

I In some level and then a kind of a rational scientist will dismiss her and say that's not science, it's just emotive.....

R Like this thing it actually drives me mad you can only make decisions on scientific grounds you know that is a complete way of alienating 95% of the population and they would say it to us I mean Dave McConnell is classic he drives us all mad poor old Dave McConnell , I mean a lot of the other scientists we were fine with but we drive him mad and he drives us mad there's just this ugh.....he just has to open his mouth he is so patronizing he'd always say ah this is just typical Quentin doesn't know what he's talking about I mean for instance he said that what's this it was Quentin called something an enzyme instead of a protein or whatever, ah he can say that and what does he know he said to me was Clare I do think you're wasting your time you should be working on something important like smoking and he just he is an example of the patronizing nature of some scientists that they feel that they've done x amount of years training he's been in for 25 years he knows it inside out and he knows it's safe and it's a 100 it's not just safe it's a 100% safe and I mean like people like that have been caught out in the past he's got no sense of humility and self analysis and I mean I would look at that man and think that guy and if you want to get a bit spiritual that guy needs to do a bit of inner work because he is hanging onto genetic engineering as his whole identity and it is him and he needs to be on all these boards as well you know he's got a lot of stuff on his plate and you know no-one can say something is 100% safe and he's mad to do it.

I He's about the only one who does give that much strength to the message even among the pro-science community or the pro-GMO community or whatever...

R And it's probably good to have him out in the front cause he's easy then to kind of dismiss cause he's so black and white about it I don't know why they let him but it's interesting that he wasn't involved in the process...

I I don't know that they let him as such you know that what's striking about that side there's quite a lot of individuals who in general lets say in the direct sense don't have a vested interest no-ones paying them to do it or out essentially campaigning for this issue you know quite a few well I suppose the vested interest in the sense they're usually from University departments and something and that is their area of research and they don't want it banned or whatever else but it's interesting, that coalition you know.....

R That's true they know off each other and they meet each other at conferences but that's probably it whereas it's easier for us to get all the NGOs together and come with up with a common position for them actually probably for the scientists we were wondering how that happened how did they pick the two that turned up for the process but em and I do knowing that like people like Catherine Adley you know and what's his name Whittaker, he went a bit radical like he apologized to us after that.....

I He was even stronger on the second day I must say I think he was just feeling a little, embattled by the process or something.

R Because he was on the radio with Sadhbh and he apologized to her afterwards saying that he realized that he had overshot the mark on a few things that he had said and em you know he realized he had made some mistakes and he made some wild assumptions and somewhere along the way he had said that Quentin was earning something like a million pounds from the organic industry you know I mean I don't know where he is coming from and all of that it's almost like someone had schooled him like he was the one who brought up these newspaper headlines and you know Frankenstein this and that and it didn't seem like him it was very strange but I think his wife must have got to him afterwards because he was very chastened you know or he must have got hassled but I do think there are more people like him and Catherine Adley who and there's a few others who do genuinely believe in the science and they do genuinely believe that it does work and that it has benefits and they will say to us, I mean Catherine has said to me she eats organic you know she fully understands the need for organic food you know and that they but I wonder how much like I suppose we look that way and they well maybe they have looked that way and they found that it totally was okay you know.

I But you were saying earlier on that when you first got involved that your very first press conference involved bringing Ricarda over to give the science side and to chance the science so how does that fit with basically saying you don't want this to be about science you know?

R That's right like it's very interesting I mean when we were ringing the media and trying to get the media there their first thing was well have you got a scientist to speak it was interesting like that went on for a year or more year and a half you know and Quentin did one or two of things and I remember he was up against like

David McConnell who lambasted him on Marian Finucane and you know they always wanted a scientist and when we couldn't come up with one very often they didn't do the piece it's quite interesting you know and we picked that up very early and we knew that there had to be a scientist and particularly because David McConnell was out in the first, because it had to be someone who talked his language and that this was the level that the media felt they wanted to be dealing with it responsibly and I think they also felt disempowered, so they didn't want to be caught in a situation where they weren't putting up like with like otherwise they would maybe then have to get more involved in the debate or in the particular interview but that has changed and like we would say to them you know Quentin's here or we'd have our few people but we couldn't get people to speak I mean that was the other interesting thing that in the early days no-one that we were in touch with on our committee everyone was very reluctant to take it on board because we all felt and myself included we all felt disempowered by the science of it which is a huge part of the campaign this sense of disempowerment it's only now that we've got over it I think in the last six to eight months and now they ring up genetic concern and okay genetic concern speaks they never ask us for a scientist anymore, I mean every so often we bring one up and it's Joe Cummins em was there and that they don't look for it and I think that's sign that the issue has now moved more into the mainstream and they don't feel that it's just a discussion between scientists but we had no choice in the early days, its quite interesting but I mean they dropped things if we said we couldn't get a scientist.

I And how does poor old Mr. or Ms. public react if it's kind of two scientists talking about or expressing an opinion.....?

R Listen I think that some of those early discussions went over their heads because they didn't understand a thing and it's been a challenge for us over the last while for us to translate it you know but I think what it does there is like what needed to happen at the beginning and that's why the scientists had to be brought in probably from a media perspective is you have to lend credibility to the other side of the argument as well because with Monsanto and Dave McConnell were saying like these people don't know what they're talking about they said we have researched this for years and we've done x,y,z and in St. Louis and we've done all the appropriate tests and it's proven to be safe so having one of us come and in and say oh no we think we've a gut feeling that it's not safe then it doesn't lend credibility to our side of the argument and to be fair to the media I think they wanted our side of the argument to seem credible from the beginning as well so they had a good balance, and by us bringing in the scientists it meant that we could say and

we still say it we say listen we are getting our advice from trained geneticists you know we are they are telling us that there is x,y,z wrong with it its not just us making it up and so you do unfortunately have to fall back on the science because that unfortunately is where the argument starts you know.

I But that still hinges it on the safety issue, as you were saying earlier somebody else might say but I don't care whether it's safe or not I'm worried about say globalization and the developing world and stuff like that do those issues essentially get pushed off because it's all, it does all seem to be about safety even still?

R Well do you know what is an interesting thing and I think you'll see it with genetic concern like Sadhbh is going to become well she is already becoming our spokesperson and Quentin when he's around he'll do some things but we're trying to you know you need to have a change of blood but Sadhbh would come with a totally different paradigm like her interests or background is more on the social side and the developing world and food security and globalization and all that so I would say in her debating that the arguments would widen now and when there's a scientific brain needed Quentin will come in because he's got a good grasp of all the scientific issues so we will be chopping and changing and we actually have a couple of other people like this woman Eleanor she's done a couple of debates now and she would be coming from the community development perspective and em I think that's going to be challenging for Monsanto and the time is right for them to be challenged on those aspects you know because they've had it on their own turf for long enough and it should broaden the arguments.

I And do you have the power to steer the arguments like that do you feel.....?

R Em it's interesting I think we do to an extent now because I think the media well certainly in the media they would respect what we're coming up with I think well I mean obviously and I don't think like if you notice now ethics you can talk about ethics now I'll tell you if you mentioned the word ethics to the media a year and a half ago they'd have a wobbly you know we don't want to be talking about ethics it's not ethics like because we'd be saying we've got so and so we were trying to push Sean McDonagh as a priest out naw wouldn't take him they took him once or twice but no they wouldn't have him and we have some great nuns aagh don't want them and we were really trying to push the ethical side far too early whereas now we can talk ethics and em I think that for whatever reason I suppose it's just a process you know when people realize it's important.

I So even if even if you feel that you haven't, even ultimately that you'd decided you'd lost this issue or something you could claim credit for broadening a lot of societal debates I think issues like globalization and ethical science and stuff I've heard them talked about in the last year in ways I had never heard them talked about in public before you know and you know just that questioning of science and the role of science

R that's right the power of science

I and things like that and I think that's an on-going thing anyway and you can look at episodes like BSE and you know and Chernobyl and whatever else and you can see this as the next episode in that and I'm interested to see where it leads you know.

R Yeh but I think this issue has got scientists out on it more than any of the other issues probably it's again it's a process we had come in at the end of a teething process on it and now scientists realize that they have to start being more open. The danger is I mean the danger with all of that is that they would go down the PR route you know of industry that we have to what is it that Burston Marsteller said what was it..it was a wonderful phrase that we have to em it was persuading the public it was something more interesting than that, it was whatever the public but basically that you have to convince them of your argument you know so you put more flowery language on it and you can see in the States the American grocery industry they're this huge I assume they're the equivalent of IBEC or something like but they are now putting a couple of million dollar PR campaign together to convince American consumers that there is nothing wrong with genetic engineering and that the you know that there is a danger that science would go down the PR route and that they would get advice on how to make science more palatable to the general public rather than actually engaging the public in a debate on how much power science should actually have because it does seem to me just listening to a few, and your man on the Davis lecture the other night that it is again scientists still believing that they're right and that their like what they're doing is paramount and that they just have to being people along with them you know and they don't actually understand that there are actually people like us who actually do question how much power they should have because we're not altogether sure that it's the right way to go down you know.

I It is interesting sometimes to see when people talk about educating the public, its, education is kind of a bit of a euphemism I think when they say we want to educate people so they'll know how great this is or something like that....

R So much for education that's indoctrination and I think that's what I mean there'll all regrouping now with this defacto moratorium and with what's going on in, well, everywhere they're all regrouping and their real work is cut out for them on how to convince the public that it's safe you know so em I mean it doesn't mean like when all this happens it doesn't mean that we can all pack up and go home it means we'll have a harder battle.

I So it's never going to end basically

R Yeh and I think we are aware that the next trench of products they're pushing are going to be consumer friendly and that's what they keep saying that this will be coming out and there will be a better food to the consumer and that they will have a very good PR spin on how important it is for consumers to use these products.....em....and they're moving into things like forestry that's another big area which is a little less controllable cause you don't have farmers well you do but it's big companies who are running the forestry so again it's out of the publics hands you know.

I So are you doing many debates at the moment like where you get put on a panel of speakers on a Tuesday night in a church hall is there a lot of that going on?

R Genetic Concern?

I Yeh.

R Em it comes in spates in the summer now it's quietened down but we had a burst of them there didn't we for a while but I don't think we have anything lined up for the Summer but that's not unusual I think everything kind of closes down but we do I mean we've been like we're invited to something in February the year 2000 it's this International Women's Association of Ireland or something they're very keen to have somebody on 11th of February the year 2000 and em but no we don't have a huge amount I mean we have some on-going things like these festivals like the Mallow thing you know but that's not a debate but very often we don't expect them they just turn up on our doorstep kind of thing you know.

I People basically call you up say send a speaker, and do you find them of value or do you find you're just thrashing out the same arguments in front of a.....?

R Yeh do you know what we realized when we had Joe Cummins around that it is more beneficial to go into an ICA group where the people are already there than for us to organize a talk because people won't necessarily come out per say to hear about genetic engineering but if they go to a group that is meeting anyway and has different topics each month then they'll be there and from our point of view that's better because we're getting some of the uninitiated in those groups as well whereas there is a thing with once off talks bringing the same old people the people who are convinced already and it's hard to know I mean what we would hope would come out of that is that it would mobilize people from just thinking moving to acting on it I'm not sure whether it always does but we really want to get to people who haven't necessarily made up their minds I think that's important so we're trying to encourage the ICA to do more talks for instance and the women's groups we met with the Federation of the Women's Council and we were really trying to get them to help us and to introduce us to all the various groups around the country and things.

I Yeh if anything came up I'd be very interested in hearing if I could tag along and kind of listen I think I was saying to you last time because I feel there is a bit of a gap in reaching people who aren't active on one side or the other what I am trying to do or considering doing is talking to people like local ICA groups and saying like if I brought along one or two speakers and kind of facilitated a debate and like I was allowed ask a few questions like why did you ask that or what do you think of that aspect would you be interested and that way they get the education and all that and I get to intervene a bit or something so maybe if that came to pass you might consider coming along.

R Sure no problem and we'll keep you posted I'll check with Jo but I don't think there's anything coming up now em which is good for us cause we actually we'll continue like the trouble with campaigning you try to set yourself to an evaluation period and bloody hell something else blows up in your face so last week was really busy and you know something else will emerge but as far as we can control it we're hoping to use this Summer as a kind of think tank as preparation time for next year if we're allowed if we're given the time there is a

danger that we just run you know that we're reactive as opposed to proactive you know.

I Yeh but it's hard when it's a small group given there's so much.....

R Oh yeh and you have to respond that's always been our thing you know there have been a few times just that we can't do it but we generally will stretch ourselves to do whatever we can do you know to participate em which I think has paid off because people now know who we are.

I I think yeh again it's hard for someone like me like I have been following the debate and I would have told all my friends about it and all that like I am interested in it like I wonder how widespread the message is and I think you're right that it is spreading and certainly a lot of people who have heard of Genetic Concern and whether what they've heard is correct they've heard the terminology and they have some vague idea what it's all about and stuff like that you know.

R Yeh which is you know which isn't bad really.

ENDS

Sample Debate Event Observation Notes

Genetic Concern Event, Ormonde Hotel, May 31, 1999
Speaker: Prof. Joe Cummins

About 30 people, most seem to know each other
Quentin Gargan introduces
Prof Cummins is "a real treasure" since he's a geneticist but he's on our side

Joe Cummins speaks
What is Genetic Engineering, general background
I've no objection to medical GE (except for all the money spent it hasn't produced much), but the ethics are well discussed for medical GE. In contrast, crop GE is done in a authoritarian way.
The science of GE is still quite crude, planting a gene likened to tossing a statue through the window of a museum. We don't know precisely where the genes are going and how they will act
Substantial equivalence. GMO's not heavily tested because of substantial equivalence. They're "swindlers" when they keep saying they're the most tested foods. They should be tested more than other foods, more like pesticides.
Pustzai evidence. The rats were starving because of lack of protein in the GM potatoes, so let that be a lesson: we may all starve if we ate only GM foods
Ethics, EU, WTO. The regulations say the issue should be decided on scientific principles, so that leaves no room for important ethical aspects. Also, science is sometimes bad, makes selective use of the evidence, and anyway the public never agreed that the decisions should be made by science alone
My main concerns: --spread of viruses, --use of totally synthetic genes (used because natural version patented by another company), --food allergies and auto-immune diseases, --anti-biotic resistance, Danish research showing resistance transfer to animals "it has been proven in a laboratory now so it is scientific",
My main concerns: --spread of genes, --damage to insects (monarch butterfly) "they're a beautiful animal, and one hates to see them go" damage to the living web, --side effects from herbicides, cancer among glyphosate exposees, --creation of toxins, build up in soil, University of Oregon experiment
That's my list I'd like to hear your comments

*Questions to Joe Cummins, with particular challenger marked

QUESTION 1 In GM maize there is insecticide in the cells, is there insecticide in the food part?
JOE in most instances yes
CHALLENGER the substance isn't harmful to humans, it's a lepidoptrin
JOE goes into details, stomach acids usually inactivate the toxin, there is argument on proteins, numbers of genes etc, I thinking the testing is incomplete
QUESTION 1 (again) but we'll eat more of the toxin in the future than we have in the past

CHALLENGER people say cauliflower mosaic virus is to blame based on Pustzai, how many plant molecular biologists would you have to ask to get one to support that?
OBSERVER hostility towards challenger from several people, interjections
CHALLENGER scientists are just trying to stop the spread of scientific misinformation
JOE scientists should tell the truth as they see it, we seem to be seeing a scientific Vatican at work
OBSERVER challengers colleague chips in

QUESTION 3 from 1800 to 2000 natural breeding went on, what controls were in place then?
JOE they did it by breeding, not by grafting, going back to the origins of agriculture
CHALLENGER interjects
OBSERVER challenger is bullying, much noise, someone calls challenger a smart arse
JOE talking about history of agriculture
CHALLENGER still butting in
JOE GE is not a normal progression of agriculture
CHALLENGER so what technology is a normal progression, there's nothing scary about a little bit of gene, a couple of thousand base pairs long

QUESTION 3 (again, reading his questions) what risk management can be used to allow GE, or are you saying we should never allow it?
JOE there's not enough testing, etc., mentions lectins
CHALLENGER there are lectins in kidney beans
JOE more comments

QUESTION 4 you have to boil kidney beans to make them ok, my concern is the narrowing numbers and ranges of foods, and also the increasing allergies, "I'm very

much against messing with foods", spelt and wheat, I'm the first woman to speak here, I'm concerned there's not very many women speaking, I'm not going to have children but anyone who wants to better not eat GMO's
OBSERVER she goes on a long time
JOE wheat gluten gene being put in other crops, but where does that leave coeliacs?

QUESTION 3 (again) re virus spread and hepatitis, what crops is it and what viruses
JOE the cauliflower mosaic virus promoter
OBSERVER interjection from challengers colleague
JOE responds to challenge, gives some details of the promoter and enhancer, new and unique viruses being created, that's my concern
QUESTION 3 but what crops
JOE many crops
QUESTION 3 but not in field crops
JOE yes in most field crops
QUESTION 3 is this virus gene the same as the hepatitis virus
JOE its related
QUESTION 3 but not the same
JOE the cauliflower mosaic virus attacks the human liver, but "bacculo virus"
QUESTION 3 how is the virus killed
OBSERVER questions seem very leading towards pre-set ideas
JOE baculo virus is hard to kill, there are danger out there, people hearing about them don't go screaming into the streets in the real world, we need testing, I have no moral objections to GE though I respect those that do, but I have no faith in the safety

QUESTION 5 I'm a scientist. We're not all brainwashed, we don't look down on the public. We have peer review, so how should we police GE
JOE I think these foods should be tested as much as pharmaceuticals or pesticides
QUESTION 5 you were challenged on the radio because an example you used was "only a small scientific experiment" said the Monsanto man. I think you're balanced

CHALLENGER When did you last do an experiment or publish a paper?
OBSERVER some dissent from audience
CLARE WATSON I'm watching this, your carry on is typical of what we see from scientists, you're so aggressive

OBSERVER Challenger is trying to interrupt Clare, but she is able to control him
QUESTION 5 He's (challenger) not a typical scientist, he's not balanced
CLARE WATSON You shouldn't be so aggressive and rude

QUESTION 6 (directed at challenger) I'm only a BSc, so you might dismiss me, but I say you should allow consideration of human aspects and not think of science all the time. Monsanto and Clinton links, role of politics, there are broader issues.
CHALLENGER I'm not a plant molecular biologist, I'm an evolutionary geneticist. But I do know most of what Genetic Concern say to make the public swallow it is nonsense
OBSERVER somebody says mention one thing
CHALLENGER tryptophan
JOE Oh yes I will mention tryptophan now that you've brought it up. The company was "showadenko", tells the story, new method, not properly filtered, mysterious fire which destroyed all their records, it was a substantial equivalence problem
CHALLENGER Is it true that they used less activated carbon to filter, 20 mg to 10 mg, so the problem wasn't GE
JOE yes it was GE, it was substantial equivalence
QUESTION 1 the point is mistakes are made, and once its released we can't go back
QUESTION 3 so if showadenko set up again with the correct amount of carbon, would you accept it
OBSERVER Q3 getting more feisty
JOE my point is it was the assumption of substantial equivalence that caused the problem
CHALLENGER no, it was the filter
QUESTION 3 (more aggressive) so if they changed the filtering...
QUENTIN GARGAN we're probably losing the rest of the audience here
QUESTION 3 If that's the way you want it
QUENTIN GARGAN I think that probably the greatest indictment of the biotech industry is the destruction of the evidence
OBSERVER notice that this is a stock phrase often used word for word
QUESTION 3 well that's a different story

QUESTION 7 Because the US has no regulatory systems, the rest of the world has to accept GE, but there are good controls in Europe. But we're getting US soya etc. But you lost credibility for me saying that there's no regulations, because there is social political stuff here
JOE I'd like to see a ban on substantial equivalence

JOE on genetic fingerprinting
QUESTION 7 I had a lengthy discussion with the EU commission regulatory agency in Blackrock. Their position is you can't test and identify the stuff.
JOE That's wrong
QUESTION 8 In Germany there's good regulations
QUESTION 7 Well Joe is saying there isn't
QUESTION 8 There's no regulations here, that's why we're at risk. Commissioner Bergemann is promoting testing here because he couldn't do it in his own country
JOE The US will try to force you to accept GE, but it can be tested. Also, many GE crops are proving to give poor yields.

QUESTION 3 Should the Japanese have held on to the dangerous bug (referring to Showadenko case) so we could all know about it and avoid using it
JOE I agree. They should have gone to jail. They have a very bad record overall

QUESTION 9 (Sadhbh O'Neill) This debate is about science and how it happens. But its also about food, if 80% of foods may have GM soya, even babyfoods. There's a huge issue of the foodchain, not just GE. I want to eat food that doesn't contain pesticide, that's grown locally etc
JOE Growth of organics. Lots of proposals (science) are like "bousan gold" case in indonesia (false gold find), making dodgy claims to boost stock market prices
QUESTION 9 Does this apply to some of the claims about benefits of GE?
JOE For example canola oil with Vitamin A for deficiencies in developing countries, but canola is a cold climate crop. If Vitamin A canola gets onto first world market, Vitamin A supplements in a Vitamin A rich diet can cause problems in pregnant women
QUESTION 4 Its because of cash crops, eg, not rich in vitamin A

JOE makes final comments

QUENTIN GARGAN wraps it up

OBSERVER Joe approaches challenger and friend after the end, asks names, chats away in a friendly manner