A Nation's Nature: framing the public discussion of genetically modified crops in Britain

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This thesis is submitted to Cardiff University in fulfilment of the requirements for the Degree of Doctor of Philosophy

May 2013

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Acknowledgements

Thank you to anyone who has helped, advised or contributed to my research and to the many people who have cheered me along the way. Doing the PhD alongside a job meant my weekends and evenings were often spent writing and reading; thank you to my friends and family for patiently enduring my absences and understanding when, once again, I said no to their invites.

I would never have managed to spend so many weekends working without having a quiet place to retreat to – thanks to the staff of the British Library for providing one.

To my proof readers: Roger, Linda, Christabel, Rachel, Anna and James – thank you so much, all hail the comma!

To the many colleagues and comrades I have worked and organised with, thanks for reminding me of why academic research should always stay attuned to the needs of the present. Particular thanks to those at People & Planet, Action Aid, Red Pepper and Platform who took the time to discuss my research and offer their perspective; it was invaluable.

I would like to thank colleagues and friends at JOMEC for their interest and support over many years. I love returning to the corridors of Bute and hope I shall continue to find reasons to do so. Special thanks go to my old office mate Sadie and fellow Beck sceptic Tammy.

Some fabulous people have supported me during this thesis. Thanks to all of you, but special kudos is due to Andy, Anna, Alex, Catherine, Christabel, Chris, Emma, Helen, John, Juliette, Rachel and, of course, Melis. Let’s go do fun things!

Thanks to my parents - Linda and Roger - and my sister Sophie for always being there: 'you have to learn to live with what you can't rise above'. Thanks to James for your support and for prioritising my work at times when your own life was hard – here's to free weekends.

Finally, thanks to my supervisor Jenny. Without your belief and perseverance I wouldn't have submitted this thesis. Your integrity and commitment are an inspiration and something I aspire to, not just in my academic work, but in everything.

Abstract

A Nation's Nature: framing public discussion of genetically modified crops in Britain.

Two key cultural concepts, 'nation' and 'nature', have shaped the British debate on genetic modification (GM). The thesis uses focus groups, semi-structured interviews and newspaper analysis to explore how the concepts of nation and nature are used at different moments during the process of communication. It examines media influence within the GM debate and also considers other resources that audiences draw upon when talking about GM.

The study found that, although most focus group participants reproduced dominant media frames, they were not just passive consumers of the media. They creatively synthesised a wide range of cultural resources in support of those frames. The thesis, however, concludes that it is not accurate to describe such activity as 'resistance'.

The study found that the media provide crucial discursive resources for the construction of identity. This has a significant effect on how people understand themselves, the modes of action they consider appropriate, who they trust and how they understand social difference. The thesis concludes that nationality is still a key way in which people make sense of the world but that Britain is principally depicted as a nation of consumers rather than citizens.

GM is predominantly depicted as unnatural. The research indicates that framing risk debates around nature premises physiological as opposed to social risks. Both nature and nation are 'categories of certainty'; they have been used within the Western world to structure how people understand themselves and the world around them. The focus on these categories puts ideas of security and fear at the centre of the GM debate.

Frames promoted by environmental NGOs dominated the coverage. The study considers their implications and argues NGOs should not be exclusively concerned with making 'pragmatic', politically expedient demands that do not challenge the basis of inequality. Rather, they should be contributing to a political project which envisages new ways of organising society.

Contents

Chapter 1: Introduction: Contextualising Controversy 1

1.1 GM: The Risks 1
1.2 GM: The global context of regulation 3
1.3 Growing Controversy: Breaking the GM story 4
1.4 Why GM was framed as a health risk 6
1.5 Fear takes root: The GM debate five years on 7
1.6 From Activist to Researcher: my interest in GMOs 10
1.7 Key Questions 12
1.8 Thesis Structure 13

Chapter 2: Following the Circuit of Communication – Media Studies Literature 15

2.1 Power and Discourse 15
2.2 Encoding: Creating the Media 20
2.2.1 Primary Definers 20
2.2.2 Source Strategies: the environmental movement 23
2.3 The Circuit of Communication: Audiences 26
2.3.1 Criticisms of *Encoding/Decoding* model: where next for audience research 28
2.3.2 New Audience Research: 32
2.4 The Media Representation of GM. 36
2.5 Summary 38

Chapter 3: Literature Review: Nature 40

3.1 Constructing Nature 40
3.2 Situating Knowledge: responding to criticisms of constructivism 41
3.3 Natural Values 43
3.4 Oppressive Nature 44
3.5 Struggles over nature's meaning 45
3.6 Producing Nature 46
3.7 Nature and science 48
3.8 Boundaries and Purity 49
3.9 National Natures 52
3.10 Nature as commodity 54
3.11 Nature as environment 55
3.12 Environmental Justice 58

Chapter 4: National Identity Literature Review 60

4.1 The Origins of Nationalism: The Primordialists and the Modernists 61
4.1.1 Limitations of Modernist Theory 64

4.1.2 Mediating Identity 65
4.1.3 Explaining Culture 68
4.1.4 National Audiences 68
4.2 The Global Nation? 70
4.2.1 The 'Glocal' 71
4.2.2 Mediating the Planet 73
4.2.3 The Decline of Nationalism? 78
4.3 A Nature's Nation: Discussion 80
Chapter 5: Methodology 82
5.1 Source Interviews 83
5.1.1 Interview Structure: 84
5.1.2 Transcribing, Analysing and Presenting the Interview Data 85
5.2 Newspaper Analysis 86
5.3 Focus Groups with Audiences: 88
5.3.1 Group Schedule 89
5.3.2 Analysis of focus group discussions 92
5.3.3 Searching for Media Effects 93
5.3.4 The value of focus group data 93
5.4 Frame Analysis 94
5.4.1 Defining Frames and Discourses 95
5.4.2 Media Studies and Framing 96
5.4.3 Condensing Symbols and Discursive Cues 97
5.4.4 Challenges of Frame Analysis 99
5.5 Summary 100
Chapter 6: A Modified Nature: The Natural in the GM Debate. 101
6.1 Introduction 101
6.2 Pressing Nature: How the media frame genetic modification and nature 104
6.2.1 Explicit uses of the words Natural/Unnatural 104
6.2.2 Implicit mobilisations of ‘Nature’ 107
6.3 Natural Enemies: How sources use nature in the GM debate 111
6.3.1 Quantitative Findings 112
6.3.2 Explicit mentions of nature 112
6.3.3 Dismissing Nature 115
6.3.4 Keeping a distance: NGOs 118
6.3.5 Nature's Collocations 121
6.3.6 Contaminated Nature 124
6.3.7 Monstrous Imagery 126
6.4 Discussion 128
Chapter 7: A Modified Nature. The Natural in the GM Debate. Audience Discussions 134
7.1 Introduction 134
7.2 Talking Nature 134
7.3 Concepts of nature 137
7.4 Risks discussed 145
7.4.1 Health Risks 145
7.4.2 The Environment 151
7.5 Going against the Grain: Alternative concepts 153

7.6 Discussion 161

Chapter 8: A Modified Nation: Nationality and Citizenship in the GM Debate. Press Coverage and Source Interviews 164

8.1 Introduction 164

8.2 Press Coverage 166

8.2.1 The GM-free Nation 166
8.2.2 A nation of citizens or of consumers? 170
8.2.3 The Island Nation 172
8.2.4 The Unique Nation 173
8.2.5 Corrupt America and Guardian Europe 173
8.2.6 Countries in the Global South 175
8.2.7 The Double Threat: Foreign Food and Foreign People 175

8.3 Sources 178

8.3.1 Holding the Line: the need for certainty 178
8.3.2 Consumer vs. Citizen 181
8.3.3 Other countries: 185

8.4 Discussion 190

Chapter 9: A Modified Nation: Nationality and Citizenship in the GM Debate - Audience 198

9.1 Introduction 198

9.1.1 Participants' Nationality 199

9.2 The Homogenous Nation and its Symbolic Border 199

9.3 The Unique Nation 204

9.4 Europe as threat and salvation 206

9.5 America: The GM Nation 207

9.6 Famished Africa 212

9.7 Migration and GM 217

9.8 A Nation of Citizens or Consumers 220

9.9 Discussion 226

Chapter 10: Conclusion 232

10.1 A summary of each empirical chapter 232

10.2 Answers to my Research Questions: 236

10.3 The study's contribution to scholarship 243

10.4 Reflections for Social Activists 243

10.4.1 Practical recommendations for NGOs 248

10.5 Directions for future research 249

Appendices

A List of interviewees 250

B Overview of focus group participants 251

C Example of focus group schedule 252

D Consent Form for Focus Groups……..…… 253
E Photographs used in the Newsgame……..…… 254

Bibliography……..256

List of Tables

Table 5.1 Kitzinger's aspects of the text which might be examined to identify key 'cues'……..…. 95

Table 6.1 Average number of times source groups used words associated with nature per Interview……...…...110

Table 7.1 Total number of times words associated with nature were used per focus group……...…. 134

Table 9.1 Focus group participants who identified with other countries……197

List of Images

Image 1.1 Sainsburys GM Tomato Puree……..…… 5

Image 6.1 Monsanto…… 100

Image 6.2 Genetic Engineering Network……..100

Image 6.3 Michael Meacher & a ‘Friendly’ Scarecrow……...125

Image 6.4 A Mutant Monsanto Scarecrow……..……125

Image 8.1 Friends of the Earth GM Free Britain…… 163

Image 8.2 Monsanto UK Home Page……...163

Image 8.3 Scary in the Dairy Campaigners…… 181

Image 8.4 Greenpeace Campaigner with ‘GM Free’ Milk……..181

Chapter 1: Introduction: Contextualising Controversy

In 1999 the media coverage of genetically modified (GM) crops exploded when journalists identified their growth and consumption as a contentious risk. In 1998 there less than 50 newspaper headlines contained the word ‘GM', but in 1999 there were over 1000.[1] The extensive media coverage that GM received ensured the technology was pushed to the forefront of public and political debate. Much of the coverage framed GM foods as highly controversial and potentially dangerous.

This thesis examines how two key cultural concepts, nation and nature, shape the British debate on genetic modification (GM). I look across three distinct sites in the circuit of communication (the text, production of the text and consumption of the text) to explore how the concepts of nature and nation are used at different moments in that circuit.

In this introduction I will outline some of the key events in the GM debate that occurred between 1999 and 2004. I begin by outlining some of the risk claims made about the technology and briefly describe the global regimes that regulate the movement of GM material. I then summarise the UK media coverage explaining how the story broke, why it was framed as a health risk and how the coverage evolved over time. This information contextualises my subsequent substantive chapters. The introduction also discusses my own involvement with, and interest in, the GM debate, and outlines my key research concerns and the structure of this thesis.

1.1 GM: The Risks

GM crops are plants whose genetic material has been altered; novel genetic material is normally inserted into an organism's genome to cause new and useful traits. Genetic modification often (but not always) involves the transgenic substitution of genes from another species. GM technology has predominantly been used to develop new varieties of agricultural crops for human consumption.

1

Based on a search of the electronic newspaper database Nexis for articles containing the word 'GM' in the headline. This produced only 45 articles for the year 1998, by 1999 however the same search found 1094.

Despite genetic modification being pursued by western nations since the 1980s there remain important areas where scientific knowledge is incomplete (Welsh, 2006), although, of course, it is important to note that scientific uncertainty is not always due to a lack of scientific knowledge but rather a lack of coherence among competing scientific understandings (Sarewitz, 2004). Established risks include the potential for environmental damage through the reduction of biodiversity via increased pesticide use, the creation of pesticide resistant 'super weeds' through cross-pollination and the contamination of the 'primitive cultivars' from which staple crops were developed via selective breeding.

These potential risks to the environment sit alongside less clearly defined health risks; these include concerns about humans suffering allergic reactions to the foods because proteins not normally consumed by humans have been inserted, the production of foods which are toxic to humans because genetic engineers cannot fully predict how a protein will respond when inserted into a plant and the transference of GM genes across the human gut by horizontal gene transfer. This means there may be instances where the gut bacteria start to produce a transgenic protein in a human gut. There are certain traits like antibiotic resistance which would be harmful to human health if cells containing these substances were produced in the gut. In addition there are concerns about the lack of animal feeding trials which have been conducted. Those who oppose the technology argue that not enough is known about the effects of GM foods on human health due to the lack of feeding trials (Azeez and Nunan, 2008).

There is also concern that the initial commercial applications of agricultural GM were developed by the US agri-business sector. The concentration of GM ownership in the hands of corporations has led to fears about the monopolisation of crop production through the use of intellectual copyright on genes. In addition, the Global South's take up of the technology has led small-scale farmers to become further dependent on agribusiness for the food they eat. Such dependency enables profit motivated companies to charge more for their seeds; this pushes prices up for subsistence farmers already struggling to feed themselves and their families. This increase in input costs risks pushing even more people into hunger (Hindmarsh, 2004; Smith, 2009).

These risks were compounded by more general fears and objections. There was considerable concern about the genetic manipulation of ‘nature’, there was a worry that adverse effects from GM organisms were likely to be irreversible and impact on the fundamental building blocks of ‘nature’. In addition, there was a fear about GM harming the national reputation of *Britain's* food and therefore the livelihoods of *British* farmers.

Conversely those who argue in favour of GM claim that risks arise from not using the technology. Firstly, there is a risk to Britain’s scientific and commercial

biotechnology knowledge base as 'brain drain' and 'capital flight' within the UK agricultural biotech sector are often presented as the likely result of underinvestment in GM technology. Secondly, there is a perceived risk to development and aid agendas based on GM's potential to create a second 'green revolution' and play a significant role in feeding people in the Global South. This risk has gained more coverage as the negative effects of climate change on food production have become widely accepted.

1.2 GM: The global context of regulation

Currently GM crops are grown in the United States of America, Argentina, Canada, China, Brazil, Australia, Bulgaria, Colombia, Honduras, India, Mexico, Romania, South Africa, Spain and Uruguay. The biggest producer is the USA. The four main crops grown are soya beans, maize, cotton and oilseed rape.2 Commercial planting has not taken place in Britain though some people argue residual cross-pollination could have arisen from the government GM field trials (over 100 were held between 1999 and 2004) despite the imposition of quarantine zones around these sites (Weekes et al., 2007).

GMOs are subject to several national and international regulatory levels. EU member states wanting to plant a licensed GM crop must place an application before the Agricultural Ministers' Council; if they cannot decide, the decision is passed to the European Commission. Within Britain there is another layer of decision making: if the EU approves a crop for commercial planting, it must be added to the National Seed List. All the devolved administrations must approve a seed before it can be grown anywhere in Britain. This means the Scottish Parliament and the Welsh Assembly play an important role in GM regulation. In addition it is possible for local authorities to establish zones where the planting of GM crops is not permitted.

In June 1999 an EU-wide moratorium on GM products was put in place and no new GM products were licensed for use, though food products already containing GM continued to be imported. GM products not for human consumption and GM animal feed for livestock were also imported. The moratorium resulted in an international trade dispute. The USA, backed by Canada and Argentina, lodged a complaint with the World Trade Organization claiming that the moratorium was illegal (Toke 2004). The World Trade Organization complaint was upheld in March 2006, weakening the EU's ability to ban the import of GM food. Irrespective of this the continuing commercial boycott of GM ingredients by supermarket chains still limits the potential of GM within EU member states.

2 www.nerc.ac.uk

This demonstrates the many layers of policy making involved in the regulation of GM, layers which stretch from international bodies all the way down to local councils.

1.3 Growing Controversy: Breaking the GM story

GM foods were first sold in Europe during the summer of 1994 when GM tomato puree was introduced into the market. The trademarked '*Flavrsavr'* tomatoes that went into the paste were produced by biotechnology company Zeneca who used the product as a marketing experiment. They deliberately charged a low price for the paste and clearly labelled it GM (see Image 1.1) declaring that the puree had been made with genetically modified tomatoes. The cheaper puree sold well and it was argued European consumers had accepted genetically engineered foods.

However, the biotechnology industry's quiet success was short lived. Before companies had the chance to develop a significant number of commercial GM applications consumers were rejecting the technology en masse and supermarkets were frantically removing GM products from their shelves in the race to declare themselves 'GM free'. What changed in the five years between 1994 and 1999? Within it was three specific, linked news events that brought GM to public attention and created a media furore.

GM first received mass media coverage as a health scare story in 1999. In the previous year Dr Arpad Pusztai, a senior scientist from the Rowett Research Institute, appeared on the BBC's 'World in Action' programme to claim that rats fed on GM potatoes suffered signs of intestinal damage and harm to their immune systems. Media attention intensified in 1999 after the Rowett Institute suspended Pusztai for presenting provisional data which was yet to be peer reviewed. The Institute seized his data and disbanded his research team. The *Guardian*, after interviewing members of the Rowett Institute, claimed external pressure from both Monsanto and the British Government had forced the Institute to silence Pusztai. Environmental campaign group, Friends of the Earth (FOE), organised a public letter of support for Pusztai that was signed by 22 scientists from 13 countries. On 12 February 1999 this letter was published in the *Guardian*. Finally, despite the Royal Society and the House of Commons Science and Technology Select committee condemning Pusztai's methods, the *Lancet* decided to publish the study.

Dr Pusztai's study (or more accurately the ensuing controversy) played a key role in framing GM foods as a story about risk to human health and government cover ups. Two similar stories reinforced these themes early on in the debate. The first of these also broke in 1999 when, hot on the heels of the Pusztai scandal, the British Medical

Association, despite being pressured by Government and scientific communities to support GM, declared there was not sufficient evidence that GM organisms were safe and that they should not be released into the environment until there was greater scientific certainty. The BMA's statement was widely reported as doctors speaking out against GM foods.

The third major story reinforcing the themes of 'heath risk' and 'government deceit' broke in 2003, when Michael Meacher, the then Environment Minister, was sacked. The media claimed Meacher's dismissal was because of his anti-GM stance. Meacher added to this speculation by writing a piece in the *Independent* accusing the Government of ignoring evidence of the health risks posed by GM and arguing that the GM field trials were not a sufficient test of a crop's safety. This claim received wide-spread attention as Meacher argued that the Government were systemically rubbishing evidence of health risks because of their links with the biotechnology industry.

These three linked stories all received large amounts of media attention and served to firmly establish GM technology as not only a risk to human health but as a story about government lies and deceit. The early establishment of this particular frame had considerable consequences for how the risks from GM crops would be discussed for many years afterwards.

Image: 1.1: Sainsbury's GM tomato puree

1.4 Why GM was framed as a health risk

Despite the variety of different risks that are associated with GM there was one threat that dominated the 1999 coverage: the threat to human health. Durant and Lindsey (POST, 2000) claim BSE provided a template for the GM debate, connecting this new technology with the horror of mad cow disease. There were also external factors that meant the GM crisis was framed as a health risk – in particular the introduction of unsegregated soya imports. Prior to this GM had been visibly labelled (as shown in Image 1), but this was not a legal requirement. With the approval of soya beans which had not been segregated into GM and non-GM varieties food manufacturers no longer knew the origins of their imports. The simplest solution for them was not to label at all. This irrevocably changed the debate: consumer choice was removed, people could no longer choose whether to eat GM or not. Durant and Lindsey (POST 2000) found that in the run up to the GM media storm it was consumer journalists who wrote the largest number of feature articles on the topic (43% of articles), far more than say political, science or environmental correspondents, suggesting that GM had become an important consumer issue. The erasure of consumer choice pushed the discussion of GM as a health risk up the news agenda.

FOE was quick to spot that the media was interested in GM if it was framed as a consumer or health issue. As Allan writes, "*Any perceived threat to public health, needless to say, is likely to be regarded as potentially newsworthy by journalists*" (2002:148). FOE recognised that journalists' interest in GM as a health risk offered them an opportunity to get attention for an issue on which they had recently started campaigning. By mobilising scientists to write the letter of support for Pusztai FOE ensured that the GM storm finally broke, and established GM as a controversial and risky technology.

As an environmental group FOE's first concern was not for human health but the environment; it is therefore notable that FOE achieved their media breakthrough when mobilising scientists to speak about the risks to human health rather than risks to the environment. This is noteworthy both because FOE was more interested in environmental risks and also because there was more evidence that GM technology posed a threat to wildlife than to human health.

Focusing on the threat to human health was a deliberate media strategy employed by FOE's press officers. It was motivated by the organisation's knowledge of news values rather than their key concerns about GM.

By organising the letter of support for Pusztai FOE played a crucial role in mobilising support for an anti-GM campaign. External factors like the BSE crisis and the imports of unsegregated soya meant that GM was a touchpaper waiting to be lit, the controversy over Pusztai's sacking provided the fuel and the subsequent interventions of both the BMA and Meacher were fans to the flame.

1.5 Fear takes root: The GM debate five years on

By 2004 GM technology had been receiving large amounts of media attention for almost five years. FOE and Greenpeace were both running anti-GM campaigns covering a variety of areas: animal feed, local authority regulation and imports. Activists outside of the larger environmental NGOs had also mobilised against GM. The 'Green Gloves pledge' saw the Government's GM crops trial sites being damaged on numerous occasions by 'crop-thrashing' protesters taking direct action against plans to commercially grow GM crops in the UK. The verdict at the end of the Government's 'GM Nation' debate was widely interpreted as a resounding 'no' - although researchers have argued that the debate conveyed an overestimate of the strength of anti-GM feeling in Britain (see Horlick-Jones et al., 2007).

Through the intervening years coverage of GM remained high: around 500 articles for every year[3]. After 2004 there was a notable decline in coverage, with the average number of articles with GM in the headline dropping to about 300. The press sample that informs this thesis is taken from the first six months of 2004; a crucial time politically for GM crops as the UK Government decided to approve a GM variety of maize for commercial plantation in Britain. Informing this decision were the results of the Farm Scale Evaluations. The evaluations involved planting three varieties of GM crop in the open air and monitoring them to assess the impact on biodiversity for a limited period. All three crops were designed to be herbicide resistant and the trials found that two out of the three crops (rapeseed and beet) did have a negative effect on biodiversity because the increased amount of pesticide harmed the environment. GM maize however was found to have a beneficial effect, although this result was contested as the GM maize was compared with a conventional maize that was sprayed with altrazine, a highly toxic pesticide that was banned by the EU during the course of the study (Hunter, 2003).

The results were published on 5 March 2004. On the 9 March the Government, having considered these results, formally approved the planting of GM maize. Coverage of this decision focussed on continued public hostility towards GM crops.

3 Based on a Nexis search for articles with the word 'GM' in the headline.

By the end of March there was a dramatic reversal of the Government's decision when the biotechnology company that owned the variety of maize approved for planting, Bayer Crop Science, announced they were withdrawing that type of maize because of prohibitive growing conditions set by the Government. To address concerns about crop 'contamination' any farmer growing the GM maize was legally required to compensate a non-GM farmer should the crop cross-pollinate with theirs. Some people involved with the GM debate have argued this was a disingenuous concern, given for political reasons; in fact Bayer never intended to grow that particular variety of crop as it was already an 'old technology' by the end of the four years' trials.[4] It is claimed Bayer only kept Chardon LL on the market because withdrawing it would have rendered the Farm Scale Evaluations obsolete. So they kept the crop on the market to support the efforts of those hoping to get GM crops approved for planting in Britain.

In the end Bayer's perseverance achieved nothing; GM proved so unpopular that the approval of one variety of maize did not provide enough political ammunition to allow the commercial growth of other varieties and since 2004 no further attempts to commercially plant GM crops in Britain have been made.

By 2004 risks to human health were no longer dominating the coverage, with only 36% of articles discussing the health implications of GM in comparison to 49% of articles discussing environmental risks (Hughes et al., 2008). The strategies of groups like FOE helped facilitate this shift. Having propelled GM into the media spotlight as a health risk, NGOs were later keen to refocus the press coverage on environmental as opposed to health concerns. Their success in framing GM as a controversial and dangerous consumer risk ensured it's continued newsworthiness. This allowed NGOs the media space to talk about environmental, as well as health, risks. For many years newspapers were willing to carry stories on GM regardless of whether the risk discussed was an environmental or a health one, especially as the Farm Scale Evaluations (which looked solely at environmental risk) were being framed as a 'test of Tony Blair's leadership'. GM crops were newsworthy regardless of the angle and it was therefore possible for NGOs to get a wider variety of risks covered than they were able to at the start of the debate.

By 2004 anti-GM NGOs were successfully dominating the debate as they were the most quoted source, providing over a quarter (28%) of direct quotes. They were followed by the Government who provided 12% of quotes (Hughes et al., 2008).

4 Based on oral evidence given by Linda Smith, Head of the GM Policy, Science and Regulation Unit DEFRA to the Environment, Food and Rural Affairs Parliamentary Committee, 15 June 2005

Both FOE and Greenpeace have large media teams with press officers specialising in different types of media e.g. national news, local news and magazines etc. They have sophisticated media strategies and often know networks of key journalists whom they brief before any story breaks. In addition to this, as competition between NGOs has increased, they have developed strategies to ensure their campaigns complement each other rather than compete. In the GM debate, for example, FOE concentrated their campaign on lobbying supermarkets whereas Greenpeace led the crop thrashing campaign. This ensured both had their own angle to offer the media and as a consequence it was not unusual to find *both G*reenpeace and FOE quoted in an article.

Biotechnology companies by comparison were quoted relatively infrequently in the 2004 media coverage; only 8% of direct quotes came from them (Hughes et al., 2008). Even when they were quoted, industry voices would often be put at the end of an article and therefore could only respond to the argument already established by the two or three earlier anti-GM quotes. When the GM controversy erupted, biotechnology companies had to quickly develop media skills, they were unprepared for the furore that they were at the centre of. Industry scientists were perceived as biased and biotechnology companies had to quickly establish independent voices to speak in favour of GM (Hughes, 2008). They set up cropGEN: a group of scientists who were not biotechnologists but were paid by the industry to act as a public advocate for the technology. This group ensured there was a strong and apparently independent voice arguing in favour of GM. The tactic worked well as very few press articles mentioned that cropGEN scientists were paid by the biotechnology industry.

However, the biotechnology industry learnt the 'dark art' of PR one year too late; environmental NGOs had already set the terms of the debate. They were media savvy *before* the GM controversy erupted, indeed they used their media skills to ensure that it did erupt and were therefore well positioned to frame the debate. Once environmental groups had set the terms of the debate it was extremely difficult for sources to redefine them – no matter how media literate they had since become. Environmental NGOs by contrast were able to remould their own frame and include environmental as well as medical risks in their discussion of GM.

In addition to medical and environmental risks many articles in the 2004 sample discussed the ethical, legal and social implications (ELSIs) of GM (Hughes et al., 2008). The predominant ELSI was democracy and accountability, in particular the British Government was criticised for ignoring the wishes of the public. The then Prime Minister, Tony Blair, received most criticism; he was described as both arrogant and

misguided. GM crops were cited as yet another example where the voice of the British public was being ignored.

The idea that the Government are untrustworthy was supported by other events. In 2003 Britain and America invaded Iraq because, both countries' governments claimed, Iraq was developing weapons of mass destruction. This claim was later disputed, leading the UK press to criticise the Government's decision to join the American invasion and their willingness to mislead the British public in order to further their own objectives. Before the war started an estimated 1.5 million people marched in London against the invasion (*BBC* and *Guardian*), this is still Britain's biggest ever political demonstration. The level of opposition to the war cemented the idea that the Government were willing to ignore the views of the public. GM crops and the Iraq war were both held up as examples where Tony Blair was ignoring the wishes of British citizens.

In addition to the Iraq war a number of other issues were cited as examples of Tony Blair's dictatorial style of governance – these included tuition fees, immigration and drugs policies. The Iraq war provided a useful political frame for anti-GM campaigners as it put further pressure on Tony Blair, the man who had ultimate jurisdiction over whether GM would be planted in Britain. As such it was useful for NGOs to 'talk up' the crisis in leadership by linking seemingly disparate issues.

This introduction has outlined several trends in the press coverage of GM which have implications for the analysis offered in later chapters: the focus on health risks, the role of NGOs as primary definers, the template of government deceit and the importance attached to consumer choice. While all of these factors inform my analysis and will be referenced in later chapters this thesis focuses on the discursive importance of just two concepts: nature and nation. I will explore how journalists, sources and audiences all utilised these two concepts in ways that had significant implications for understandings of, and policy responses to, GM technology. These concepts cannot be viewed in isolation; it is crucial to explore not only how they interact with each other but also with other concepts such as citizenship, agency and consumer power. This introduction offers some context ; it is to be read alongside my substantive chapters.

1.6 From Activist to Researcher: my interest in GMOs

This study utilises Haraway's idea of 'situated knowledge' (1988). This means it is important for me to consider my own connection to, and interest in, the issue of GM. It was as an environmental activist that I first became interested in GMOs. When the

Government announced they were planning to commercially plant GM crops in Britain I joined many others in taking non-violent direct action against this plan. I was concerned about corporations achieving greater control over the food chain. Later I worked at the FOE press office as a volunteer press assistant – it was the first of several NGOs job I was to have. While working as part of FOE's press team I learnt many of the key skills involved in campaigning: framing an argument in a way that resonates with public discussion, finding strategic points of leverage and creating powerful visual images that encapsulate a problem. During my time at FOE, the Government were still conducting Farm Scale Evaluations and many of the press clippings I cut and the releases I wrote were about GMOs. I soon discovered the anti-arguments promoted by FOE differed from those used in the grassroots anti-GM groups I had been part of. FOE's campaign spoke more about health risks and ideas of nature and purity. They mentioned foreign farmers less and focussed on the impact GM would have on the *British* countryside. Working at Friends of the Earth during the early 2000's meant I was privileged to witness one of the most successful environmental campaigns ever conducted in the UK – thanks in large part to FOE's campaign the planting of GM crops in Britain became politically untenable. Despite this success (or perhaps because of it) I was left with a number of questions about the implications of FOE's GMO campaign for both the public's understanding of GM and their ideas about FOE.

I was given the chance to explore some of these questions in more depth when working at Cardiff University as a research associate on an ESRC-funded project on risk (see Hughes et al., 2008). However, as this project involved studying a number of different 'risk topics', I did not have the chance to explore the discourse around GM crops in sufficient detail. As a consequence I decided to write a thesis so that I could think further about the consequences of how environmental NGOs frame their campaigns. During the time I have been writing my PhD I have worked at several NGOs (People & Planet, Action Aid and Platform) and I have continued to identify myself as an 'activist' participating in numerous climate, feminist, socialist, anti-cuts and anti-border movements. This has given me the opportunity to continue thinking about the issues raised by my PhD – it has also allowed me to discuss my research with colleagues and fellow activists over a number of years. These discussions and my observations, both as a professional campaigner and a grassroots political organiser, have informed my findings. My background meant the discourse used by anti-GM NGOs became more of a focus for this thesis than the arguments used by other actors e.g. the biotechnology industry. Although I analyse the arguments put forward by all actors in the GM debate (in order to fully consider how the debate was framed), in the discussion and conclusion sections I focus particularly on the implications of the

choices made by NGOs. My arguments about NGO campaigns are informed by theoretical questions and rigorous analysis – by focussing on campaign groups I have been able to contribute to theories of environmental movements. It is, however, important to acknowledge that theoretical concerns were not the *only* reason I chose this focus; I was also motivated by the circumstances and interests outlined here.

1.7 Key Questions

Academic studies have charted GM's construction in the press as a risky and controversial technology (see Gaskell and Bauer, 2001 and Shaw 2002). Many researchers have been concerned with 'traditional' media studies questions about the amount of coverage, who the primary definers are, what major themes exist in the coverage etc (some of the topics I've addressed in this introduction). By focusing on these questions Hansen claims such studies ignored other elements, in particular:

> "the deeper-lying and perhaps taken for granted assumptions, myths and ideologies which form both the basis and contexts for 'what is or can be said' about certain problems or issues".
>
> (Hansen, 2010: 104)

The development of ideas about discourse has provided researchers with analytical tools to explore core frames and cultural assumptions but, in the discussion of environmental problems, these elements are often ignored. This study takes a cultural approach to the issue of GM crops and in so doing adds to a burgeoning field of cultural explorations of environmental concerns (Hansen, 2010 Hannigan, 2006 Cook, 2004).

Many academics have explored public opinion about GM but few have done this from a media studies perspective; the vast majority are rooted in the discipline of 'public understanding of science' (e.g. Coyle, 2005, Shaw, 2002). This study uses a distinct methodology and looks across the 'circuit of communication' to explore source, media and audience discussions of GM.

This research focus promoted me to consider both the frames that shape public discussions of GM and the implications these frames have for how GM is understood. In addition I was also concerned with traditional media studies questions about the circulation of messages across the circuit of communication and had a particular concern about the role of NGOs in GM debate. I identified nation and nature as key concepts in the GM debate and established three interrelated research questions in relation to these concerns.

1 How does the concept of nature function as a frame of the British discussion of GM?

2 Now does the concept of nation function as a frame of the British discussion of GM?

3 Did audience participants reproduce the media discourse and what other factors influenced audience discussions of GM crops?

1.8 Thesis Structure

The thesis begins with a literature review which is split into three parts (Chapters 2-4) relating to the three different literatures I draw on. Chapter 2 looks at media studies literature - I consider both source and audience theory. I also include some broader literature about discourse and power to explain the theoretical underpinnings of this thesis. Chapter 3 explores the concept of nature – I consider social constructionist theories of nature and include the work of other researchers who have written about nature in relation to GM. Chapter 4 is focussed on literature about nationality. I offer an overview of national identity theory before considering the insights of cultural studies into identity formation. I end by discussing the links between theories of nature and nationality.

In Chapter 5 I outline the methods used by talking about each area of research: source interviews, media content and focus groups. I discuss why I chose these data collection techniques and consider any problems encountered.

Chapters 6-9 are the substantive chapters. I do not split these by method but instead according to analytical focus. Chapters 6 and 7 focus on the discourses around 'nature', with Chapter 6 examining how the press and sources talk about nature, and Chapter 7 examining how audiences discuss nature. Chapters 8 and 9 focus on ideas of nation, with Chapter 8 examining how press and sources frame national identity and Chapter 9 examining how audiences articulate national identity. This structure, while demanding more of the reader, allows for a fuller consideration of the ideological implications of each of key concept. By focussing on either nature or nation I am able to track their distinct evolution across the circuit of communication. This structure also had the advantage of allowing more analytical space for the discussion of the focus groups. There are no studies from a media perspective that consider audience responses to GM and I therefore felt it was important to allow enough space in the thesis to sufficiently develop my analysis of the complex processes of audience reception. I end each chapter with a discussion section outlining the broader implications of my findings.

Chapter 10 is my conclusion. This briefly recaps the key findings and then returns to my key questions to consider the significance of my thesis for the areas of literature I have drawn upon and for environmental campaigners. I also think about the discursive interaction between 'nature' and 'nation' in the GM debate and the implications of this for how GMOs are framed. I end by offering some practical recommendations for NGOs and suggestions for areas of future research.

Chapter 2: Following the Circuit of Communication – Media Studies Literature

"Because media audience and reception research has been a rich and many-faceted field, there would be many other ways to tell its history" (Alasuutari, 2000, pp. 327*).*

This thesis is a study of both the production and reception of media content. In this literature review I will briefly outline media theories of both.

The chapter will be split into the following sections:

1. **Power and Discourse** – an overview of ideas about power and discourse that inform this thesis.
2. **Encoding: Creating the media –** an outline of theories about media access and source strategies. It pays particular attention to the environmental movement.
3. **Decodings: Audiences** – an overview of Hall's theory of decoding and criticisms of that theory.
4. **New Audience Research** – a discussion of recent reception studies on which this thesis draws.

2.1 Power and Discourse

This chapter will begin with broader theories of power and discourse. Media power cannot be understood in isolation: journalists and audiences do not arrive at media texts as blank canvasses: a plethora of frames, knowledges and institutions structure their understanding of themselves and the world around them. To research the media it is necessary to analyse more broadly how power operates. I am going to begin this literature review by considering theories of power and its discursive modes of operation. This discussion will inform the following sections on the processes of production and reception of media content.

Lukes defines power as "a capacity or ability to bring about a specific effect or consequence. It can be identified in its potential agency as well as in its realisation" (Lukes cited in Corner 2011: 17). To say the media are powerful means that newspapers, television programmes, radio broadcasts etc have the potential to exert effect: over audience opinions, over public discourses and over policy makers. Power is not exclusive to the media of course: it is present in every societal interaction, every institution, in all processes and utterances. Power relations are inescapable. Foucault describes power as a "network that runs through the whole social body" that is "always already there" (1994: 120).

Cultural theorists argue that societal power relations do not derive from a single dominant group or institution; be it a state or an elite group. Power is not merely a "projection of the sovereign's great power over the individual" (Foucault, 1980: 187) but exists within specific relations of dominance between all individuals. These relations work in relative autonomy to the state - the sense that power is *held* by one group over another is replaced by a capillary-like network which flows *through* people. Gramsci viewed power as an entwined and complex web of relations. He claimed power "exists in us, it is embodied and lived in our everyday" (cited in Allan, 2002: 3).

Foucault was interested in power, not just as a force of repression, but also of production. It is this duality that makes power a believable societal force, "If power were never anything but repressive, if it never did anything but to say no, do you really think one would be brought to obey it" (1994:120). In particular, power, when brought together with knowledge, produces discourses. Discourses are comprised of specific groups of concepts and ways of thinking about a particular domain. For example, Foucault traces how the discourse of sanity and insanity is related to a wider set of ideas, institutions and practices (Foucault, 2001). Discourse, in its turn, is also productive: it produces institutions, subject positions and means of action. Yet discourse also limits – it determines what is say-able and what is know-able within particular contexts or situations. Discourse is both constructive and constraining.

Discourse is commonly thought of as language, as words, as rhetoric, but according to Foucault discourse is more material than this, encompassing the realm of the economic and the institutional. An example of the material nature of discourse is the modern army: a new distribution of power known as discipline was needed to create what we now know as the army. The discourse of discipline was not just created with concepts such as duty and service but also in distinctly material ways, for example new types of armament and new forms of recruitment. Poststructuralist discourse analysts (like Laclau and Mouffe, 2005) accept Foucault's notion of discourse as both material and semiotic. In so doing they differ from critical discourse analysts who view discourse as distinct from other forms of social practice.

This thesis will adhere to a notion of discourse that straddles the material and the symbolic; such a perspective does not deny the material's existence but argues that the material is always ensnared in the discursive. Material objects may be non-discursive but they do not exist in a non-discursive vacuum; they are always interpreted within discourse.

Truth is not distinct from discourse. Foucault writes that "Each society has its regime of truth, its 'general politics' of truth: that is, the types of discourse which it accepts and makes function as true."(1980: 132). Any objective notion of 'truth' is

unattainable and the key question, therefore, is not what is 'truth' but how are effects of truth produced in discourse.

Although Foucault argues power relations are ubiquitous, he still recognises that power can serve certain interests. Power relations provide the conditions for the privileging of certain groups, the normalising of certain behaviours and marginalising of particular voices. It is the structures of power that provide “the changing soil in which the sovereign’s power is grounded, the conditions which make it possible for it to function” (Foucault, 1980: 188). This is because power is “capable of being utilised in strategies” (Foucault, 1980:142). Societal structures of power are utilised by dominant groups who use discourse to shape the processes of socialisation. Discourse provides institutions with a powerful means of incorporating individuals into relations of domination.

Gramsci also argues that the power of dominant groups is exercised through processes of socialisation and the domination of the realm of ideas and culture. Gramsci's theory of hegemony sets out how relations of power are concealed, and how the consent of the dominated to their lot is won rather than coerced. He describes how “ 'spontaneous’ consent is given by the great masses of the population to the general direction imposed on social life by the dominant fundamental group” (Gramsci, 1971: 12). Forces in power do not simply impose their will; rather, they naturalise the ‘reality’ of their control and in so doing win the consent of the oppressed. As Willis puts it, “One of the most important general functions of ideology is the way in which it turns uncertain and fragile cultural resolutions and outcomes into a pervasive naturalism” (1977: 162).

Current societal arrangements are seen as 'common sense' and 'inevitable', alternatives fall beyond the realm of the possible. The privileging of certain groups is obfuscated and power’s role in maintaining certain interests at the expense of others is hidden from view. Deetz writes: “Dominant-group definitions of reality, norms, and standards appear as normal rather than as political and contestable” (1992: 62). Yet discourse is only a temporary closure in meaning – all social formations could at all times be different. Hegemony is a site of ideological struggle over common sense, a struggle over whose norms, values and ideas are labelled self-evident. As Hall states: “You cannot learn, through common sense, *how things are*: you can only discover *where they fit* into the existing scheme of things” (1977: 325, emphasis in original). It is only by constantly looking at those possibilities that are excluded that one can pinpoint the social consequences of particular discursive constructions.

Far from being static, notions of 'truth' are in a constant state of flux. “New ideas are always entering daily life and encountering the ‘sedimentation’ left behind by this

contradictory, ambiguous, chaotic aggregate of disparate conceptions " (Gramsci, 1971: 422). Instead of being 'self-apparent' commonsense is a site of struggle as different actors compete to fill it with their norms, values and interests. However, the fact that social formations could be different, does not mean everything changes all the time. Discourses have a certain weightiness and inertia (Jorgensen, 2002) – there are large areas which it is extremely difficult to 'think beyond'.

Conduit (1994) emphasized that dominant ideology should be theorized as a temporary coalition of multiple voices, rather than as a unified force. Hegemony is based on many sets of interests, not a single dominant one. Gramsci reveals that rather than automatically submitting to dominant interests, civil society is characterized by ongoing struggle between hegemonic and counter–hegemonic ideas. Hegemony is always a contested active process of negotiation, not a monolithic system, and no one group can remain dominant without discursively adapting to changing conditions. Struggle is crucial for Foucault: he argues there are no relations of power without 'resistances'. Force, strategies and tactics are central: "I believe one's point of reference should not be to the great model of language (*langue*) and signs, but to that of war and battle" (Foucault, 1980: 114). The key to analysing discourse is not words but struggle. Foucault claims that struggle exists 'in the same place' as power and therefore, like power, it is also capable of being incorporated into strategies of resistance.

These concepts of power and discourse, consent and struggle have important implications for how we understand the media. The key question posed by these ideas is not what does the text mean, but rather who does it serve? Whose interests are promoted here? Audience responses are no longer individual, privately authored thoughts; they too are structured in discourse and reflect the hegemonic conditions of their utterance. Our actions and thoughts are not wholly the product of an autonomous self, they are discursive. As Bowman writes "subjects do necessarily have the delimited propensity to make decisions, but only according to the options that appear contextually possible" (2007: 78). Agency can only be exercised within a discursively predetermined range. Talk should be analysed not for the physiological processes that underlie what viewers say but for the cultural 'taken for granteds', the norms and ideas that are labelled 'common sense'.

Not only are people's thoughts produced in discourse, but so are people's identities or subject positions – an insane person is labelled insane because of the institutional and societal understanding of madness. Foucault does not deny the existence of a physiological thing called madness, but a person's identity is not just construed from their illness but also from the discursive labelling of that phenomena.

Post-marxists Laclau and Mouffe replace the idea of representation with articulation. Representation suggests that a particular subject position, such as 'working class', is determined by social and economic factors. It exists before it is spoken and is then simply re-presented at the subjective terrain of consciousness. Articulation indicates something different:

> "unity between these agents is then not the expression of a common underlying essence but the result of political construction and struggle. If the working class, as a hegemonic agent, manages to articulate around itself a number of democratic demands and struggles, this is due not to any a priori structural privileges…"
>
> (Laclau and Mouffe, 2001: 65)

It is in articulation that working class identity is formed. Power does not exist as an external relation between pre-constituted identities, it is power itself that constitutes identities. Political groups do not 'naturally arise'; they are produced within discourse and signification. Experience itself requires legitimation; "the production of plausible or reliable knowledge is also bound up with the production of legible forms of subjectivity" (Bowman, 2007: 81).

Identity, according to this logic, is a discursive practice that "emerges within the play of specific modalities of power" (Hall and du Gay, 1996: 4). It is an ongoing process that always remains incomplete (Hall, 1992: 287). People's identities are not fixed and unified but contingent, in process and potentially contradictory. Hall argues that "all of us are composed of multiple social identities, not of one…we are all complexly constructed through different categories, of different antagonisms" (Hall, 1991: 57). Identities are continually being made and remade.

There are political implications that stem from these ideas. Foucault makes clear that power is 'always already there' (1980: 141). We can never place ourselves 'outside' power, there are no 'margins'. Resistance does not mean removing relations of power but deconstructing them. Foucault states "it is not a matter of emancipating truth from every system of power (which would be a chimera, for truth is already power) but of detaching the power of truth from the forms of hegemony, social, economic and cultural, within which it operates at the present time." (1980: 142). Resistance is to be achieved by showing that present societal arrangements are not inevitable; other worlds are possible, although they too will be saturated with, indeed structured by, power. These are important ideas for this thesis to consider as it will evaluate the extent to which environmental NGOs challenge current social arrangements, how identities are formed and the struggle over meaning contained within media texts.

2.2 Encoding: Creating the Media

Hall's 1973 essay *Encoding/Decoding* is often cited by media scholars as the start of reception studies in mass communication research (reprinted in Hall et al 1980). Hall's model was crucial to media studies because it reconfigured communication from a theory which implied the transmission of a fixed object (the message) from producer to receiver to one which emphasised the social and symbolic processes involved in the two distinctive moments of encoding and decoding a text. The paper conceptualised the ideological role of the media, but also saw the audience as active bearers of ideologies. For Hall a TV text's meaning is produced by the diverse personnel who create the programme, the TV programme itself and the audience. Hall's model therefore creates a space for both media power and audience power – it is the interaction of the two which determines meaning.

The media constitute a primary site for the playing out of the kinds of struggles over meaning that Gramsci outlines. Hall argues that the meanings encoded in the media have the institutional/political/ideological order imprinted in them and are therefore likely to reinforce the prevailing order by reinforcing dominant ideas (1977). Hall's key questions are: how does hegemony operate through popular culture and how are dominant ideologies reproduced at the key moments of production and reception?

2.2.1 Primary Definers

Part of Hall's answer is outlined in 'Policing the Crisis' (Hall et al.,1978). This study argues that the structures of power in society are reproduced as structures of access to the media: this is an indirect form of editorial control which is created due to the routines and conventions of news reporting. The news media, according to Hall and his colleagues (Hall et al. 1978), accredit status to the 'powerful' as news sources, and allow them to dictate the primary interpretation of an event or topic. The interpretation of these 'primary definers' frames the subsequent discussion and sets the terms of reference within which all further coverage of debate takes place (Hall et al., 1980:58). Hall et al's theory predicts that official sources, such as government spokespeople or scientists, are cited by the media as primary sources far more often than environmental groups. Other studies have supported Hall et al.'s theory (e.g. Hansen, 1990).

The 'primary definers' model acknowledges structural factors that shape media content. Journalists are often under pressure to produce a story and they do not always have time to check the information their sources give them. Official sources give journalists' quick, reliable information, and therefore the conditions that journalists work under encourages reliance on official sources. In addition to structural issues,

cultural factors also help privilege official sources: “professional ideologies call for journalists to ground stories in ‘objective’ and ‘authoritative’ statements from ‘accredited’ sources thus structured preference is given in the media ‘to the opinions of the powerful’” (Lester, 2010: 89). Journalists work within pre-determined cultural norms. If culture views official definitions as accurate then journalists are duty bound to report those definitions.

Subsequent speakers have to acknowledge primary definitions or risk being labelled irrelevant. Once an issue has been defined, non-dominant groups cannot easily penetrate this definition. The media, therefore, help to maintain the definitions of the powerful not only by the voices they privilege, but by “maintaining certain strategic areas of silence” (Hall et al., 1978: 65).

Hall’s theory of primary definers is a useful description of why particular sources dominate the media coverage but it is clearly out-dated. Hall et al. describe the Trade Union Congress (TUC) as an 'accredited institution', the TUC have long since lost their powerful position as an 'official source', and their views are normally marginal in media coverage. This was apparent in the reporting of the 2011 public sector strikes where reporting focused on the disruption caused by the strike rather than the preferred message of the TUC: the reasons why workers were striking.

It is not surprising that Hall et al.’s examples are out of date, but they point to a more important flaw with the theory: it is not able to account for changes over time. As Schlesinger argues it “tacitly assumes the permanent presence of certain forces in the power structure” (1990:67), the implicit logic is that primary definers are granted this privileged position simply because of an institutional location. The privileged position of primary definers is not just determined by institutional location, as Hannigan (2006) shows, elites can lose their position of power if they fail to ensure their norms and interests continue to win consent. For example, the shift of popular view to the political right during the eighties meant the TUC lost their role as primary definers. The theory’s atemporality is problematic as longer-term issues of access, and changes in the power structure, are not captured.

Hall's study relies on text analysis. By not including a production study it fails to capture the activities of sources that attempt to generate ‘counter-definitions’. This means Hall et al. do not consider instances where the influence of primary definers on the media content are not clearly visible - 'off the record' briefings for example (Schlesigner, 1990).

By not analysing how primary definitions are produced Hall et al. imply there is a consensus among official sources; it does not take into account that different primary

definers have different amounts of power or that some sources enjoy privileged access in relation to some events or issues but not in relation to others.

A third criticism Schlesinger (1990) has, is that Hall et al assume primary definitions always originate from sources. In fact there are cases where the media themselves act as primary definers either by challenging institutional representatives or just developing their own definition of a topic which 'accredited' sources later adopt.

Schlesinger highlights the need to fully capture the competition for access that takes place. Within this competition material and symbolic advantages are unevenly distributed but "the most advantaged do not secure a primary definition in virtue of their positions alone. Rather, if they do so, it is because of successful strategic action in an imperfectly competitive field" (Schlesinger, 1990: 77). Although the state may get privileged access to the news, they don't control it (at least not in the current UK context); depending on the strategic choices of other groups they can usurp state representatives, or economic elites as primary definers. Analysing source strategies through both text and production studies is therefore very important.

Other researchers have demonstrated how the media manage access so that a number of voices are included, while also privileging some as primary definers e.g.Herman and Chomsky 1988, Hallin 1986, Gandy 1982). Gandy exposes the symbiotic nature of the relationship between sources and journalists. Sources operate strategically to ensure they get coverage, which in turn gives journalists cheap, readily available information – a commodity which is even more important in today's 24 hour news environment. Sources provide journalists with off-the record briefings, press conferences, news releases and blog articles. Gandy terms these activities indirect information subsidies.

There is evidence that information subsidies are increasing. In 2008 Lewis et al. found that between the years 1985 and 2005, the amount of editorial content had increased three fold, although there had only been a slight increase in editorial employment during the same period. Unsurprisingly journalists felt that the "pressure to produce a high number of stories daily had intensified, and that this increased their reliance on recycling material rather than reporting independently'" (Lewis et al., 2008: 4). Lewis et al. found that in the UK, nineteen per cent of newspaper stories and seventeen per cent of broadcast stories were 'verifiably derived *mainly* or *wholly* from PR material or activity' (2008: 17, original emphasis).

Power hierarchies still shape the boundaries of media access. But these boundaries can shift. Those excluded from public debate are not fated to remain so indefinitely; if they position themselves correctly they too can become primary definers. Research on media and sources (e.g. Cottle 2003, Fenton 2009) has shown non-

dominant sources are involved in complex struggles over news access. These studies do not ignore structural inequalities and unequal distribution of resourcing that affect sources, but they are interested in the processes and practices that allow sources – elites *and* non-elites – to gain news access (Cottle, 2003: 14).

2.2.2 Source Strategies: the environmental movement

One issue area where source struggle is often evident is environmental debates: Anderson (1997), Cottle (2003), Hansen (2010) and Lestor (2010) have all shown how previously marginal voices such as environmental pressure groups, have succeeded in defining some issues. Anderson demonstrates how, during the 1980s, groups like FOE and Greenpeace achieved access *firstly* to the media, and then to policymakers. Increasing interaction with policymakers, and the establishment of several environmental groups as key players in the policy-making process, led both NGOs, and the demands they made, to become institutionalised. In this way, environmental concerns have been contained within established boundaries.

Cottle (1993:12) analysed British television programmes. He found that environmental news featured a range of 'primary definers' (scientists, diplomats, local officials and politicians, environmental pressure groups, individual citizens). Yet Cottle argued this did not add up to 'a situation of open and equal access', rather environmental news depended on a number of well-organized interests, some from the dominant elite, some from opposing groups. Hannigan also observed this, commenting that:

> “Even when the media solicit comment from opponents of the status quo, news sources are invariably drawn from the executives of major social movement organisations such as Greenpeace and Friends of the Earth.”
>
> (Hanningan 2006: 81)

It is possible for primary definers to offer voices of opposition; but this does not mean that the media are necessarily inclusive of alternative viewpoints. A few voices of dissent are included (often from professional campaigners) but many others are excluded.

A rapid growth in NGO membership during the 1980s led to the increasing professionalisation of environmental groups (Anderson, 1997). As the number of people willing to join campaign groups increased, so did the number of groups people could join. An expansion in the number of NGOs has increased competition for paying members, for active supporters, for the attention of policy makers and, of course, for media space. In response to increased competition further professionalisation has

occurred. Fenton tracks how, in recent years, there has been a growth in PR offices at NGOs. Press Officers are no longer drawn from activist circles, or even from professional campaigners, they are most likely to be trained journalists who “have the same norms and values as their counter parts in the mainstream media” (Fenton, 2010: 153). In such a professionalised environment, resource poor organisations find it harder to compete, especially as journalists have to do more in less time (Davies, 2009) and are therefore more reliant on a few sources.

Large NGOs who employ professional PR staff are able to provide news that conforms to established news criteria and provides journalistic copy at little or no cost. Fenton argues that “the line between professional PR agency and large-scale campaigning NGO has blurred to near extinction” (2010: 166). In such an environment it is not surprising that NGOs have become mainstream sources.

But such legitimation was won at a cost, NGOs no longer offer an alternative perspective; they conform to the news agenda. Fenton found little evidence of NGOs “challenging normative conceptions of news criteria – indeed they did their best to fit these normative conceptions in order to gain more coverage for their organisation.” (2010: 158). The aim of a press release is to provide journalists with 'ready made copy'. NGOs are succeeding in this aim but to do so they must reproduce existing power hierarchies by fulfilling the normative news agenda.

Part of the reason primary definers are successful is not just because of their structural position, it is also because they situate their interpretation within hegemonic values and definitions. In this sense they are not completely free to define an issue. If a group’s ideas fall beyond the hegemonic consensus they are unlikely to be a primary definer regardless of how much money or political influence they have.

According to Gramsci, dominant social groups maintain their social, cultural and political power through an accommodation of oppositional practices. It is, therefore, useful not just to focus on *who* is being quoted in the media but also to look at *what* is being said. Certainly the views of the environmental movement, which were once excluded from public debate, have now been accommodated into the mainstream. During the last thirty years environmental discourse has formed a valid strand of public debate, yet in the same timeframe environmental bads have undoubtedly increased (Beck, 1992). The current climate crisis demonstrates the environmental movement’s inability to challenge capitalist hegemonic logic, even when talking about an environmental problem that threatens capitalist society itself (Stern, 2006). The popularisation of environmentalism has not transformed society; environmental discourse has been accommodated within existing discourses and, as Gramsci (1971) predicted, this has served to maintain power relations – not to challenge them.

This institutionalisation of opposing groups is reflected in the communication choices they make; Allan describes how groups seeking to be ‘credible’ news sources are often forced to “adapt to the narrow confines of legitimized topic parameters” (2002: 74). Alternative viewpoints are honed so they fit dominant frames; the critiques that environmental groups offer are contained within a certain range. Any view that falls in, what Hallin (1986) would term as, ‘the sphere of deviance’, receives little, if any, media attention. Groups that do not adhere to ‘the sphere of legitimate debate’ (Hallin, 1986) must 'make news' by being disruptive. In such cases groups will complain that the media almost exclusively report the 'trouble', rather than the ideas or demands that groups use disruptive tactics to express. If marginalised groups wish to gain access to the mainstream media it is necessary for them to re-package their claims in terms that resonate with 'dominant interpretative packages' (Hansen, 2010: 119). The question for NGOs is how to do this without losing the central critique of their argument.

As Hannigan writes:

> **“**Packaging an issue in the form of direct criticism of the dominant social paradigm (that economic growth is generally desirable) would not appear to be an effective communication strategy for environmental claims-makers. It makes more sense to situate environmental messages in frames that have wider recognition and support in the target population: health and safety, bureaucratic bungling, good citizenship and so on.”
>
> (Hannigan, 2006: 88)

The environmental movement provides a clear example of how structures of media access shift over time according to source strategies, media landscape and societal context. Yet the environment movement demonstrates that while sources may change, this doesn’t necessarily result in different preferred definitions. Sources have to use savvy strategies and tactics to gain media legitimation. Such tactics often involve promoting normative assumptions, and respecting argumentative limits. Environmental NGOs have gained attention for environmental issues but they have not posed a significant challenge to the capitalist consumer logic that is responsible for so many environmental woes. The journey of environmental groups from radical outsiders to legitimate insiders illustrates Gramsci’s (1971) warning that hegemony accommodates oppositional viewpoints, but in so doing defuses the discursive threat those oppositional views pose.

2.3 The Circuit of Communication: Audiences

Whilst Hall et al.'s theory of primary definers takes a mainly structuralist approach, 'Encoding/Decoding' focuses on both the symbolic processes of communication and the role of audiences in creating meanings. Hall et al.'s paper recognises the ideological role of the media, but also sees audiences as active bearers of ideologies engaging with media messages, and in so doing, creating either consent or resistance. Hall describes how the media compete with other representations, practices and experiences that shape people's lives. Media influence is created through the interaction of the text with the histories and accounts that already surround and construct audiences.

Hall's distinction between encoding (the moment of the message's production) and decoding (the moment of reception) shows that meaning does not lie in the text alone, "researchers cannot accurately predict how people will relate to and interpret a particular cultural product simply by analysing headlines and photographs, camera angles, lighting, sound tracks and scripts" (Kitzinger, 2004: 19). The consumption of the television message is also a 'moment' in the production process. This means that although media texts privilege the likelihood of certain interpretations, they do not have the power to determine interpretations.

Hall says it is possible to locate 'significant clusters' of meaning within audience responses that are linked to the social and discursive positioning of readers or viewers and their 'interpretive communities'. Morley expands on this in an essay printed alongside a 1980 reprint of *Encoding/Decoding* (Hall et al. 1980). In this essay he argues that at the moment of textual engagement there are always other discourses in play, besides those of the particular text being encountered; these discourses are determined by the subject's cultural, educational and institutional position. The meaning of the text will be constructed differently according to the discourses (knowledges, prejudices, resistances, etc.) brought to bear on the text by the reader and the crucial factor in the encounter of viewer/reader and text will be the range of discourses at the disposal of the audience. Morley highlights the subject's formation within discourse, showing how there is a constant interaction of other texts and discourses which position the subject in relation to the text. The relationship of one text/one subject is transformed to a "multiplicity of texts/subject relations, in which encounters can be understood not in isolation but only in the moments of their combination" (Morley, 1980: 168).

While Hall's model recognises the importance of audience response in producing textual meaning, he is careful not to deny media power. Despite acknowledging that there is no necessary correspondence between encoding and decoding, he also

recognises that the former can still attempt to 'prefer even if it cannot prescribe or guarantee the latter' and 'unless they are wildly aberrant encoding will have the effect of constructing some of the limits and parameters within which decodings will operate' (Hall, 1980: 135). Hall's model recognises that the text itself places constraints on interpretation or as Hall says the text is encoded with a 'preferred meaning'.

Hall outlines three hypothetical positions from which the decoding of a televisual discourse may be constructed. Hall makes clear that these are hypothetical positions only; he instructs media researchers to empirically test and refine them:

The three positions are:

3.1 The Dominant-Hegemonic position: When the viewer takes the connoted or preferred meaning 'full and straight' and decodes the message in terms of 'the dominant code'. Hall states that for a broadcaster this is the ideal-typical case of 'perfectly transparent communication' (Hall, 1980: 135). For example a viewer who watches a piece on how wage freezes are in the national interest because they are needed to tackle inflation, and accepts this analysis, is decoding the programme within the dominant code.

3.2 Negotiated position: Hall defines this as a decoding which contains "*a* mixture of adaptive and oppositional elements: it acknowledges the legitimacy of the hegemonic definitions to make grand significations (abstract), while, at a more restricted, situational (situated) level, it makes its own ground rules – it operates with exceptions to the rule" (Hall, 1980: 136). For example a viewer who accepts that it is in the national interest for people to earn less, but is still willing to go on strike to fight their own wage freezes is decoding the programme within a negotiated code.

3.3 Oppositional position: This is when the text's preferred meaning jars with the viewer's worldview. The audience member will read the text through a different lens, their interpretation will be informed by an entirely different frame. Hall's example is a viewer who listens to the same wage debate but 'reads' every mention of 'national interest' as 'class interest'. He/she is operating within an oppositional code.

Brunsdon and Morley provided one of the first empirical tests of Hall's Encoding/Decoding model. They conclude that distinguishing readings according to social and cultural position is not as clear cut as Hall's model outlines. Perhaps the most crucial finding that their study produced is just how complex decoding is. Although social position undoubtedly shapes decoding, it does not completely correlate. Three different groups: one comprised of apprentices, one of trade

union/shop stewards and one of black FE students all shared a common class position, but their decodings were shaped by different discourses and institutions.

Livingstone (1999: 66) comments that “theorising about media influence is a messy pot-pourri whose findings often prove inconsistent or inconclusive.” The difficulty and complexity of the audience-text relationship is a crucial finding and even though Brunsdon and Morley's audience work did not fit the pattern they expected, it did effectively highlight the complexity of audience studies.

The work of Hall and Morley laid down a series of questions for the media researcher:

- How is it possible to capture the role of text and audiences in determining meaning?
- How can a model of audience response best capture both audience and media power?
- What factors influence audience responses and how can the analyst meaningfully pattern these whilst resisting oversimplification?

2.3.1 Criticisms of *Encoding/Decoding* model: where next for audience research

Hall's *Encoding/Decoding* model was first published in 1973, yet forty years later I am still discussing its implications. This is because the model was so seminal for audience studies: as Barker (2006) writes “the simple fact is that (the encoding/decoding model's) adoption made audience researchers begin again from scratch” (2006: 126). In a published interview Hall states that he did not see the encoding/decoding model lasting for the next 25 years arguing that “If it's of any purchase... it's because of what it suggests. It suggests an approach; it opens up new questions.” (Hall, 1994: 255). In this critique I shall consider exactly what the model did suggest and some of the theoretical developments that grew out of the questions it posed.

Some interpretations of Hall have suggested his three positions are definitive ways audiences read media texts, and that the distinctions between each position are clear and easy to define. I find this interpretation unconvincing. I am going to discuss the UK media’s discussion of the 2010/2012 debt crisis – instead of the 1970s wage freezes example Hall gives – to demonstrate the problems with using Hall’s model in an overly rigid manner. This is purely for illustrative purposes and the example is based on my regular, but by no means rigorous, reading of the UK media. Most UK media coverage supports the view that public spending cuts are an effective way to reduce the UK deficit. Hall would characterise this as the preferred meaning. It is a view that is

also being put forward by the political elite; both the Coalition government, and the main party of opposition, Labour, argue that public sector cuts are necessary. Promoting public service cuts over other policies, like tax rises, also favours richer members of society who are able to pay for privatised services and therefore the media can be said to be replicating a view that favours both the politically and the financially powerful – so far Hall's analysis fits. However, some of the media are still questioning the level of austerity being introduced. I would argue this is a negotiated position; thus some media articles are going against the dominant-hegemonic view. This is my first problem: I am unsure how the encoding/decoding model accounts for different media interpretations. Media coverage is not a monolithic entity and it does not always present the same viewpoint.

What would an oppositional audience reading of the news coverage look like? If an audience member questions whether cutting public spending is the best way to tackle the deficit this could be an oppositional reading or, alternatively, if someone argues that the UK's deficit does not need to be cut and, therefore, the crisis is fabricated, this could also be construed as oppositional – how do we define what is truly oppositional? So this is problem number two: the distinction between negotiated and oppositional readings seems ambiguous and perhaps, more importantly, I am not sure what it would tell me if I could define one as an oppositional reading and one as negotiated - what does that distinction mean?

For me this model is over-simplistic, yet this may be the fault of those who have appropriated the encoding/decoding model. Hall himself has already revised the model to argue for a spectrum of positions and acknowledges that the negotiated position which was presented as one position is not one at all but many. He also explains how it is possible for audience members to move between different readings. But still, for me, the three positions do not help me reach the really important questions: The Who? The What? and The Why?

- Who is being blamed for the debt crisis? Bankers? The old Labour Government? Benefit recipients? Public sector workers?
- What threat is being portrayed? 'another Greece?' 'a double-dip recession?' 'the destruction of British manufacturing?'
- Why are people claiming the debt crisis arose? 'A few greedy individuals?' 'A poorly regulated banking sector?' 'A bloated public sector?'

Addressing these questions and looking at how the answers to them shift across time and audience grouping would, I believe, lead me to a more insightful analysis of audience reading and media representation of the UK debt crisis.

A common criticism of Hall's work is that it has led to an overemphasis of audience power. Some media theorists are criticised for having seized on Hall's assertions about the polysemic and potentially open nature of messages to make:

> "an undocumented presumption that forms of interpretive resistance are more widespread than subordination or the reproduction of dominant meanings. To romanticise the reader at the expense of analysing textual determinacy"
>
> (Morley, 1993: 15).

Although I find other parts of Hall's model unclear and sometimes problematic, his ideas about media power seem both straightforward and convincing. One of the central features of Hall's original encoding/decoding model was that it contained the concept of the preferred reading - that there are textual constraints that affect audience understandings but that these constraints can be negotiated or even opposed by the audience. This is an important part of the value of the encoding/decoding model: it acknowledges that audiences have the power to create different meanings from media texts; but this acknowledgement does erase media power.

Some theorists accuse those who have picked up on Hall's work of putting "little effort into pursuing Hall's original proposition that texts carry preferred meanings." (Kitzinger, 2004: 188) and also for making no attempt to link significant clusters of meaning to the social and discursive positioning of readers: therefore ignoring both the power of the media text and also how audiences are shaped by discursive formations. Such accounts dismiss large swathes of Hall's theory and, in my opinion, overlook his most valuable insights. As Kitzinger states, audience responses are not 'free-floating', instead they are a product of time and place, embedded in power structures, shaped by patterns of everyday life and language. Audiences' responses are dependent on the discursive repertoire available to audience members, without such discursive armoury resistance is not possible. To concentrate only on the diversity of audience response is to ignore the impact of media representations and the political-social context of the audience.

Another criticism levelled at Hall's *encoding/decoding* model is that it risks overemphasing the agency of the producer. Lewis (1994) warns against equating a message's ideological power with the ability of its authors to, consciously or unconsciously, infuse programmes with a preferred meaning. The *encoding/decoding* metaphor, alongside the concept of 'preferred meaning', implies that the message is first formed in the author's mind and is subsequently encoded into language for transmission. The implication is that language is merely a mechanism for sending messages, rather than the medium in which consciousness is formed. The use of

encoding implies an intentionality and agency to the 'preferring' which is unhelpful in trying to understand which messages are 'preferred' or dominant.

It is tempting to turn to the text itself to analyse the dominant message within the media content – yet this is a problematic strategy. Looking at only the text privileges the researcher's interpretation of the message; their reading of the text, although likely to be rigorous and nuanced, does not necessarily produce the preferred meaning. Lewis (1994) argues we can only identify preferred meanings at the site of decoding. The preferred meaning can only be determined if the researcher knows how the majority of people decode the text. Meaning is created in the interaction between audience and text. The dominant meaning is simply the one that is most popular.

This definition is helpful as it recognises that meaning is only made when an audience sees, views or hears a text. I would expand on Lewis' argument to draw a distinction between dominant and preferred meanings – dominant meanings are as Lewis defines: the meaning that the majority of audience members take from the text. Preferred meanings are multiple and relate to specific actors: the journalist who wrote the article might have a preferred meaning, the source quoted might have another, and the sub-editor a further still; they are not innate in texts but reflect the intentions of communicators. Of course such meanings are not solely authored by journalists or audience members: they are constructed within a particular culture, but the concept of preferred meanings is a useful concept to analyse the strategies (and counterstrategies) used in the struggle over hegemonic accord.

Hall's model does not account for texts where the preferred meaning works against the dominant societal discourse. It does not allow space for alternative media interpretations, texts that come from subcultures or work against accepted framings. By not acknowledging the presence of oppositional media texts, Hall's concept of oppositional readings is also problematic. Kitzinger (2004:191) asserts that genuinely polysemic readings are most likely to occur when a text breaks the frame offered by mainstream coverage. The more alternative the message, the more likely the audience are to reject it. The concept of oppositional readings can, therefore, not be evoked as a mantra guarding against media power as it is dominant ideologies that are likely to form the majority of 'oppositional readings'; the discursive resource for which is likely to have been provided, at least in part, by other media texts.

Hall later responds to this criticism by claiming that if there is homogeneity in preferring it can only be detected in patterns over a period of time (Hall, 1994). The hegemonic message cannot be determined by just one text. This is an important revision to Hall's original theory which was based on exploring the relationship between

the audience and one particular text. This later revision demonstrates that it is vital to look across texts to explore the pattern of framing that appear over time.

There can be no denying just how successful Hall's model has been and, I would argue, deservedly so. The encoding/decoding model recognised that meaning is determined by both the media text and the audience, a crucial insight. Hall created a simple diagram model and three clear 'decoding positions'. By creating such a clear ‘model’ rather than the more abstract alternative – a 'theory', Hall ensured his ideas could be easily explained and reproduced. Yet the text that accompanied Hall's encoding/decoding diagram is dense and complicated and Hall's subsequent writings have added yet other ideas to his original paper. It is hardly surprising then that Hall's model has suffered overdeterministic or partial readings, that Hall's warning that his model is hypothetical and needs to be developed has not always been heeded, and that Hall himself was unable to capture the full depth of his ideas in a diagram. Yet, for all the criticisms of Hall's theory, his ideas have also led audience studies in very productive ways, providing many new insights into the audience text relationship. I am going to conclude by talking about audience work that I have found particularly valuable when theorising about the audience media relationship. This work is built upon the encoding/decoding model using the insights of Hall to further develop media studies.

2.3.2 New Audience Research:

Recent reception studies have emphasised the importance of bridging the divide between active audience and media effects research. In particular researchers like Corner (1991) and Kitzinger (2004) have championed a new direction for reception studies sometimes referred to as ‘New Influence Research’. Such research combines a commitment to analysing how media power operates, with a recognition that there are variations in audience 'readings' of the media (although variation does not necessarily denote resistance). New Influence Research explores how, and under what circumstances, the media convey ideas – recognising that this process occurs not just in spite of audience ‘activity’ but often through it as well. As Kitzinger writes:

> “The most important conclusion from my research is that we should not see ideas about audience activity as contradicting theories about media power. Instead, we should see them as integral to any efforts to understand how that power operates.”
>
> (Kitzinger, 2004: 192)

The media are just one site where ideas are (re)produced and the media’s influence is only realised through its interaction with other discourses. New influence

research argues that the media influence ideas, assumptions and attitudes; empirically demonstrating that there are pervasive common themes in the meanings conveyed to audiences (Livingstone 1999, Kitzinger 2004). But they also explore how such pervasive themes are made sense of by audiences in their day to day practices.

Just as media researchers have clearly articulated the limits of the text's power so they have also drawn attention to the limits of the audience's power. This recognition arises from the Foucauldian insight that audiences exist within social/discursive formations, and 'speak' their experiences, including media experiences, from that discursive position. Nightingale describes how the television programme holds within its structure signs of the history and culture that produced it. She also claims the body of the viewer holds these signs of history and culture: “the text and the life/body resonate, and resonation produces overtones which have intertextual repercussions with other texts, other lives, other bodies” (1996, 125). The audience are also part of social reality.

Audiences cannot be freed from the discursive structures within which they operate, yet culture works to conceal this fact, suggesting that thoughts are privately authored and personally owned. McKinley argues that:

> “Until we have a way to understand our innermost thoughts, desires and beliefs as woven with materials provided by language and culture, we will be unable to move beyond arguments over whether television can “make” us do anything… the enemy here is the fiction of the autonomous self: I am the unique source of my thoughts; culture and language play no role in the meanings I make.”
>
> (McKinley, 1997: 240)

When we speak of audience ‘resistance’ to particular messages, individual agency is implied but ‘resistant’ readings do not signal individual freedom. Audience members who 'resist’ the dominant viewpoint have not managed to excavate themselves from the shackles of culture, instead they are located in a different cultural position and this provides them with a different set of discursive resources.

Cultural studies has drawn on Gramsci to observe that difference is always present in culture, a hegemonic position is successful if differences are incorporated in a way that does not challenge the mainstream. Some audience researchers have empirically explored moments when resistant or non-hegemonic views are aired. McKinley’s research on female identity construction, with audiences of Beverley Hills 90210, found that participants posited non-hegemonic ideas: that a woman can be independent, strong or nonconformist but then closed them again in favour of the

dominant position. McKinley concludes that marginalised positions were offered but then ‘clawed back’ into mainstream meanings (1997: 238).

Fenton et al 1998 and Kitzinger 2004 developed this idea by distinguishing between the moment of decoding and the moment of interpretation. Their studies each found that although audience members evaluated individual texts in a critical and sceptical way, this independence of thought at the moment of decoding did not necessarily carry over into the moment of interpretation. Although audiences may 'resist' the dominant media message, a TV programme or newspaper article can still have the power to convey facts and to influence audience ideas, assumptions and attitudes (Kitzinger, 2004). Scepticism of a particular text or of the media in general, did not automatically mean people reinterpreted assumptions or norms.

As well as finding that oppositional readings are not always transformative Kitzinger found they are sometimes disempowering. She gives the example of a misinterpretation of a Health Education Authority advert about AIDS. ‘Resistance’ in relation to this divergent readings is not a useful analytical concept.

Kitzinger also notes that the media influence understandings of experiences which are traditionally seen as ‘media free’. In particular she looks at the impact of the media on *personal*, ‘private’, experience observing that “The media play a part in how people classify, recall, or interpret events in their own lives” (Kitzinger, 2004: 192). Kitzinger demonstrates that personal experience, which is often cited as a source of 'resistance' to media messages, can itself be shaped by media constructions of reality.

The presence of divergent readings does not, in and of itself, denote resistance. As Livingstone argues, there are many more conditions that must be met before divergence can be called an active, counter-hegemonic resistance:

> “One cannot claim that any kind of interpretative activity involves resistance, opposition or subversion, without having a clear test of whether a divergent reading is subversive or normative, of whether it originates primarily in the text or

from the viewer, and without having shown how such supposed resistant decodings actually do make a difference politically."

(Livingstone, 1998: 249)

In fact very few divergent readings can be labelled resistant.

New audience research has shown how meaning is not just generated at one point on the circuit of communication but at various and diverse locations (Haran et al., 2008). Media researchers interested in the sociological implications of a particular discourse will include campaign group adverts, government policy documents and online blogs in their attempt to track the full circuit of a discourse and to discover many different moments in its production (Boyce 2007, Haran et al. 2008). Corner points out that "cultural power and ideological reproduction operate as much, if not more, through social factors bearing upon the interpretive action as they do through that "inscribed" in the media texts themselves" (1991: 271). The task facing audience research becomes increasingly challenging as researchers explore the relations between texts and contexts, with context being ever more broadly conceived. Under such circumstances the concept of audience itself is called into question; if social relations as a whole are to be analysed, what is the difference between audience member and society member?

Livingstone argues the audience still has relevance as a relational or interactional construct; it provides a conceptual way of focusing on the diverse set of relationships between people and media forms and allows researchers to ask how texts are part of and, as Livingstone highlights, agents in, people's lives:

> "audiences (plural) can be conceived relationally as an analytic concept relevant to and providing links across, relations among people and media at all levels from the macro economic/cultural to the individual/psychological."
>
> (Livingstone, 1998: 251)

The job of the media theorist is to consider the full range of societal influences *and* to maintain a commitment to analysing how these influences operate in relation to the media. This is not because the media are, necessarily, the most important discursive factor but rather because there is value in giving different societal factors a separate analytical space. The media theorist's role is to provide such a space for the media; other researchers can offer analytical space for other influences: be it the education system, the workplace or the family etc.

2.4 The Media Representation of GM.

There is a significant body of empirical work examining media coverage of GM foods. The majority of these studies analyse newspaper coverage, often using content analysis to identify the frequency of broad thematic categories (e.g. Bauer, 2002; Gaskell et al. 2003; Hornig priest, 2006, Ten Eyck 2005). Categories such as nature, risk and accountability are frequently identified in this research. Other studies track the amount of attention GM receives over particular periods (Nisbet and Huge, 2006, Bauer and Gaskell, 2002, Shanahan et al. 2001, McInerney et al., 2004). A recent example includes Listerman (2010) who analysed newspaper coverage to track short phases of media attention for GM in the US. These studies reveal that there have been two distinct phases in the reporting of GM. In the 1980s newspapers promoted the technology as part of basic research activity and industry development, (Priest, 1995; Gaskell, Bauer, Durent & Allum, 1999). In the 1990s however this changed when there was a sharp increase in news coverage associated with particular events like the contamination of foodstuffs by GM corn not approved for human consumption. During this period the coverage became less positive and began to incorporate elements of risk, ethics and accountability (Marks, 2001; Nisbet and Lewenstein, 2002).

There have been a number of studies that consider the presentation of scientific data within the GM debate. They convincingly show that there is a limited discussion of scientific techniques in the GM debate, that there is a lack of scientific expertise amongst the journalists writing about GM and that science is often represented as a political "battleground". Researchers frequently conclude that this contributes to a democratic deficit with public understandings of science (Filpse and Osseweijer, 2013, Augustinos et al. 2013 and Casaus, 2005). Other studies analyse *who* is quoted within particular newspaper articles (Cook, 2004). Maeseele, 2009, observes that NGOs are regularly quoted in Belgium coverage of GM whereas industry figures decline from being quoted. While there are many studies of both the US and UK press coverage of GM there is less studies of other countries press coverage, notable exceptions include New Zealand (Rupar, 2002) Belgium (Maeseele, 2011), Hungary (Vicsek, 2013), Catalonia (Casaus, 2010) South Africa (Mwale, 2010) and Japan (Shineha et al., 2008).

In comparison to the large body of literature on the newspaper coverage of GM there are very few studies on television coverage: one exception is Nucci and Kubey, 2007 who examine television coverage in the US between 1980 and 2003. The authors explore some of the questions that are well rehearsed in relation to the newspaper coverage: What is the quantity of coverage?, Where are news items placed?, How long

are news items? and Who are the spoke people? Nucci and Kubey discovered that there is far less coverage of GM on television than there is in newspaper content.

In addition there is also a lack of texts that look at fictional or entertainment representations of GM. This is partly because, unlike human genetics, there have not been many fictional representations of plant genetics. McHugh considers the Ruth Ozeki's novel “All over Creation” to discuss a far broader set of questions than the studies of news media. In particular how “reckoning with the lived conditions of GM plants involves more than being responsible scientists or informed consumers: it requires becoming sympathetic community members”. (2007: 44).

It is also notable that although there are many studies of media texts, almost none of these are combined with audience studies to consider the implications of the way GM is discussed in the media. One exception is Cook's 2004 study of British newspapers which involves a production, content and focus group study. Cook does not, however, give space to fully develop an analysis of his focus group data, dedicating only 6 pages of a 141 page book to focus groups responses. In this section Cook provides a selection of quotes that demonstrate that audiences were broadly sceptical of the claims for GM but he does not look at whether the particular elements he identifies in his detailed textual study are present in the focus group discussions. One of the limitations of Cook's focus group study is that he asks participants to read small extracts of text and analyses their responses to those particular texts. He does not consider the complex ways audiences construct their own texts from a wide variety of cultural influences.

Despite the considerable number of studies of the media coverage of GM the questions asked by this body of work are not particularly wide-ranging. Broadly similar elements of the media's coverage of GM have been analysed many times; unsurprisingly this has produced similar results. By having such a narrow research focus these studies reproduce their own limitations. Firstly they do not look across the circuit of communication to consider audience engagement with the issue of GM, secondly they are often focussed on newspaper coverage (usually in Europe or the US). Thirdly these studies are generally limited to questions about the amount of coverage, who is speaking and what broad thematic categories make up the coverage. Such studies have provided a useful picture of what the coverage of GM looks like, but they do not explore the ideological implications of how GM is framed. They fail to consider the complex processes involved in the reception of particular messages or the importance of cultural assumptions in shaping public understandings of GM. Studies

which carefully attend to the implications of key cultural concepts can build on the context provided by the current body of literature.

2.5 Summary

Within this chapter I have outlined key concepts that inform my understanding of the media. Power is everywhere; it cannot be removed, only deconstructed. Understanding that power relations are ubiquitous makes debates about whether the media have power redundant. As a social element the media necessarily have power. Power operates through discourse which is enabling as well as constraining. This thesis will utilise theorists who argue that objectivity and truth are both constructions and that this construction obscures the hegemonic struggle in which alternative possibilities are suppressed. In this thesis I consider not just what a text means but who it promotes.

I utilise Hall's theory of encoding / decoding because it emphasises the social and symbolic processes involved in creating meaning. The thesis considers processes of production *and* reception. When discussing production I will draw on critiques of Hall's theory of primary definers to argue that access to the media fluctuates. It is possible for oppositional groups to gain media coverage but to do so viewpoints must be honed to fit the hegemonic discourse. Other researchers have shown how environmental groups positioned themselves as 'primary definers' but in so doing sacrificed a critique that challenges societal arrangements. This study will further consider how environmental groups frame their arguments in order to gain media coverage.

When discussing processes of reception I shall utilise Hall's model of encoding and decoding to consider both the ideological role of the media but also the ideologies that audiences bring to bear on their interpretations of media texts. I shall consider Hall's own revisions of his model, in particular his recognition that hegemonic messages can only be identified by looking across media texts for patterns of dominance, rather than looking at individual media texts. I shall also draw on new audience research to ask questions about assumptions, norms and silences. I agree with Lewis (1994) that a text's dominant meaning can only be identified through audience studies. Audience research is complicated – audience interpretations are influenced both by the text and the discursive structures within which they operate. Divergent readings cannot be simply read as resistant and audience positions are neither permanent nor consistent. They are potentially contradictory and context dependent. Whilst the text of a TV programme or newspaper article is finite, bounded, the text of the audience is anything but – it is continuously changing, altering. As

Nightingale writes “The audience-text relation is a chimera which can only ever be apprehended partially... Audience is a shifty concept” (1996: 148).

Ideas about audience activity do not contradict theories of media power. In fact audience activity is integral to any efforts to understand how that power operates. As Katz states it is not that “the multiplicity of factors which mediate between television and viewers undermine media effects but rather that it is only through such complex mediations that any effects could occur at all” (Katz, cited in Kitzinger, 2004: 180-181).

I ended by considering the limitations of current media studies scholarship on GM. In particular I noted that there are very few studies which track discussions of GM across the circuit of communication.

Chapter 3: Literature Review: Nature

"*Nature is imagination itself*" (William Blake, The Letters of William Blake, 1906)

Nature is a deceptively complex word; a complexity reflected by the number of different academic disciplines that have something to say about the natural world. Anthropology, social science, cultural geography, feminist studies, media studies and, of course, the physical sciences have all spoken about nature. Such complexity has given rise to many definitions of nature but I would argue the most convincing is that set out by the cultural theorist Raymond Williams who explored the etymology of the word, arguing that there are three related meanings given to nature:

1. The material world itself, taken as including or not including human beings

4 The essential quality and character of something

5 The inherent force which directs either the world or human beings or both

(Williams, 1983: 219)

Williams explores how these three meanings are overlapping and mutually reinforcing; making it difficult to untie which meanings are mobilised in particular contexts.

Having set out these basic ideas about nature's meaning I am going to consider how nature has been used at different socio-historical moments and the role 'nature' has played in the construction of human society. While nature's etymology was set out by Williams, its connotative meanings continue to shift as it is deployed in different arenas and is linked to different debates. As Kaebnick (2011) observes a particular concept of nature is only relevant in the context in which it operates.

3.1 Constructing Nature

Despite nature's close association with essence, materiality or the 'real', it is important to acknowledge that nature, too, is discursive. When we talk of nature we are talking of how the physical world is culturally constructed and understood. As Mayerfield Bell (1998) writes "whatever else nature might be it is also a social construction" and he is far from alone in positing this view – there is an extensive literature that is concerned with nature's construction. (See for example, Bird, 1987; Eder, 1988; Evernden, 1992; Greider and Garkovich, 1994; Cronon, 1995; Hanningan, 1995; Soper, 1995; Beck 1996; Cantrill and Oravec, 1996; Dupuis and Vandergest, 1996; Ellen and Fuhui, 1996).

To view nature as constructed is to acknowledge that nature is not a self-apparent entity. Instead, humans work to define what constitutes nature. As such, nature is imbued with the values, arguments and world views of those who compete to cement its meaning. Nature is crammed with 'human history' (Williams, 1980); behind its construction is a long and complicated cultural story that has led human beings to conceive of the natural world in very different ways (Cronon, 1995). The natural and the cultural can never, truly, be separated. Latour (1994) claims there is no such thing as nature, only 'nature-culture' and Freudenberg et al. (1995) echo this view, referring to the 'socio-environmental'. Nature is a fluid concept which is both culturally grounded and socially contested.

There is not a singular nature but a diversity of historically, geographically and socially constructed 'natures' or ‘contested natures’ (Macnaughten and Urry, 1998). Many researchers have documented different accounts of nature. Anthropologists have provided examples of the differences that exist within various cultures - e.g. Howell (1996), Knight (1996) and Freudenberg et al. (1995).

The field of media studies has documented how shifting versions of nature are constructed – for example within wildlife documentaries (Cottle 2004, Davies 2000), as well as in response to particular events/political contexts (Allan et al., 2000). What these studies offer are citable examples of how ideas of nature have shifted and the ways in which they are contingent on their specific historical, spatial and cultural context.

A constructivist perspective reveals that nature is not “some ultimate truth that was gradually discovered through the scientific processes of observation, experimentation and mathematics” (Merchant 1980) rather its meaning is contingent on its human interpreters. Those who write about nature’s construction not only provide a theoretical framework for the analysis of nature but also offer empirically grounded examples of both current and past views of what constitutes ‘nature’.

3.2 Situating Knowledge: responding to criticisms of constructivism

Constructivist views of nature have been criticised for undermining legitimate claims about environmental degradation and promoting a relative sophism that disables calls for action to address environmental bads. They claim that social constructionists see too much society in the construction of nature; positing the natural as an entirely flexible concept and denying it an independent agency (see Gerber, 1997 and Pedynowski, 2003). These criticisms do not, however, fully account for different constructivist positions.

Many social constructivists have argued convincingly that recognising a claim's construction need not undercut its legitimacy. Some strict constructivists maintain that we must be vigilant in making any assertions about social conditions but, in contrast to this, there are also 'contextual' constructivists (Hanningan, 1995). Contextual constructivists argue that the legitimacy of claims can be evaluated on the basis of evidence such as official statistics or public opinion polls, whilst at the same time continually acknowledging that this evidence is, of course, also socially constructed. For example, Best (1993) suggests that a researcher could reasonably doubt claims that Satanists sacrifice 60,000 victims annually while accepting figures provided by the Centers for Disease Control for the numbers of American AIDS victims. It is crucial to consider the historical context within which the social problems claim has been formulated in order to explain its emergence and assess the validity of this claim.

As Yearley (1992) observes, demonstrating that a problem has been socially constructed is not to undermine or debunk it, since both valid and invalid social problem claims have to be constructed. Indeed, the analysis of a claim's construction can reveal how 'accurate' a particular claim is likely to be, why it has become prominent at a particular time and which solutions are likely to be rhetorically, as well as physiologically, expedient. Rather than hindering those who seek to protect the environment, social construction can actually be an analytical tool in their armour. For example, social constructionists could track how coverage of climate change was decreasing in the mid-1990s even though carbon emissions were still rising. Environmental problems are not just 'found' they are constructed by organisations or individuals; it is therefore important for anyone analysing a particular environmental debate to understand how this process works.

Much of the constructivist view fits with the poststructuralist premise that reality is both material and textual. Such a view does not deny the existence of material conditions but insists there is always a textual supplement accompanying reality. Others, concerned with critiquing scientific practices, have drawn attention to this, for example Haraway states: "I want to call attention to the simultaneity of fact and fiction, materiality and semioticity, object and trope" (2000: 82). Haraway's feminist science studies perspective asserts that knowledge is not 'found'- just as nature is not 'found'. Haraway argues for a different epistemological approach: one which does not seek objectivity but instead 'situated knowledge'. No longer should we hope to uncover *the truth* but look instead for *truths*. A 'situated knowledge' recognises that such truths are co-determined by both social and material conditions.

Those taking a critical constructivist perspective acknowledge that just because something is socially interpreted does not mean it is unreal. It is a combination of both

textual and material. Pollution does cause illness, species do become extinct and the climate is changing but people make very different things of these phenomena and their interpretation is necessarily limited by the discursive resource at their disposal. Irwin describes the social and the natural as 'actively-generated co-constructions'. As much as history is a vehicle for nature, so nature in turn provides the setting for history's occurrence. This recognition is an acknowledgement of the embodied reality of human existence (Soper, 2011). There is always nature beyond that which we have constructed, although we, of course, don't have any shared access to that reality other than through discourse (Eckersley, 2004). Such a recognition should not prohibit us from making *any* claims about the natural, but it should warn us not to ignore the discursive context in which our own claims are made.

3.3 Natural Values

Literature on the social construction of nature is not just concerned with drawing attention to nature's construction; it is the utilisation of nature to shape shared societal values that makes it such a powerful and important concept. Throughout Western history nature and culture have been bound together, each dependent on the other for meaning. As Capra recognised "we can never speak about nature without, at the same time, speaking about ourselves" (1975:77). Societies use nature to reflect their own values back to themselves.

Nature's construction is always about much more than just nature. Haraway describes nature as "perhaps the most central arena of hope, oppression and contestation for inhabitants of the planet earth in our times" (1991: 1). Nature is used to shape society in all kinds of ways, it rhetorically justifies what is accepted, valued and given power and also what is subjugated, oppressed and othered. Evernden argues "nature is used habitually to justify and legitimate the actions we wish to regard as normal, and the behaviour we choose to impose on each other" (1989: 164).

William's writes that "though often unnoticed nature contains an enormous amount of human history" (1980: 70). A crucial part of William's observation is the phrase "though often unnoticed". Nature is powerful because its construction is hidden. The need to highlight nature's 'constructedness' is partly brought about by the word itself as Cronon says "when we speak of the nature of something, we are describing its fundamental essence, what it really and truly is" (1995: 34). By viewing nature as essence we are led to see nature as if it had no cultural context, as if it were everywhere and always the same rather than contingent on space and time. A view aligned with nature is seen as popular and commonsensical, the word 'naturally' is often used to inoculate arguments against further scrutiny.

Nature is often ascribed the role of external moral arbiter. Nature pronounces what is correct and therefore prescribes values. Williams identifies this as one of the rhetorically important features of nature: “One of the most powerful uses of nature, since the late 18th century, has been in this selective sense of goodness and innocence” (1983: 223). The invisibility of its construction ensures that appealing to nature is the ultimate justification, nature is discursively linked to what is 'right'.

What makes nature particularly fascinating is its complexity. Williams recognised this when he claimed that: “Nature is perhaps the most complex word in the language”. (Williams, 1983). Williams points to the binary tensions which are consistently at work in interpretations of nature. It is the polysemy or semantic richness of ‘nature’, the ability of the word and the concept to accommodate a multitude of contradictory meanings that makes it a powerful and flexible construct in virtually any public debate or controversy (Hansen 2006, Soper 1995).

3.4 Oppressive Nature

Appeals to nature have been used to enact many different practices of domination and subordination. In particular, the divide between culture and nature has been used to marginalise some people; whilst at the same time privileging others. As Plumwood states: “To be defined as ‘nature’ is to be defined as passive, as non-agent and non-subject, as the ‘environment’ or invisible background conditions against which the ‘foreground’ achievements of reason or culture…take place” (1994:3). To be aligned with nature is to be defined as 'other' – a resource which is empty of its own purposes and instead there to be used by those identified with reason or intellect, namely those aligned with culture. This can be seen particularly clearly with colonialism and racial oppression which has been premised on the idea of a separate nature; there to be exploited by and for the West (with non-Western people viewed as part of that nature). It is on the basis of this self/other or culture/nature binary that oppression of one human by another, one culture by another is justified. The exploitation of humans is contingent upon the othering of humans; just as the exploitation of nature is contingent on the othering of nature. Katz and Kirby, writing from a political economy perspective, recognise that the “exploitation of nature is coincident with its construction as something apart and other” (1991, 269). According to Katz and Kirby's analysis capitalism others to exploit.

One 'other' that nature is often depicted as is female – as demonstrated by the phrase Mother Earth and the common use of the pronoun she in reference to nature. Mayerfeld Bell (1998) demonstrates how disturbingly sexual and militaristic nature

metaphors are – words like ‘breaking’, ‘clearing’ ‘conquest’ and, of course, ‘rape’ are commonplace when talking about human interaction with nature.

Ecofeminists have been keen to show the links between the domination and exploitation of women and the domination and exploitation of natures. Western culture has traditionally assigned women ‘nature’s work' – reproduction, nurturing bodily and emotional needs etc. In contrast men are traditionally associated with production, transforming nature so that it does what we want it to, and with the public sphere, rationality, civilisation, government and business. These gendered associations imply a clear hierarchy. As Mayerfeld Bell asserts:

> “Western thinkers have often considered women inferior because of their alleged closeness to nature and men as superior because of their allegedly greater skills in the allegedly higher aspects of human life”.
>
> (Mayerfeld Bell 1998: 168)

By demeaning women for their socially enforced association with reproduction and with nature, both the domination of women and the domination of the environment is encouraged.

Nature rhetorically justifies many kinds of oppression (not just racism and sexism) and is used in all kinds of arguments. Although nature has often been used to dominate and exclude, it has also been claimed by many fighting against oppression. Kitzinger (2006) and Shakespeare (2006), for example, both discuss the cultural ramifications of biological discoveries. They are concerned with exploring the social and political implications, for lesbians and gay men and for disabled people respectively, of claims to natural, innate difference. They demonstrate how arguments which appeal to naturalised difference can be dangerous but can also be used as a tool of resistance.

3.5 Struggles over nature’s meaning

Welsh defines nature as “a site of intersecting and competing social and cultural definitions and interests” (1998: 17). Nature’s flexibility is a key reason that it is culturally fought over. Even within the same debate it is possible for both sides to claim the ‘support’ of nature. Nature’s interests are seen as universal, right and for the common good, yet they are also ambiguous and complex, allowing nature to be appropriated by anyone who recognises its rhetorical power.

Kitzinger comments that “concepts of nature are always used in the performance of culture” (2006, 116). These concepts need to be excavated so we understand how

they are being deployed, who is deploying them and to what purpose. This thesis will analyse a particular environmental debate (GM crops) revealing the definitions and interests that shape its discursive expression as a problem. The public discussion of GM crops provides an arena for exploring "which uses of 'nature' and 'natural' – and more significantly, whose deployment of them – become, over time, the winning arguments in media and public controversy about 'appropriate' and 'acceptable' uses of genetic research and biotechnology applications" (Hansen, 2006).

3.6 Producing Nature

Other media studies researchers have analysed concepts of nature in their work. There are several studies exploring how nature is utilised in media texts, how sources and journalists draw upon nature and how publics respond to and interact with the media's depiction of nature. However, relatively few studies have followed nature's deployment across different circuits of communication. This means they are unable to track how a particular discourse of nature changes or remains unaltered as it moves from producer, to text, to audience.

Hansen (2006) explores how the words 'nature' and 'natural' are used in the UK newspaper coverage of genetics and biotechnology. He explores the ideological implications of the word 'naturally' and demonstrates how it is often used in UK newspapers to imply commonsense consensus. He also notes that within the UK press nature is usually ascribed a female gender.

Two studies by Cottle (2004) and Davies (2000) explore how ideas about nature are conveyed on television. They are both concerned with exploring shifts in natural history programming. As well as documenting changes in nature programmes they serve as case studies in the "social construction and social evolution of public representation of 'natures'". (Cottle, 2004)

Many studies have analysed how publics draw on concepts of nature within biotechnology debates and other arenas (Ladle and Gillson 2009, Zimmerman and Cuddington 2007). Much documented research argues that the public response to biotechnological innovation has resolutely maintained divisions. People perceived biotechnology as 'unnatural' or an inappropriate scientific intervention in 'nature' (Gaskell 2000; Shaw 2002; Straughten 1992). Emerging technologies are situated within particular historical contexts and explicitly 'branded' in certain ways by those seeking to promote or criticise them. The histories and processes of each set of technologies frame the perceived utility and acceptability of each innovation; they also frame the perceived relationship between that technology and the natural. This means

people's reactions to different technologies vary, although it is not always possible for researchers to predict what those reactions will be. For example, Frewer at al. (1997) found that applications of genetic engineering that were associated with animals or humans caused ethical dilemmas and were described by European audiences as 'unnatural, harmful and dangerous.' Yet, plant or microorganism applications were seen as 'beneficial, progressive and necessary'. In contrast to this Bauer (2007) notes that since 1997 the UK public discourses on genetics have been split into 'green' agricultural biotechnology, which has been sceptically observed, and 'red' biomedical biotechnology which has been generally supported because it saves lives. This split was first prominent in the media (Bauer, 2005) but was soon taken up within public discussions and by legislatures keen to shield 'red' technologies from the unwelcome attention 'green' was receiving. In this context, it is plant applications that are seen as unnatural and human applications which are celebrated as medical progress.

Kaebnick (2011) notes that appeals to 'nature' are quite different depending on whether they are made in debates about medical biotechnology, agricultural biotechnology or environmentalism. Such research demonstrates the value in unpacking how a particular technology is constructed as either 'natural' or 'unnatural' and how the acceptability of a particular scientific advance is often connected to the way that technology is framed or 'branded'. Biotechnology has been characterised by two contradictory discourses: one, "celebratory and enthusiastic about the potential of scientific and technological progress, and the other concerned and fearful about the dangers and potential for 'out-of-control' damage inherent to scientific and technological development" (Hansen, 2006).

Several researchers have attempted to set out typologies of nature in relation to public discussions of the natural. Adams (1999: 295) outlines a typology of 'myths of nature': 1. nature benign, 2. nature ephemeral or fragile, 3. nature perverse/tolerant (nature predictable within certain limits but cannot survive major excesses) and 4. nature capricious or nature unpredictable. Coyle and Fairweather (2005) explore the public perception of biotechnology in New Zealand. They utilised Bakhtin's ideas of chronotypes to look at how the public deployed nature in eleven focus group discussions of biotechnology. They identified five chronotypes – wise nature, traditional nature, pure nature, complex nature, balanced nature. These chronotypes were continually interwoven by participants trying to make decisions about a variety of novel biotechnologies – they mobilised different versions of nature sometimes simultaneously. These studies reveal the flexibility and ambiguity within arguments about nature and how the concept can be mobilised in competing ways to support or dismiss a technology.

Much audience research points to public unease about the effect human activity has on nature. Gaskell and Bauer (2000) write about a series of focus groups on biotechnology conducted in ten European countries. They found that when the dangers of a biotechnology were discussed these were framed as concerns about 'tampering', 'meddling', fiddling' and 'interfering' with nature. Gaskell and Bauer (2000) were struck by how similar discussions on nature were in all ten countries.

Shaw explores public understandings of genetically modified (GM) food in the UK through a series of focus groups. One distinctive response was the feeling that GM was an unacceptable 'fiddling with nature'. She states that "people expressed an intuitive unease about moving genes between species, a feeling that was described by one person as going "'against the grain'" (2002: 280). In Shaw's groups nature was seen as fundamentally good and human intervention in nature was inherently bad. Cook provides one of the few studies to look at how both stakeholders and audiences talk about GM. He also found interfering with nature was a key concern in focus groups and described how participants spoke about "fiddling around, interfering, meddling, playing, tampering, tinkering" etc. (2004: 97). He compared these 'lay' discussions with institutionalised discourse where he found the word nature was no longer a popular choice but biodiversity was. Although the terms are commonly assumed to be synonymous, Cook claims there are important differences, in particular that biodiversity belongs to the discourse of science "while nature belongs also to that of poetry, religion, recreation and personal discussion" (2004: 98). The cultural associations likely to be triggered by the word nature are therefore very different from those triggered by biodiversity.

3.7 Nature and science

As the above discussion suggests nature is a key concept in debates about science. Turney (1998), Weart (1998), Huxford (2000) and Hansen (2010) have shown that journalists rely on readily available cultural scripts and frames, particularly when reporting new scientific developments – one such frame is nature. Turney's persuasive text *Frankenstein's Footsteps* explores the cultural narrative that scientific progress and science's interference in nature may spiral 'out of control' and produce dangerous outcomes that are ethically 'wrong' and unpredictable. This narrative is encapsulated by the often referenced Mary Shelly novel Frankenstein. So popular a concept is 'Frankenstein' in the discussion of certain scientific debates that it serves more as a cultural metaphor than a reference to a particular text– its meaning is often understood regardless of whether people have read the novel. Turney shows that the Frankenstein narrative is a key frame in the discussion of genetic manipulation and biotechnology.

Public concern about science's 'interference' in nature is evident in the changing semantic choices of those referencing the genetic alteration of plants, as Bauer et al. write:

> "What can be perceived as the negative connotations of 'genetic engineering' led to the introduction of two new terms: first 'genetic manipulation', and then (as this term, too, came to be viewed with suspicion) 'genetic modification'
>
> (Bauer et al., 1999: 127)

The lexical changes are symptomatic of public/cultural sensitivities and the interests of claim makers eager to allay uncertainty and anxiety. This points to the struggle over particular words and phrases within the GM debate. In this study I shall explore which actors managed to ensure their preferred terms were used in the GM debate and how these terms were accepted, rejected or ignored, in public discussion.

3.8 Boundaries and Purity

Within Western societies nature's construction is dependent on the historically and culturally contingent practice of boundary-making between nature and culture which is embedded in power relations. As Foucault suggests, the cultural separation between nature and culture has not been created in the context of neutral relations between the human and non-human world, but rather, it has entailed detailed and persistent 'disciplinary practices' (Foucault, 1980). Technological advances, such as biotechnology, have increased the need for these disciplinary practices precisely because of the non-duality of humans and the natural world. Western culture needs to symbolically maintain the dualism between nature and culture in order to continue using nature as a thinking tool, as a moral arbiter and as a resource which Western society can exploit.

Douglas (1966) explores boundary maintenance and the problems that boundary crossings pose for Western society. She writes about the idea of dirt and pollution, claiming there is no such thing as absolute dirt – rather dirt is 'matter out of place'. In chasing dirt away Douglas states: "we are not governed by an anxiety to escape disease, but are positively re-ordering our environment, making it conform to an idea" (Douglas, 1966). For Douglas, dirt represents a dangerous transgressor of boundaries; when such boundaries are traversed, our ideal order of society is threatened. Douglas's work has informed much social research on nature. Smith and Davidson, for example, draw on Douglas when writing about phobias. They note that the objects of specific phobias are almost always 'natural' things deemed to be inappropriately and uncontrollably present in 'cultural' situations. They claim the reason these objects

might be deemed threatening is not because they pose physical danger but because they are “indicative of nature itself transgressing the very basis of the symbolic order on which modern society and self-identity are founded” (2006: 45). Nature becomes the ultimate matter out of place; by placing nature in the cultural realm a fundamental dichotomy has been broken.

The importance of boundary maintenance means that those who break boundaries – merging parts which are normally held at a distance and disrupting the ideal order - are both disturbing and reviled. Latour (1994), Douglas (1966) and others (e.g. Eder, 1988) describe the desecration enacted by hybrids which break ‘nature's boundaries’ and in the process become polluted entities. Douglas discusses how throughout Western history ‘hybrids and other confusions are abominated’ (1966: 54).

Latour (1994) believes that the symbolic maintenance of the nature/culture boundary may no longer be possible due to the proliferation of hybrids. Developments in biotechnology mean that hybrids are proliferating in increasingly visible ways as every new advance, every new breach, crossing or opening up of the boundary of human, animal or plant calls nature into question. A once known and taken for granted nature has now become 'nature in the making' (see Harvey, 1996 and Haraway, 1991). Biotechnology raises the stakes; humans must work harder to ensure nature's construction remains hidden. Biotechnology “muddies the once transparent boundaries between nature and artifice, natural and unnatural” (Coyle and Fairweather, 2005: 145).

Debates in biotechnology provide a fascinating insight into the symbolic maintenance of nature as a meaningful category, even if that same technology is unravelling the coherence of nature. Western societies will work hard to ignore nature’s social and cultural construction and ensure it continues to provide a “simple foundation for a good life” (Macnaghten and Urry, 1998: 42). Lock writes about the power of biotechnology to disrupt the once assumed category of nature. He recognises the importance of analysing arguments around biotechnology to consider “why certain responses, decisions, and commentaries become dominant and 'naturalised' and why other possibilities may be openly disputed or completely beyond consideration” (2002: 51). Biotechnology debates allow us to view specific moments when nature is challenged and other moments when it is unquestioned – it is important to consider when and why these different reactions occur.

Haraway considers the political implications of hybridity. Like Douglas she observes that hybrids are culturally monstrous and have the power to disrupt the neat dualities that structure Western thinking “These boundary creatures are, literally, monsters, a word that shares more than its root with the word demonstrate. Monsters

signify" (1991: 2). Haraway acknowledges that this hybridity will be treated with disgust but she argues it is also something to be celebrated. This is because she views hybrids (or cyborgs - the label she prefers) as a key site of resistance to the borders which have been constructed to support:

> "the tradition of racist, male-dominant capitalism; the tradition of progress; the tradition of the appropriation of nature as resource from the productions of culture; the tradition of the self from the reflections of the other" (1991: 150).

For Haraway the cyborg is both imagination and material reality, the cyborg is "a fiction mapping our social and bodily reality and…an imaginative resource" (1991: 150). As such "Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves" (1991: 181). A cyborg identity is about embracing the breakdown of clean distinctions between organism and machine, and other similar distinctions structuring the Western self. It posits a new subject position which is about connectedness with others, ambiguity, permeability of boundaries and the pleasure of merging.

Technological progress is calling supposedly fixed and bounded entities into question, such developments have created fraught debates about boundaries. Theorists like Haraway and Myerson argue that "now, at the second millennium…the divisions will never again even seem fixed. We are going to have to learn to live, think and even experience afresh" (Myerson, 2000: 64). Thinking afresh about our sense of self and other has so far not proved a popular response. Instead, biotechnological developments are often greeted with revulsion and public demands for a return to lost purity. It is a response which Haraway is critical of. She maps how the phrase 'genetic pollution', used by those who would oppose biotechnology, has deeply oppressive connotations whatever the intentions are of those who use it:

> "It is a mistake in this context to forget that anxiety over the pollution of lineages is at the origin of racist discourse in European cultures…I cannot help but hear in the biotechnology debates the unintended tones of fear of the alien and suspicion of the mixed."
>
> (Haraway, 1997: 61)

There never was a 'pure' nature but now biotechnology means it does not even *seem* pure. Arguments against the transgression of categories are generally conservative; they reinforce boundaries while ignoring swapped genes, altered lineages and the multiplicity that necessarily exists in all species. It is hard to deny the overwhelming negative connotations of words like genetic purity, contamination or monoculture which are thick with resonances that extend well beyond the particular

argumentative field in which they are planted. I will explore the responses to nature's unravelling given in the discussion of GM – looking both for arguments which symbolically premise old boundaries and those which try to envisage a new relationship between humans and nature.

3.9 National Natures

There is evidence from communications research that media constructions of nature draw on and in turn reinforce notions of national identity (Hansen, 2006: 135). Within the UK, for example, there is a shared understanding of what constitutes 'nature'. Macnaughten and Urry (1998) discuss the evolution of a shared national understanding of 'English' nature referring to Romanticism, the traditions of preservationism and critiques of post-war modernisation. Since the 1800s national identity has been linked to a romantic view of nature. English culture has been equated with a particular image of the countryside: winding lanes, thatched cottages, and green pastures. As Thomas writes, "The visual expression of Englishness requires village greens and gardens, medieval lanes and churches." (1995: 3) Here, English rather than British nature is premised. Scottish and Welsh landscapes, and in turn people, are excluded from this construction of the rural. Such views of the English countryside were constructed by poets (e.g. William Wordsworth and William Blake - who famously spoke of *England's* green and pleasant land) and painters (e.g. John Constable). National notions of nature are closely linked to a rural, idyllic past. Williams (1973) demonstrates the coincidence between the growth in this nostalgic view of nature and a period of immense social upheaval, urbanisation and city migration in Britain.

It is the use of nature in advertising which most clearly shows the concept's connection with nostalgia; companies use the 'rural imaginary' to sell us their products or reconcile us to their activities. Companies seek to be aligned with nature:

> "Today, it is the marketing rather than the political propagandist potential of nature that is more exploited, and the clichés of nationalist rhetoric have become the eco-lect of the advertising copywriter."
>
> (Soper, 1995: 194)

Nature is used by advertisers to construct a mythical image of the past as a time of green fields, long summer days and innocence. The nostalgia for nature is used to stir up other desires: a longing for inclusive communities, the close ties of family and, above all, a well-defined identity. The national landscape represents more than physical properties; nature is used to depict an idealised ordering of society. This is a

mythic reconstruction but such mythology only adds to the depiction's power (Kelsey, 2011).

It is not just the *British* countryside that is used to articulate an ideal version of the past. Armitage (2003) shows how American popular culture uses stereotypical images of American Indians to epitomise and articulate a nostalgic view of nature. Schama (1995) demonstrates the particular historical context and the political role of the construction of nature in the culture and politics of a range of nations (e.g. the 'forest' in German culture and 'wilderness' in the US). Creighton (1997) shows how the search for authentic national identity in Japan manifests itself in the increasing popularity of 'traditional rural Japan'. Creighton's study reveals that nature is being commodified in popular culture and via consumer goods. People no longer have to visit rural areas to reconnect with their nation's identity; they can consume, or buy into, Japanese cultural identity without having to leave the city.

Hansen suggests that nature's connection to nostalgia may be relatively recent. He observes that a key difference between uses of nature in the 1970s and advertising of the late twentieth century is that in the former period adverts were optimistic about the co-existence of nature with the techno-scientific urban society. The perspective in the late twentieth century is one of looking back, "to recover a lost idyll, harmony, authenticity and identity of a mythical past" (2010: 147).

This semiotic linking of nature with a nostalgic past *and* national identity is worth considering further. These three rhetorical concepts have been ideologically aligned to powerful effect. As Hansen claims, the linking of nostalgia, nature and nationality:

> "has undoubtedly been one of the most potent ideological uses in the modern age, used in the early parts of the twentieth century for naked political propaganda and mobilisation for war, and in the second half of the twentieth century for commercial purposes."
>
> (Hansen, 2010: 151)

Rural idylls naturalise, and sometimes even celebrate, deeply stratified societies. Media researchers have shown how the British television and print media construct 'English' versions of a rural idyll along social class, rural and gender lines. (Phillips et al. 2001, Thomas 1995, Brookes, 1999). The English countryside is predominantly a place where the white, middle-class reside. In their analysis of British rural television drama, Phillips et al. (2001), show that the dominant construction of a rural idyll "enact(s) particular social identities, including, but not exclusively, those of class" and that the class identity enacted is predominantly a middle-class identity (2001, 3). Scutt and Bonnet comment that social and racial exclusion can be seen as intrinsic to the

maintenance of the countryside as a cultural reservoir (1996: 8). In order for rural areas to represent Englishness, groups who do not conform to stereotypical images of the English are symbolically excluded from those spaces.

British television's conflation of the English countryside with particular social identities was highlighted in March 2011 when the producer of the detective drama *Midsomer Murders* was suspended for arguing that the rural setting should not feature any ethnic minorities "because it wouldn't be the English village with them. It just wouldn't work...We're the last bastion of Englishness and I want to keep it that way."[5]

There are class, race and gender dimensions to nature's construction. As analyses of many media forms, including adverts, have shown, nature is important in the promotion of nationalism. In relation to the GM debate it is important to consider how depictions of nature and the national interact, and the social consequences of this interaction.

3.10 Nature as commodity

As the above accounts of nature in advertising suggest, the natural world has become an important tool in the promotion of consumerism. The notion that we can 'buy' nature is a not a new one. Since the industrial revolution nature has been viewed as a commodity, a resource for humans to use rather than something to value in its own right. Of course other discourses have opposed this view (as discussed below, in recent years nature has been ascribed a value *in its own right* irrespective of its usefulness to human industry) but these arguments have not destroyed the idea that nature is a commodity. Indeed both views have succeeded in coexisting.

One of the most poignant arguments against the commodification of nature was put forward by Polanyi in 'The Great Transformation' (1944). Polyani argues that the market society required that the basic constituents of that society – land, labour and money – be commodified. As nature, and the lives of working people, came increasingly under the sway of market forces, they were subject to immense destruction and destitution "Nature would be reduced to its elements, neighbourhoods and landscapes defiled" (1944: 73).

The discussion of nature's commodification has continued in more recent years. Goldman claims that central to the argument over the 'global commons' is the view that nature is being transformed into private property and a 'new object of management'

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5 http://www.beehivecity.com/newspapers/exclusive-excerpt-from-midsomer-murders-racial-remark-row-interview-674325/

(1998: xiii). He explores how the discourse of the global commons is being used both to privatise nature (the tragedy of the commons) and resist privatisation. In particular, he notes how arguments about world biodiversity that focus on privatisation as a means of 'protecting' nature may only exacerbate species extinction as they implicitly encourage the 'consumption' of nature.

Escobar (1996) shows how capitalist development, and the accompanying consumption of nature, is routinely sheathed in seemingly beneficial discourses such as 'sustainable development'. This is made possible by the ambiguity at the heart of such discourses; such ambiguity is used to win 'consent' for the capitalising of nature'. Bluhdorn & Welsh further this argument, describing how “the belief in the compatibility and interdependence of democratic consumer capitalism and ecological sustainability has become hegemonic” (2007: 186). They argue that despite the rhetoric of the eco-political forming a cornerstone of public debate, the key principles of consumer capitalism, i.e. infinite economic growth, have remained unchallenged. In such a context sustainable development is appropriated by state and business so “the state/corporate sector nexus, operating through deepening public-private partnerships emerges as the central means of delivering sustainability.” (2007: 192). They label this co-option of ecological rhetoric by the very market system which has co-opted nature 'the politics of simulation'.

I would argue it is the 'politics of simulation' that has enabled nature to discursively co-exist as an entity for commercial exploitation and as something to be valued in its own right and to some degree 'protected' regardless of its use to the market system.

3.11 Nature as environment

An important recent shift in Western culture’s formulation of nature is the construction of nature as environment. The publication of Rachel Carsen’s *Silent Spring* (1965) was a pivotal moment in defining nature as a fragile and threatened environment. As Mayerfield (1998) recounts, this text precipitated such a dramatic shift in public opinion that it has become conventional to date the start of the modern environmental movement to the publication of *Silent Spring*. Carsen painted a picture of a world in mortal danger, a danger systematically and cynically produced by the greed and self-interest of the pesticides industry. Carson argues that, because of chemical poisoning, a time could come when spring arrives "unheralded by the return of the birds, and the early mornings are strangely silent where once they were filled with the beauty of bird song" (1965:103). Carsen’s critique centred on a representation of nature as systematically threatened by modern industrial processes. She graphically

illustrated how the body had become subject to invasion by dangerous agents which could not be properly sensed, let alone repelled.

Carsen documents the outcome of a series of agricultural innovations that began in the 1920s with the development of hybrid corn. The technological transformation of agriculture was continued in the 1950s-70s with the use of pesticides, synthetic nitrogen fertilisers and improved crop varieties developed through conventional (not GM) cross-breeding. Such innovations dramatically increased crop yields but they were accompanied by significant environmental problems: e.g. a loss of biodiversity and the discovery of DDT in human breast milk.

By 1970 (just five years after the publication of Silent Spring) the reinvention of nature as environment was firmly established as attention was drawn to a much wider range of problems threatening the environment: nuclear radiation, vehicle emissions and other forms of air and water pollution. These events began to generate a sense of a more general crisis of environmental threats which were moving across national borders and potentially invading everyone's body, rather than the more sporadic and isolated previous environmental concerns (Wynne and Crouch, 1991). These concerns led to the birth of the environmental movement in the 1960s, as activists formed campaigns to highlight the consequences of agricultural industrialisation (Macnaghten and Urry, 1998: 45). By the early 1970s environmental NGOS like Greenpeace and Friends of the Earth had formed out of these movements.

A related but separate process of agricultural innovation, the Green Revolution, took place in the 1970s when the Rockefeller Foundation and the US Government funded a number of programmes that transferred industrial agriculture from the Global North to the South (Hindmarsh, 2004). In particular monoculture, high yielding plants and agricultural inputs such as fertilisers, pesticides and land-reform. While the Green Revolution had some success in raising agricultural productivity it failed in its promise to 'feed the hungry' (Hindmash, 2004). The new agricultural technologies created similar environmental problems to the ones seen in the global North and there were additional adverse consequences, for example, increasing tenure displacement and the destruction of traditional polyculture farming (Smith, 2009).

Representing nature as environment emphasises human fragility; the concept highlights that we have porous bodies that are easily poisoned and damaged. Reconfiguring nature as environment ensures debates about the use of nature are placed centre stage as harm to the natural world is reconfigured as harm to humans.

By the late 1980s, in Britain at least, nature had been substantially reinvented as the environment (Macnaughten and Urry, 1998). The sense of threat to the environment was heightened by a realisation that the instantaneous nature of new

technologies could create extraordinary, rapid, ecological disasters that would take decades or even centuries to undo. Throughout Western countries the environment was becoming firmly established as a major political and cultural issue (even as environmental bads increased). In Britain Margaret Thatcher gave her now famous 'green' speech to the Royal Society in 1988. She argued that environmental issues were of critical importance – her focus was not on local or even national problems but firmly on the global scale as she talked about depletion of the ozone layer, acid pollution and global warming.

The speech generated considerable media coverage and was part of a trend towards the environment becoming a political issue; politicians and journalists had to engage with this new version of nature as environment – one which was not just about threatened landscape or species but rather about the potential global destruction of life on our planet; harm to nature was reconceptualised as something which could pose a health risk to humans. Within the media this led to the appointment of environment correspondents and a search for 'expert' spokespeople. Macnaughten and Urry (1998) recount how, for example, in the mid-1980s Geoffrey Lean, then a journalist with the Observer, committed his paper to a year long campaign on the countryside. This is the same journalist who spearheaded the anti-GM campaigns run by the Daily Mail and the Independent on Sunday. It demonstrates how Lean's 'environmental journalism' originates from a shift in the dominant discourse, rather than representing an oppositional viewpoint. For NGOs the politicisation of the environment had a dramatic effect. No longer did they play the role of activists seeking to persuade the rest of the world of the importance of environmental issues. Now the rest of the world appeared to share their agenda and was looking to NGOs for the next move. (Anderson: 1993)

This account demonstrates that the shift in concepts of nature had political consequences. This particular construction determined who was given the right to speak on behalf of nature, which arguments were granted semantic credence and ultimately policy responses.

Nature as environment is still a popular concept that was present in the GM debate. Today the concept of the Green Revolution has transformed into the Gene Revolution (Smith, 2009). The Bill and Melinda Gates Foundation are following in the footsteps of the Rockefeller Foundation and offering multi-billion dollar endowments for agricultural programmes in Southern countries, many of which rely on GM technology. GM is linked to the processes of agricultural industrialisation that occurred in the Global North and South (Smith, 2009). Some of the agribusiness corporations that are developing and patenting GM seeds are the same companies that sold the world pesticides. One of the first commercial applications of GM technology (developed by

pesticide companies like Monsanto) was the creation of crops that could withstand greater amounts of pesticide. Such early applications allowed NGOs to easily link GM with the industrialisation of agriculture and portray GM as a technology that would harm the environment.

3.12 Environmental Justice

The final version of nature I am going to discuss is that put forward by the environmental justice movement. The environmental justice movement emerged from the anti-globalisation protests of the early 1990s. 'Grassroots' environmental activists opposed what they saw as the compromised demands of international NGOs. The 'bottom-up' organisational principles practiced by these groups have been outlined by many theorists (see De Luca 1999, Della Porta and Tarrow 2005). It is claimed that the environmental justice movement reconceptualised nature to include people as well as landscape: DeLuca comments:

"No longer does the media, the general public or our opponents see the environmental movement as one that is focused on open spaces, trees and endangered spaces alone. They have finally got it! The environmental justice movement is about people and the places they live, work and play in"

(DeLuca, 1999: 237)

I would argue NGOs had already achieved this transformation; in the 1980s nature was reconceptualised as something which could harm people. From the early 1960s public discourse recognised that hurting the environment could also hurt society. What the environmental justice movement added was an understanding of *who* would be harmed when nature was harmed. The movement mapped environmental bads along class, race and gender lines. Damaging the environment does not hurt everyone equally, it has a disproportionate effect on those already disadvantaged by society. Beck (1992) describes how the uneven distribution of environmental bads, or the politics of pollution, is obfuscated – the environmental justice movement aims to remove the blinkers.

Environmental justice discursively links environmental bads to the social stratification of people. Hannigan (2006) illustrates the difference between the campaigns of grassroots environmental justice groups and professional environmental NGOs with a useful example. He describes how uranium poisoning affected thousands of transient mine and mill workers from the 1950s through to the 1990s. Larger environmental groups did campaign on this issue but framed it as a general environmental bad. They focused on the environmental harm caused by uranium

poisoning and although they acknowledged that environmental bads could harm human health they did not address these concerns in 'social justice' terms – i.e. they did not consider *which* humans were being harmed and why, only how harming nature posed a generalised risk to human beings. This focus meant the kinds of solutions being proposed focused mainly on regulation or containment because they did not speak about the structural reasons that some people were exposed to uranium poisoning.

Kebede (2005) has utilised a Gramscian perspective to contrast national environmental groups, who he claims are more interested in perfecting existing hegemony, with members of grassroots environmental justice organisations who he describes as more inclined to 'launch questions that go further into the innermost socioeconomic arrangements'. From an environmental justice perspective efforts to get rid of environmental problems are futile if the issues of social justice are left aside. The environmental justice movements of the 1990s, like the environmental movements of the 1980s, redefined nature. Grassroots eco-activists explicitly link nature's exploitation with the exploitation of people. Nature is reconfigured as a force that stands in solidarity with oppressed peoples – the struggle to protect the natural world and the struggle of the socially disadvantaged are one and the same. The arguments of the environmental justice movement are at odds with the existing hegemonic accord – calls for social redistribution of wealth or a curbing of consumption do not fit with the dominant logic of consumer capitalism. Therefore, the demands of the environmental justice movement have not been mainstreamed in the same way as the demands of the 1980s environmental movement. In this thesis I consider the differences between concepts of nature offered by large, professional NGOs and those offered by the environmental justice movement.

Having considered theories of 'nature' I shall now review literature on national identity before concluding by briefly considering the connections between both sets of literatures.

Chapter 4: National Identity Literature Review

'We have made Italy, now we have to make Italians' (Massimo d'Azeglio, I Miei Ricodi, 1867)

Nationalism is defined by the Oxford English Dictionary as the '*advocacy of or support for the interests of one's own nation, especially to the exclusion or detriment of the interests of other nations'.* What this simple explanation hides is how contested a concept nation is. The definitions ascribed to nations often fulfil political ends; how countries are conceptualised has tangible impacts upon the world. I am interested in the constructed nature of nations and national identity: how *is* it that Italians are made? If we are not born 'Italian' or 'Argentinean' or 'Chinese' how is that we come to identify with a particular nation?

National identities are, at least in part, born out of physiological phenomena: (land masses and groups of human beings) but in equal (or even greater) measure they are borne out of the social, cultural, economic, political and discursive conditions of their existence. Just as nature is both material and discursive – so are nations. There is nothing self-apparent about nations, they exist in historically specific circumstances – scratch at the surface of any country and you find a multitude of political and social factors that determine not only its character but its reasons for existing. Nations do not simply appear as ready formed, naturally occurring entities; and this is as true for 'island nations' like Britain as it is in areas where borders are not so geographically clear. Nations share with nature the tendency to hide the conditions of their construction.

Nations also share with nature their reliance on the concept of the other for conceptual coherence. As the *Oxford English Dictionary* definition shows, nationalism is as much about excluding the interests of others, as it is about recognising the concerns of its owns citizens. No nation embraces everyone, it is a limited, exclusive community. Those who consider themselves a particular nationality define this according to what separates them from others. In Douglas' (1966) work on 'matter out of place' nature is not the only concept under threat from pollution. Douglas also shows how minorities are thought of as impurities, contaminating the pure state; they are a symbolic danger threatening the discourse on which the nation is based. In the same way that entities classified as 'unnatural' are considered polluting when merged with nature, people classified as non-natives can be polluting to the cultures of those countries.

The political importance of nation/nationalism and identity is perhaps the reason these concepts are still ferociously debated in many countries, including Britain. A

recent example in the UK is the 'multiculturalism has failed' speech given by Conservative Prime Minister David Cameron.[6] The political ramifications of his speech were highlighted when the English Defence League used his words to claim legitimacy for their views and intimidating tactics. Nationality is central to debates around immigration, relations with others and self-identity. As such, how it is understood and articulated has important 'real life' ramifications.

4.1 The Origins of Nationalism: The Primordialists and the Modernists

Nationalist theorists can be split broadly into two theoretical camps: the primordialists and the modernists. Primordialists do not consider nations to be either a constructed or a recent phenomenon. They claim that nationalism has its roots in ancient traditions and as a consequence believe that identity is relatively fixed.

The main criticism of the primordialist approach is that it fails to capture the contradictory character of identities. By claiming nations are formed along ethnic lines, primordialists are linking these nations directly to ethnic groups established long before modernity. This view ignores the histories of "migrations, conquests, genocides and intermarriages" that define any particular group (Ozkirimli, 2000: 221). Viewing ethnic difference as natural and unchangeable has significant political consequences. By stressing the given and fixed nature of identity, primordialists sit uncomfortably close to theories that privilege race and biological differences.

The modernist strand of nationalist theory emerged in the 1960s as part of the 'constructivist' strand of thinking, which I also drew on in Chapter 3. Modernists, as the name implies, see both nations and nationalism as relatively recent creations. The nation is viewed as primarily a political entity, rather than one based on cultural differences as the primordialists claim. Emphases vary, modernist texts ascribe different origins, in Gellner's essay *Nationalism* (1964) the industrial revolution is labelled the source of nationhood but for Kedurie (1960) it was the Enlightenment. All argue that modernity is key to the arrival of nationalism and that it breaks with any past incarnation of national identity:

> "For modernists, national consciousness in the modern age has to be seen as qualitatively different from that in...the England of Shakespeare or Elizabeth or Cromwell… It is only with modernity that a sense of national identity comes to pervade all classes, or emerges as the overriding identity."
>
> (Spencer and Wollman, 2002: 33)

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6 http://www.bbc.co.uk/news/uk-politics-12371994

In other words any past references to 'nation' should not be understood as an expression of modern day nationalism. Modernists argue that nationalism, as it is understood in the modern day, is a fundamentally different concept from the one expressed in the 14th or 16th century. This is because nationalism is a product of the social-temporal situation in which it is found. Many modernists argue that modern day nationalism is defined by the capitalist society in which it occurs (Davidson, 2007).

One influential theory of nationalism is Benedict Anderson's *Imagined Communities.* Llobera wrote of the text that it was "as if people had been waiting for such an expression to be coined" (1994: 103). Anderson argues that nations are imagined because:

> "the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their community."
>
> (Anderson, 2006: 6-7)

Anderson dates the start of nationalism to the late medieval period when key ideas about the world began to unravel. Economic change, social and scientific discoveries, and the development of increasingly rapid communications challenged the current social arrangements: "No surprise then that the search was on, so to speak, for a new way of linking fraternity, power and time together" (2006: 36). Nationalism was a response to uncertainty. Nationalist sentiment gave meaning to new geographical divisions and created national subjects or citizens.

Anderson's theory pays particular attention to the role of the media in creating nationalist sentiment; he argues that nationalism's rise was facilitated by the development of 'print capitalism'. Anderson claims newspaper reading in the 19th century enabled people to place themselves in imagined communities. Print capitalism allowed for a simultaneous mediated communication across the nation state. People would read the same newspapers or novels and start to view themselves as part of an imagined community of readers.

In the daily act of reading a newspaper people are invited to imagine a community of other readers. National papers are aimed at the citizens of a particular country, even international editions are predominantly read by those citizens who live abroad. Anderson recognised that newspapers allowed nationalist sentiment to rapidly spread.

Anderson also links the standardisation of languages to the development of print capitalism and the spread of nationalism. People have to speak the same language in order to read the same paper or novel. This increased uniformity of language worked,

in conjunction with the shared reading of daily newspapers, to increase social links between people, enhancing their sense of connectivity.

Even though nationality is a relatively recent construct it is perceived as timeless: “while in factual/chronological history a nation may be of recent vintage, in the popular perception of its members, it is 'eternal', 'beyond time’ ” (Connor, 2004: 35). Hobsbawn (1992) also argues that the predominance of the nation as the natural form of political and social organisation is reinforced by the mythical construction of a seamless history. It is a nation's sense of permanence that is part of the concept's organisational power. Nations are posited as fixed, immutable objects even if historians and social constructionists tell us otherwise. Connor and Hobsbawm argue that for nationalism to be an effective sentiment it has to be viewed in this primordialist sense – as a relatively fixed, historically given entity.

Anderson's ideas have proved extremely valuable, particularly as they recognise the central role of the media in nation formation. Anderson's theory, however, does not adequately capture the spread of nationalism across the globe.

Waisbord (1998) analyses the role of print capitalism in South America to argue that Anderson's theory is only applicable to European countries. He shows that, in the early nineteenth century, although newspapers offered a communication and self-identification tool for elites they did not necessarily offer a sense of national and regional identity to the larger population because only South American elites were literate. He concludes that nationalism followed different trajectories in different locales. In this discussion I have concentrated on modernist theorists who address the role of the media in the rise of nationalism, other accounts have different emphases. I believe that the common position modernists' advance is correct. Most of the nations that make up the world are the product of the developments of the last two centuries (Deutsch, 1996). The character of the modern nation has been primarily shaped by modernity not by ethnic origins. Individual countries may have existed before the modern era, but their sense of national identity has been developed since then, constructed by the conditions of modern capitalist society.

That said, it is important to note that there is nothing modern about the attachment of individuals to the communities they are part of – the crucial question for modernist theorists is why these attachments transformed into 'national' loyalties? To what extent do attachments to other communities challenge or operate in harmony with nationalist sentiment, and what is the degree of similarity between pre-modern attachments and contemporary collective ties felt for the abstract community of the nation which consists of millions of 'strangers'?

Modernist theories of nationalism demonstrate that nationality's rhetorical power lies in its sense of timelessness. Like nature, nations hide their own construction – it is the self-apparentness of national identity which makes it such a convincing concept. Nationalism creates narrative plausibility.

4.1.1 Limitations of Modernist Theory

There are several overarching criticisms that have been levelled against the modernist approach. The most pertinent is that, as a consequence of their top-down approach, modernists have failed to look at the way identities are expressed and performed and, therefore, have not considered the historical specificity of different empirical cases. As Madianou writes “Nationalism appears a monolithic force that has homogenised populations in a uniform way, regardless of historical, economic and social conditions” (2005: 13). Madianou claims the problem lies with the term 'culture' itself – as it implies a homogeneous, coherent, timeless and discrete whole (2005: 23). The concept of culture has shifted the explanation of difference away from notions of biological difference, yet, despite this anti-essentialist intent, it has still tended to freeze difference. The insistence on radical differences between people of different cultures can lead to cultural determinism where “culture shifts from something to be described, interpreted, even perhaps explained, and is treated instead as a source of explanation in itself” (Kuper, 1999: xi). People from different countries are presented as homogeneous masses and the differences between these peoples are ascribed to cultural variances.

Modernist theorists claim once identity is 'made', it remains fixed. Cultures seem frozen in time as distinct entities, whereas, they are the result of a 'mish-mash, borrowings, mixtures that have occurred, though at different rates, ever since the beginning of time' (Levi-Strauss and Poullion, 1961 cited in Kuper, 1999: 243).

Madianou criticises modernist theory for assuming a common identity for all the people they investigate (2005: 15). Nations are described as the products of a top-down process whereby an elite discourse is taken up by people at a local level. Waisbord's (1998) critique of Anderson shows that in many cases nationalism does not just trickle down from elite to mass culture. Such a perspective ignores that people might contest the official nationalist discourse and that, even if people do embrace nationalism, modernist theorists are not explaining *how* this process occurs. By ignoring the 'how', such accounts are unable to accurately explain the 'magnetism' of nationalism; its ability to create bonds between people that potentially are stronger than those of class, sisterhood, or global citizenry. It is striking how closely this criticism parallels the insights of audience studies which demonstrates that considering

how a particular discourse is received, negotiated and recreated is crucial to understanding its effects. The act of reception is not just assimilative, it can also be transformative.

4.1.2 Mediating Identity

Media theorists, as well as modernists, have studied the media's role in nation formation. Researchers have recognised that communication technologies connect people across space and time. Like modernists, several media theorists have argued that the national media foster a national consciousness simply by existing. The regularity of media consumption, and the knowledge that the audience is bound by national limits, creates a sense of shared national conversation amongst media consumers. This works in conjunction with the newspaper's or TV channel's content to encourage audience members to identify with the national community being addressed. As particular ways of framing an issue come to dominate its discussion, the national community hear the same facts, language and analysis. As de la Haye notes, these communicative links “create the basis for the dissolution of the narrow limits of the local community.” (1980: 28-29) and Carey observes that modern technologies, from the telegraph to satellite television, give rise to “communities....not in place, but in space, mobile, connected across vast distances by appropriate symbols, forms and interests” (1989: 160). Citizens are united both by consuming the same media and also by imagining a nation of fellow media consumers.

Scannell argues that public service broadcasting provides the space for a contemporary public (national) sphere (1989). According to Scannell, public service broadcasting has contributed to the democratisation of everyday life by placing political, religious, civic, cultural events and entertainments in a common domain (1989: 136). The original public service model of UK broadcasting was depicted as a nationwide conversation, “all the citizens of a nation can talk to each other like a family sitting and chatting around the domestic hearth.” (quoted in Keane 1991: 164). It was claimed that national public broadcasting can create a sense of unity and links the peripheral to the centre. Scannell emphasised how public broadcasting has the ability to turn previously exclusive social events into mass experiences; and, above all, to penetrate the domestic sphere, linking the national public into the private lives of its citizens. Others argue Scannell's public sphere may not offer the 'inclusive and extensive sociability' (1989:136) he claims it does. Morley notes that all public spheres are exclusive:

> “By the very way...a programme signals to members of some groups that it is designed for them and functions as an effective invitation to their participation in

social life, it will necessarily signal to members of other groups that it is not for them."

(Morley 2000: 111).

Morley describes how, in the British context, the media construct the public sphere as both male and white. Madianou also questions the inclusivity of Scannell's public sphere, arguing that 'British,' as defined by the public service provider (the BBC), is conflated with 'English' therefore ignoring other nations or ethnic minorities who are UK citizens (2005: 17). The national media does not invite everyone who is a citizen of that country to participate in imagining themselves as part of the nation, it is excluding as well as including.

Another influential study is Billig's (1995) *Banal Nationalism.* Billig explores how the content of the media reinforces in audiences routine and familiar forms of nationalism. Within media content he identifies a continual reminding or 'flagging up' of national identity. He claims that newspaper readers are so used to forms of 'banal nationalism' that their constant presence in the press goes unnoticed. They become an innocuous part of journalise, familiar and unremarkable; however, Billig argues, they are actually crucial to identity maintenance. "The metonymic image of banal nationalism is not a flag which is being consciously waved with fervent passion; it is the flag hanging unnoticed on the public building" (1995: 8). The ideological reproduction of nationalism is unconsciously processed by audiences and this Billig claims is nationalism's ultimate power - that it is naturalised to the extent that it becomes invisible.

Billig also discusses how the national press address their audience, describing how 'deixis' can be used to imagine the nation. 'We' in the national press does not just include the speaker and the hearers but is extended to include the abstract community of nation or people. Billig shows how UK newspapers employ a routine 'deixis', which continually points to the national homeland as the home of the readers. But if nationalist discourse reminds us who 'we' are, it also tells us who we are not. As much as it is inclusive, 'we' is also exclusive.

Theorists like Scannell and Billig demonstrate that the media enabled the merging of the previously distinct public and private spheres. The media make a language available to people that enables them to think and talk about the nation. This language is only available to some citizens however, others find themselves excluded from particular concepts of nation.

A criticism of these theories is that the media are seen to exert a strong influence on national identity and that they are mainly based on textual analysis, rather than

looking at how discourses of nation work in the interaction between text and audience. As audience studies have conclusively shown, media effects are complicated and their impact is determined as much by audience make-up as they are by media content. Media influence can never be assumed. Texts may be inscribed with a particular version of nationhood but the crucial point is how audiences react to and use these media representations of national identity. If one person accepts the national identity handed to them by the media does everyone? Can people accept some representations of national identity and refute others?

These are the key questions that audience studies poses to those who wish to theorise about the media's role in fostering national consciousness. One seminal audience study concerned with national identity was Liebes and Katz's *Export of Meaning* (1993). The study looked at the reception of *Dallas* amongst Israeli, American and Japanese audiences. It showed that audiences appropriated the programme in different ways and concluded that global television had not generated the 'Dallasification' of cultures worldwide but, rather, has been the catalyst for more complex cultural phenomena and the reaffirmation of local identities. They concluded that how different media are received is still dependent on local context.

Despite the importance of the study in questioning assumptions about the homogenising forces of Western popular culture, it was also problematic. In particular, the authors lay themselves open to accusations of essentialism by implying that people interpret *Dallas* in different ways *because* they are Israeli, Californian or Japanese.

> “Patterns of involvement vary by ethnicity. The more traditional groups – Moroccan, Jews and Arabs – do not stray far from the referential...The American and kibbutz groups show an altogether different pattern of involvement...The Russians are critical of the aesthetics of the story...Japanese viewers object to the inconsistencies”
>
> (Liebes and Katz, 1993:152-153)

Here Liebes and Katz ascribe the difference between group readings entirely to ethnicity. Their study was wide (they conducted ten focus groups with each national group) yet the authors pay no attention to the differences between groups of the same nationality which, with such a large data range, there surely must have been. The authors ignore other factors that shape not only media reception but also the experience of being an Arab, a Jew or an American. These include political, social or economic factors. By attributing explanatory power to cultural difference, culture is reified and taken for granted, instead of being something that also needs to be explained.

4.1.3 Explaining Culture

Cultural identity theory shows that people's identities are not fixed and unified but contingent in process and potentially contradictory. Hall argues that “all of us are composed of multiple social identities, not of one...we are all complexly constructed through different categories, of different antagonisms” (Hall, 1991: 57). National identity is only one possible social identity among many.

Viewed from this perspective it is not possible to generalise about the media’s effect on a particular national identity because there is no one uniform identity shared by the citizens of a nation. Rather, there will be numerous versions of that nation's identity and which one is deployed will depend on the context. These versions are continually evolving, as members of that nation appropriate and re-appropriate what these identities mean. Furthermore, members of that nation will relate to different versions of nationality depending on what other social identities are available. How people understand and express their identity will vary from situation to situation. Identity is unstable and inconsistent; researchers must be alert to the contingency inherent in the expression of identity.

Cultural theorists show us that national identity is something that is continually reproduced and struggled over through an unending succession of discourses and practices. This continual construction, or articulation (Laclau and Mouffe, 2001), of identity involves questions of power related to the level of influence individuals or groups have on the process; identity is not a neutral construct but a discourse (Foucault 1980).

4.1.4 National Audiences

Media studies has responded to the challenges laid down by cultural theory by exploring identity as a force in flux; studies of audience responses, in particular, have been concerned with exploring how media representations contribute to the continued processes of identity formation. They pay attention to the social, spatial and temporal factors that shape a particular expression of identity.

Baumann (1997) demonstrates the fluidity of the processes of imagined community making. He explores how, and why, inhabitants of Southall in London oscillate between open and closed definitions of the community to which they claim allegiance. Werbner (1997) also finds that people sometimes offer essentialised versions of national identity and sometimes question these. He argues that appeals to community which, for political purposes, stress a group's shared external distinctiveness, rather than its internal divisions, are not necessarily reactionary. Such

seemingly essentialising claims by no means preclude more open and fluid modes of identity making being utilised at other moments.

Madianou (2005) observes that expressions of identity are often determined by politics rather than culture. In particular she looks at responses to the Kosovo crisis, exploring why audience responses are sometimes articulated along 'us and them' lines, i.e. 'we the Greeks support our ancestors the Serbs against the Muslims', whereas at other times the same people support both Kurds and Palestinians, showing they are not monolithically anti-muslim. She concludes that identification with the Serbs is both an expression of anti-Americanism and a response to the equally essentialist Western media, which generally portrayed the Serbs as the aggressors. “The global-local dialectic becomes an exchange of essentialisms and counter-essentialisms. In this context the 'us and them' frame is not determined by culture, rather politics” (2005: 95). Her findings draw attention to the context in which nationalist articulations are made. Audience reactions depend on context and situation, as well as their experiences and resources – this again confirms the insights of audience studies researchers.

Baumann's, Werbner's and Madianou's findings echo Hall's writings on the subject of identity as a discursive practice that 'emerges within the play of specific modalities of power'. Hall claims that “identity is more the product of the marking of difference and exclusion, than a sign of an identical, naturally-constructed unity” (1996:4). This fits with Laclau and Mouffe's (2001) claim that identities are not fixed points of social difference but the result of 'struggle and contestation'. As such, it is possible for expressions of identity to be inconsistent, according to the context of their utterance.

Robins and Aksoy draw on their fieldwork with Turkish-speaking groups in London to argue that media consumption is not determined ethnically, but, socially. They found that Turkish-speaking viewers reacted differently to the media they consumed and that their reactions were dependent on many factors: their jobs, their social groups, the media they consume as well as the way they self-identify. Given their findings Robins and Aksoy argue for a shift of focus from 'identity' and 'community' to 'experience' and 'resources' in an attempt to find a new more pertinent language to describe processes of belonging and media consumption (Robins and Askoy 2001: 705). Their shift to analysing resources and experiences links their study to other audience research which has shown the importance of paying attention to the resources that audiences have available to them when analysing how audiences read or decode texts.

The findings of those who analyse the role of the media in identity formation sit well with those of audience studies. Like audience researchers, these empirical studies conclude that experience and resources are crucial in determining how audiences respond to texts. They also recognise that experience and resources are interrelated (i.e. the resources you have will affect how you interpret your experiences) and that the more discursive resource a person can access, the more likely they are to question essentialist or dominant notions of national identity. Identity researchers acknowledge that context is also crucial and assert that it is important to pay attention to the political milieu in which assertions are made. The media text itself also helps determine readings and in particular who it includes and addresses as readers, and who it excludes from its imagined community. For this reason citizenship is a crucial concept – who is being addressed as a citizen of a nation and who is being excluded?

Theorists like Barth have called attention to the importance of boundaries in group formation. Boundaries are clearly and homogeneously defined, they mark the discursive construction of a community, which may be far more heterogeneous in its internal composition than the boundary suggests (Barth 1998). Whilst identities are processual, people attempt to present them as if they are not. Boundaries are thus the prime location for tracing a collective, national identity, because as Giesen suggests:

> "Precisely because these borders are contingent social constructions, because they could be drawn differently, they require social reinforcement and symbolic manifestation."
>
> (Giesen, 1998: 13)

Crucially these studies show that although communities are heterogeneous and contingent, they are often discursively constructed as static. Boundaries are a key site in the struggle to freeze identity and demarcate difference.

4.2 The Global Nation?

Many theorists claim nationalism was integral to the rise of capitalism, that nationalism created a way for trading relations to be established across greater distances and for people to feel meaningfully connected in this new industrial society (Davidson, 2007). The impetus of capitalism is to continue expanding; to meet one barrier and then push beyond it to the next. Capitalism consumes space. In the process it is claimed the tables have turned and nations are now under threat from the capitalist economy (Bauman, 1997; Giddens, 1990). The new industrial world no longer operates under the logic of the national, it is the global that dominates. In a world where media technologies allow people quick and frequent contact, companies are

able to operate not just within one country but many, becoming multinational. In the last few decades corporations have become global institutions. As the power of multinational companies increases, so it seems the power of the state decreases. Despite the demands of their own citizens, governments are failing to protect workers' wages, the environment or local culture from multinationals. As Giddens (1990) has argued, the worldwide system of nations exists in constant tension with the global capitalist economy.

Just as the move from feudal to industrial society created fear and anxiety so too has the advent of globalisation. Globalisation has the ability to undermine the modernist categories that people use to give meaning to their lives. Nation is just such a category as, of course, is nature. Bauman refers to this as the political economy of uncertainty; as the ever-increasing power of the global economy cuts across the borders of the world's political structures; people feel powerless in the face of new forms of international power over which they have no influence (Bauman, 1999: 172). Pervasive conditions of uncertainty create a society full of tension and anxiety which is simultaneously disempowering and corrosive of trust relations.

This fear manifests itself in many ways but attitudes towards immigration is one of the most evident. Bauman notes that the problem with strangers is that they do not fit our cognitive, moral or aesthetic maps of the world, “by their sheer presence...they befog and eclipse the boundary lines which ought to be clearly seen” (1997:46). As Morley comments “the far away is irredeemably mixed in with the space of the near as the processes of migration...bring...'foreignness' into jealously guard home territories” (2000: 213). Immigration can be seen to expose the nation's construction; the timeless permanence of nationality is now under threat by the revelation of its contingency. Marc Auge notes “the reason why immigrants worry settled people so much is that they expose the relative nature of certainties inscribed in the soil” (1995: 9). This observation echoes the work of those who have considered biotechnology's potential to expose the relative nature of certainties humans ascribe to nature.

4.2.1 The 'Glocal'

One of the central concerns of the anti-globalisation movement was the effect of international brands and global media corporations on local cultures. The fear is that the homogenising logic of international consumer culture will destroy the distinction of locality (Klein, 2000). Yet globalisation has not eradicated local cultures in the way that was first feared; the media (and audience responses to that media) are still full of variance. The difference of geography has proved a resilient force and local cultures, although altered by the new conditions of globalisation, have certainly not been

eradicated. Waisbord claims this is because identity formation has been intrinsically linked to participation in local and national politics. In this sense citizenship continues to be grounded in particular historical conditions and locally and nationally defined political spaces. Waisbord argues that although the rise of global communication systems and the worldwide activities of a large number of organizations indicates:

> "budding forms of transnational participation and connections to public spheres that are larger than national polities. Such participation...does not replace but rather becomes integrated with local forms of political inclusion"
>
> (Waisbord, 1998: 394)

Citizenship is institutionalised or given meaning within the nation state. There are, therefore, strong cultural and political reasons why the nation state continues as a meaningful category.

Instead of the global eradicating the local, there is an interplay between the two. Places become 'glocal'. Foucault talks of the need to accommodate both the "grand strategies of geo-politics" and the "little tactics of the habitat" in any conception of place (1980: 149). Giddens defines globalisation as "the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa" (1990: 64). Globalisation does not simply wipe the planet clean. Media theorists draw on recent theories of globalisation to stress the dialectic relationship between local cultures and global media without privileging either. Once again Hall's writings on "identity as an ongoing process that always remains incomplete" (1992: 287) are pertinent; the local and the global are bound in a continual dialectical negotiation.

Not only has globalisation's eradication of the local been contested by theorists, so has the premise that the world is shrinking as a result of globalisation. The argument goes that innovations in communication and transport technology are bringing the people of the world closer together, removing the barrier of distance. For some people geographical distance may not have much consequence, for others however, distance is a physical divide that is as insurmountable as ever. Castello et al. (2009) note that even today most people in the world never leave their own country and that the effects of globalisation should not be overemphasised. Massey talks about 'power-geometry' to consider the social distribution of access to physical transport (possession of a car) or to communication systems (possession of a computer or ability to pay a cable television subscription fee). She argues that "access is heavily structured by class, gender, ethnicity and a whole range of other social factors" (1994: 148) and therefore the 'shrinking of distance' is highly unequal, depending on who you

are and where you are in the world. Distance, she claims, is not simply shrinking, rather it is 'crumpling' in all kinds of uneven and unequal ways.

Part of the reason for this difference in how globalisation is experienced is due to the contradictory forces of the global and the national. As Bauman (1998) and Amin (1995) observe, alongside an emerging planet-wide flow of international capital, technology and media, we see contrary, localising, space-fixing processes, as states, newly weakened by global capital, act to reassert their borders. As Amin argues “while the mobility of commodities and capital leaves national space to embrace the whole world, the labour force [largely] remains enclosed within the national framework” (1995:74). It is possible to argue that, in terms of immigration controls, people are fundamentally tied to their country of birth as national governments almost everywhere tighten their border controls. The result is a sharp differentiation in the existential conditions of different parts of the population.

Yet poor people are not unaffected by globalisation, they just experience it differently. Rather than enabling them to escape the constraints of borders, globalisation often exposes them to the tumultuousness of change. Tomlinson observes that it is “the poor and marginalised – for example those living in inner city areas – [who] often find themselves daily closest to some of the most turbulent transformations” (1999:134), while it is the affluent who can afford to “retire to the rural backwaters of a preserved and stable locality” (1999: 134). Disadvantage, Tomlinson astutely notes, is not a matter of exclusion from the whole process of globalisation but rather a particular way of being positioned within it.

Massey (1994) concludes that the geography of the world is being twisted and contorted so as to bear very little relation to the physical distances that are involved. This, however, does not eradicate difference. Massey recognises that geography is far more than distance; it also encompasses the immense diversity of the world. Physical proximity is not necessarily a good measure of social and cultural distance. In this sense then the world c*annot* become smaller while inequalities still divide us; globalisation has maintained those inequalities rather than challenging them. As Bauman argues, distance “is a social product” (1998:12) its length varies depending on who a person is and where they are in the world.

4.2.2 Mediating the Planet

The rise of globalisation has led to a reappraisal of the media's role in nation formation. If the media are no longer talking to audiences as a member of a national community, how are they addressing their viewers or readers? What identity are people offered? The digitalisation, pluralisation and deregulation of the media have

decreased the amount of media experiences that national populations share with each other. No longer do people sit down at the same time to watch the same television programmes; they have a multitude of channels available. This means people are no longer addressed as members of the same nation but instead as specialist audience groups. Theorists have connected “the pluralization of the media with the 'retribalization' of society and with the demise of concern with shared culture or discussions over matters of common importance” (Hodkinson, 2011: 183). Some theorists are hopeful that the globalised media have the potential to create new forms of global citizenry. Thompson (1995) argues an optimistic case for the potential capacity of television to produce meaningful forms of planetary consciousness.

Other theorists draw more pessimistic conclusions; Morley (2000) notes that most people in the global north are mainly interested in local affairs, not least because they feel unable to affect events in the wider world. Bauman argues that the media (in particular the news) show that the world of those far away is full of social and natural disasters, murders, epidemics and the breakdown of social order.

Viewers feel dissociated from the 'reality' offered by their TV screens. Audiences are always spectators, separated by the screen of glass, never becoming actors in the scene. Not only is this alienating but more importantly it is also disempowering. The viewer is offered no agency, no sense of being able to change that far away world. TV news shows the way things are, it offers no way to change that world. As Morley observes:

> ”it is usually hard to see how we could conceivably engage with or intervene meaningfully in these events, beyond calling the Freephone number given by the television to contribute to charity appeals.”
>
> (Morley, 2000: 185)

Instead of a global citizenry, some researchers have argued that globalisation offers us a different identity: that of the consumer. Auge notes that in the current era of supermodernity the sense of a familiar rhetorical territory (once the nation) is provided globally by the stable forms of international consumer culture. Auge imagines a foreigner lost in a country that they do not know, what provides this imagined individual with reassurance and security is the international oil logo or the cereal brand they recognise on supermarket shelves (1995: 112). Morley also discusses the rise of consumer culture, citing market research which shows that young people have more trust in global brands than national governments (2000: 175).

Notions of national citizenship are being challenged as people are pushed towards individualistic models of consumer choice and market logic. Citizenship is

defined by rights and responsibilities. As citizens, people are expected to contribute to society in certain ways, be it paying taxes or putting out recycling. In return they are guaranteed certain rights. Consumers have a different obligation put upon them – to pay for the services they receive; in return they are offered choice. As global consumers, people are guaranteed choice rather than rights, however, not everyone is offered choice: just as national citizenship is exclusionary so is global consumership. In order to operate as a private individual it is necessary to have sufficient financial resources.

Many researchers have argued that consumerism is a defining characteristic of the current context (Miller, 2007, Dahlgren, 2009, Skocpol, 2004, Hindess, 2002 and Kellner 1995).They observe that societal powers are drifting towards the private corporate sector and beyond democratic control as *"*the global mobility of finance capital and all the strategies of outsourcing both the industrial and service sectors put political pressures on governments*"* (Hindess, 2002: 19). This both hinders governments' capacities to act in the interests of their citizens and subordinates citizenship to the imperatives of market. Miller observes that the social construction of consumers subsumes other identities within it as people are defined as "classless, raceless, sexless, unprincipled, magical agent of social value in a multitude of discourse and institutions, animated by the drive to realize self desires" (2007: 13). Miller suggests that consumer identity will continue to overlay and underlay the development of 'civic' consciousness for the foreseeable future (although he does not argue civic consciousness is totally eclipsed). Dahlgren considers the consequences of a loss of civic identity, arguing that the loss of citizen self-perception removes the basis for civic agency or citizenship. In Western countries this has led to a declining involvement in civil society organisation.

There is evidence that the media increasingly address audiences as consumers rather than citizens. Redden (2007) demonstrates how the media regularly tell audiences to transform their individual lives through consumption. Lewis, Inthorn and Whal-Jorgensen argue that "basic, national based forms of democratic decision making have become passé" (2005: 2) as the concept of the citizen has been replaced by consumer.

Lewis et al. show that we are continually addressed as consumers in everyday life:

> "Advertising has become ubiquitous, and now permeates our cultural environment. Our media system is saturated with commercials...Our cultural industries meanwhile – from sports arenas to concert halls – are plastered with corporate come-ons. Advertising has turned the internet from primarily a public

information service into a consumerist tool. As voting has declined consumerism has burgeoned."

(Lewis et al., 2005: 131)

Lewis et al. argue that continually addressing people as consumers affects conceptions of self and acknowledge that the media have the power to shape people's identities. If agency is granted to people only as consumers this is likely to have significant social consequences. If the purchase of commodities is seen as the solution to all problems, we must buy our way to a better society; as Lewis at al. write "It is fully in keeping with the logic of this cultural environment that the ultimate solution for social ills offered by most political parties is economic growth" (2005: 132). Consumers, in comparison to citizens, are relatively apolitical and disengaged from community decision making. They respond to possibilities rather than setting the agenda. The media's appeals to people as individual consumers instead of national citizens are likely to have significant political consequences. In Chapter 9 I shall explore how people relate to the media's presentation of them as consumers in the GM debate.

It is clear that even though the media construct audiences as consumers and global citizens, the national subject has not been completely banished from media representations, even in this global age. Castello et al. (2009: 2) argue that even though people possess multiple identities, there remains a strong sense of national identity, which television continues to address. For Hartley (2004: 8), mass broadcasting to national audiences remains a dominant mode of television, although it is not the only one, and Morley (2000) stresses that the media are still national to a large extent, but observes that notions of a unified nation are obsolete.

Nationality is still important in media representations, although it is modified under the new conditions of globalisation. Dhoest argues that Flemish TV fiction does not straightforwardly 'reflect' the national, but that it builds upon existing discourses and representations of the nation, in turn contributing to them (2007). He describes how although international genres and formats are the most popular on Flemish television these are adapted and 'indigenised' (2009). Dhoest's studies neatly illustrate the much theorised process of 'glocalisation' as the global and local interact to produce a culture infused with elements of each.

Other researchers have considered the role of nationality in risk reporting. For example, Kitzinger's study on audience perceptions of AIDS (discussed in Miller et al., 1998) looked at the links between stereotypical images of Africa and understandings of the AIDS crisis. At the time of the study, the media were reporting that scientists had traced the origins of AIDS to Africa. Kitzinger discovered that knowledge of this fact "was clearly influencing (white) public perceptions; and doing so because such

reporting was plausible, acceptable and even useful within existing sets of images and beliefs" (1998: 178). The reporting of the AIDS crisis relied upon a rigid distinction between the West and Africa. Such a distinction worked to other and blame some African AIDS sufferers and impacted upon perceptions of the disease itself.

Brookes explores the role that national identity plays in a specific risk event: the UK BSE outbreak. He notes that during such crises dominant media representations (as well as those in other spheres e.g. political, economic etc) often deny complexity and contingency within a country. The nation is posited as the *natural* political and cultural unit. This requires the denial of difference within the nation and the subordination of other possible identifications, as implicit common sense boundaries around the nation are continually reinforced.

In particular Brookes noted that in most articles BSE was predominantly presented as a threat to the *nation's* health. His study confirms Beck's finding that there is a 'loss of social thinking' when analysing risk. The whole nation was discussed as being at risk regardless of diet, income, locality etc. Brookes argues that "Communities and identities are to some extent constructed through threats to the boundaries of those communities" (1999: 255). In a food health scare story the nation is united by its exposure to danger through its shared consumption, without any consideration of the distinguishing factors that affect that consumption. Brookes does not deny that most BSE cases originate in Britain, but argues that a *symbolic* regime was structured around the nation. This paralleled the geographical spread of the disease but does not discriminate between regions, between non-organic and organic herds, between different breeds, etc. (1999: 260).

Larsen et al. (2005) also discover that national borders are premised in media coverage of risk debates. They demonstrate the prevalence of militaristic metaphors (attack, destroy, wipe out, contain, counteroffensive, full-scale war) in the media reporting of three contested areas of science-society discourse (invasive species, foot-and-mouth disease and SARS). The nation is depicted as at war with invading species and diseases – defending its borders from unwanted others. In Chapters 8 and 9 of this thesis I shall build on Brookes' and Larsen's findings by looking at how both sources and audiences talk about national identity in another risk debate: genetically modified food. A key question will be: are risks framed as a threat to the whole nation rather than distinguishing between different localities or looking at the wider threats to the globe?

Gross (2009) analyses another topic where national borders are premised: immigration. The entry of immigrants into a country has the potential to undermine the determining logic of nation. In response to this threat the borders of the nation are

symbolically premised as concrete and coherent. Even under the new conditions of globalisation these studies show that for the most part the media still talk of national identities, although this is not the only identity on offer.

Castello et al. conclude that:

> *"*Far from becoming an obsolete discourse, the national remains a powerful logic for organising the global, and in these representations we find hegemonic and alternative discourses in a dialectic contest taking place daily on our domestic screens".
>
> (Castello et al., 2009: 7)

At times national identity is contested, renegotiated or usurped by other identities such as the 'global consumer' but at other moments 'the national citizen' is premised and simplistically adhered to. The context in which national identity is deployed affects how it is used. In some debates (particularly those which challenge the perceived legitimacy of the nation state) borders are of central importance and national identity prefigures other identities. This reflects the conclusion of theorists like Barth (1998) who shows how borders are used to symbolically mark the limits of society, and are central to maintaining the coherence of that society.

This thesis will draw on the findings of these text based media studies which empirically explore how the national media operate in a world dominated by global communication systems. It will combine these insights with those of cultural identity researchers who have explored how audiences use media representations to continually reinvent their own identities.

4.2.3 The Decline of Nationalism?

In some contexts globalisation has led to a greater premising of national borders. Calhoun comments that "Growing global connections can become a source of fear and defensiveness rather than creating appreciation for diversity" (2008: 429). Just as the shift from feudalism to industrialism brought with it anxiety about the loss of traditional categories, so globalisation creates a fear that the ideas and structures that people use in identity formation are being undermined. As Bluhdorn writes:

> "The major challenge for late-modern society is to restore certainty, or at least to find effective strategies for the management of uncertainty, which is an unavoidable consequence of ongoing processes of globalization."
>
> (Bluhdorn, 2002: 64)

The search for certainty sometimes leads society to retreat back to familiar modernist categories which so neatly structured life before the advent of globalisation. Paradoxically, then, nation is often granted symbolic credence at exactly the same moment as the processes of globalisation are beginning to unravel nation as a coherent concept. The deconstructing of tradition goes hand in hand with its reconstruction; in fact the latter process supports and enables the former (Beck, 1997: 67).

Morley quotes Margaret Thatcher's horror upon discovering European 'free trade' might also mean a higher degree of mobility for people and other 'unwanted' elements. He quotes an interview she gave as British Prime Minister to the *Daily Mail* in 1989, “we joined Europe to have free movement of goods...I did not join Europe to have a free movement of terrorists, criminals, drugs, plant and animal diseases and rabies and illegal immigrants. (cited in Morley, 2000: 226). Thatcher highlights the dilemma globalisation poses. On the one hand it brings a welcome freedom and openness that enables us to be better connected to the world. On the other, it threatens the security and certainty of what we know, erasing the borders that keep us safe from the horrors that lie beyond our known locality. Globalisation means it is not always possible to distinguish between different flows. Of course many would argue against Thatcher's wish for movement of people to be restricted, but, regardless of political position, globalisation will inevitably bring with it unwanted flows. The response is almost invariably to retreat back to the known and the protective boundary of nation.

Fears about the unravelling of the nation-state's coherence echo fears about the challenge biotechnology poses to the concept of nature. Uncertainty is a fundamental characteristic of late-modern society: the erosion of traditional modernist categories leaves society grappling for new ways to meaningfully reimagine itself. Beck's theory of individualisation suggests that people today must constantly undergo the process of inventive self-definition to create their own categories of meaning: “Individualisation means the disintegration of the certainties of industrial society as well as the compulsion to find and invent new certainties for oneself and others without them” (Beck, 1997: 96). Yet this creative reinvention of certainty is not always the societal response to uncertainty; as Bauman observes:

> “Attacking insecurity at its source is a daunting task, calling for nothing less than rethinking and renegotiating some of the most fundamental assumptions of the type of society currently in existence”.
>
> (Bauman, 1999: 6)

Societies are not always equal to the task of rethinking such assumptions, instead old divisions and categories are fiercely clung too, even if they are rapidly losing

relevance. Their discursive reassertion does not stop the conceptual fraying of these categories. Sreberny writes that, “far from an end to history...identity politics and cultural preservation are going to be among the hottest issues of the next century” (2000: 117). Globalisation opens up new identity debates, reminding its global citizens that subjectivity is not a given. Far from creating uniformity globalisation has the potential to open up difference, requiring people to recreate their identity as they are deprived of old certainties. Identity is questioned under the new conditions of globalisation but certainly not homogenised. Sreberny concludes by recognising that the challenge to nation state remains unresolved,

> “Globalization implies a paradigm shift, a world in which notions of national sociologies, national cultures and national media models do not work as simply any longer. We are just beginning to work and live through its implications.”
>
> (Sreberny, 2000: 117)

4.3 A Nature's Nation: Discussion

As this literature review has shown, nature and nation are constructed concepts. Both are material and discursive. Claims that GM crops will contaminate natural varieties are based upon the physiological processes of cross-pollination, the symbolic construction of conventional crops as pure and the regulatory context which sets exclusion zone distances between GM and conventional varieties of crop. The same is true of nations: the 'white cliffs of Dover' for example are a physiological element of the landscape, a culturally loaded symbol and a heavily regulated border point. The natural and the social are “actively generated co-constructions” (Irwin, 2001).

In addition, theorists describe both as traditional categories of 'ontological certainty'. It is claimed that these categories are being undermined and called into dispute. This creates a discourse of uncertainty and fear; the response to such a discourse is to symbolically premise these categories and mobilise people to defend these concepts as if they were coherent wholes. This has been termed simulative politics. I shall consider the evocation of both uncertainty and certainty in the discussion of GM.

Both nature and nation rely on the concept of the other for coherence. And both are concepts that can serve to discursively exclude. As Douglas (1966) shows, anything which disturbs the accepted boundaries of nature or nations is often described as impure or polluting. As such, both concepts have historically been referenced in discriminatory arguments. They are words with long and complicated histories of usage. Nature and nation cannot be entirely divorced from these previous

usages and therefore need to be used with careful consideration. This is particularly true when the two concepts are used in conjunction with each other.

This literature review has shown how nature and nation are interrelated. The natural world is often ascribed the qualities of a particular nation and nationality is developed through particular notions of the natural: concepts such as the 'English Countryside', 'Japanese Cherry Blossom' or the 'Australian Outback' readily call to mind a set of images and associations that frame our understanding of both a country and its landscape. It is the interrelation between nature and nation within the British GM debate that this thesis will explore.

Chapter 5: Methodology

In this chapter I outline the three distinct methodologies I use (source interviews, newspaper analysis and focus groups) and justify my reasons for using these methods. I then outline a key analytical concept: framing. I explain why I utilise frames to analyse discourse and what textual elements I look at.

The initial research methods developed for this thesis evolved out of the *Social Contexts and Responses to Risk, Media Discourses and Framing of Risk project (SCARR)* on which I was the Research Associate. Having previously worked at FOE, I began the project with questions about the framing of the genetic modification debate that went beyond just looking at the presentation of risk (the focus of the funded project). In particular, I wished to consider some of the deep-seated cultural premises that shaped the GM debate and decided to study these questions by writing a thesis. During the funded project, and after it finished, I collected separate data for my PhD that allowed me to explore the use of nature and nation in the debate. This meant running focus groups that lasted two and a half hours to cover questions for both the research project and the thesis, adapting my interview questions to include questions related to nature and nation and, at a later stage, returning to interviewees to ask further questions to elicit more data just for this thesis. It also meant re-analysing the 323 articles on GM collated for the funded research project to produce a more detailed and completely independent content analysis of the use of nature and nation in the press sample.

My thesis draws on Hall's (1973) theory of encoding and decoding which argues that the meaning of a media text is generated through three moments: production, text and reception. I also draw on Lewis (1994) to argue that the dominant meaning cannot be identified by just analysing the text, but through also analysing the discourse produced by audiences. As such I chose three separate methods to study the three moments Hall identifies: analysis of six months of press coverage, interviews with key players in the GM debate and focus groups with diverse ‘publics’. This allowed me to look across the 'circuit of communication' to consider how the discourse surrounding GM crops is (re)produced in different locales. I agree with Philo who writes that “Without the analysis of production and reception processes, discourse analysis is limited in the conclusions that it can draw” (2007: 117). Although tracing the circuit of communication from production to audience is onerous, I believe that the insights elicited by such studies are worth the extra work.

My analysis is focused upon the core frames and cultural assumptions that are at play in media and public discussions of GM crops. I am concerned with providing a cultural explanation for why it is that some types of claims about environmental

problems are more successful than others. In particular I wish to explore how lexical choices work to prompt particular cultural scripts or frames that articulate a particular perspective, assumption or understanding. In my analysis words matter – I am not just concerned with which environmental problems are being spoken about but I will analyse how they are spoken about. Here, I will outline how I chose my methodology to help me achieve this aim.

Although I present my methods in a linear fashion, the data collection and analysis were more iterative than this structure suggests. I intermingled both data collection and analysis, ensuring my findings informed my next interview, or focus group etc. I returned to some of my earlier data samples – the press and interview samples - to collect more material once my research questions had been honed by my analysis. In this respect I adhered to the premises of 'grounded theory' which argues there should be a continual interplay between the researcher and the research act (Strauss and Corbin, 1998).

Once I have outlined the methods I used at each site of meaning production, I will then describe how I used discourse and frame analysis across all three sites.

5.1 Source Interviews

Hansen shows that “media and public discourse on genetics does not arise 'naturally; but is ultimately the result of deliberate rhetorical, linguistic and framing 'work' undertaken by stakeholders in the debate” (2010: 122). I was keen to analyse how sources attempted to frame the debate. The problems with trying to deduce patterns of source activity from content analysis alone have been well explicated by researchers like Philo (2007), Miller et al. (1998) and Anderson (1997). Source strategies are not always apparent in the media text, nor is the relative difficulty or ease of access. I, therefore, decided to conduct semi-structured interviews with key players in the GM debate. I conducted 18 interviews in total. Interviewees included policy makers, leading scientists and NGO activists. Sources were selected for two reasons; either they were often quoted in the media coverage or they had played a key role in the debate, for example, political and GM industry representatives who were in regular contact with journalists but they were not often quoted in the coverage (e.g. Linda Smith from DEFRA).

It has been claimed by some researchers that the purpose of the interview is to “tap into information without unduly disturbing – and, therefore, biasing or contaminating – the respondent's vessel of answers” (Gubrium & Holstein, 2002: 13). This fails, however, to recognise that interviewer, interviewee and the specific context

of the interview are all involved in meaning creation. The interviewer helps shape the meaning by selecting a topic, deciding who will be interviewed, structuring the question guide and interpreting the responses. Similarly, the interviewee decides which information to reveal, and which to conceal. In addition, the context of the interview itself will play a part in creating the meaning as it will affect how interviewees display their identity. For example, by holding the interview in someone's workplace, a cafe or in their own kitchen (all locations where I interviewed people) the researcher could expect to get different results. Location will affect what interviewees say and how they say it.

Everyone I approached agreed to be interviewed, two participants asked for some of the interview to be kept 'off the record' (I did not transcribe these parts) and five participants asked to see the transcript (which they were sent). All were happy to be identified. Appendix A provides a complete list of the interview participants, their job description and any extra information about their role in the UK GM food debate.

Overall I found people were very willing to be interviewed for the research. It was, however, difficult to contact many biotechnology representatives, especially because there are very few industry employees working in the UK anymore. I particularly wanted to interview a Monsanto representative and was able to talk to Colin Merrit, one of the few remaining UK Monsanto staff. In addition, I wanted to interview a representative from Bayer (the company who produced Chardon LL). They still have a Crop Science department based in the UK but they repeatedly turned down requests to interview them. I was, however, able to interview scientists who are paid to represent the views of the biotechnology industry and spoke to both Vivianne Moses and Derek Burke from CropGen. Some interviewees represented more than one interest group: one farmer I spoke to was also a member of an anti GM campaign group and the other was a Welsh Assembly member. Most of the scientists I interviewed were also representatives of industry, the Government or anti-GM groups - only one was based at a university. I, therefore, had to pay careful attention to the multiple positions from which interviewees spoke.

5.1.1 Interview Structure:

Interview length varied considerably - between 20 and 90 minutes. At the start of each interview the participants were verbally asked to give informed consent. They were told they could withdraw from the study at any time, briefly told about my background, the project's background and what would happen to the data after the interview. They were asked if they were happy to be recorded and identified and

reminded they could at any point say something was 'off the record' and this would mean it was not transcribed.

I conducted semi-structured interviews. Conducting semi-structured interviews meant keeping the basic structure of the interview and some of the questions the same. However, I introduced a section of unique questions based upon my research to ensure questions were relevant to the interviewee's specific role. I also asked follow up questions based on the responses given, allowing myself to follow lines of inquiry that were not in the original question guide. I varied the order in which I asked questions, so that we discussed topics and questions as they became relevant to the conversation. I did, however, ensure that I not introduce particular words and phrases to the conversation until they did (like contamination, nature or introducing Britain as the automatic region under discussion etc.). These were terms that my content analysis had revealed to be contested or struggled over, or were particularly key to my analysis.

A difficulty I encountered when interviewing sources was their reluctance to comment on or criticise media coverage; if they did, these comments were often 'off the record'. At other times sources just refused to answer questions. There was little consistency between interviewees as to which questions they did not wish to answer, so I found it difficult to prepare for a refusal.

5.1.2 Transcribing, Analysing and Presenting the Interview Data

I recorded and fully transcribed my interviews. Transcribing it myself meant I was very familiar with the material and when I began coding I already had begun the process of refining the codes I was using.

I first conducted a thematic analysis – replicating the codes that I had used during my newspaper analysis, while also reading and then re-reading the material to refine those codes. I used the codes to count prevalence of certain words and identify key frames. I only counted direct references to specific words like nature, contamination, wildlife.

My codes were created by using what Frankland and Bloor (1999) refer to as indexing. During indexing, "pieces of transcript are not assigned a single code in a final and arbitrary interpretative act; rather, each piece of transcript is assigned several, non-exclusive index codes referring to the several analytic topics upon which it may bear" (Frankland & Bloor, 1999: 146). The process of indexing is 'cyclical', meaning that the researcher is encouraged to return to the coding list, in order to rename codes, add new codes and create sub-codes as they become relevant.

I returned to the list of quotations for each code, to identify what frames were present in the text and then conducted a finer grained analysis to identify particular discursive cues and condensing symbols. When quoting from the interviews I selected quotations that were clear, concise and representative. I paid attention to differences between categories of interviewee (e.g. between policymakers and NGO representatives). I also noted divergent comments and analysed these, to help identify alternative frames, but I was careful not to present these quotations as representative.

5.2 Newspaper Analysis

The aim of my newspaper analysis was to identify key frames within the press sample. As Lewis (1994) asserts, the dominant meaning of a text can only be located through audience studies but identifying the key frames enabled me to compare these with both the preferred meanings of different sources (so I was able to make claims about who had been more successful) and the dominant meanings identified through audience research (so I was able to consider how audiences utilised the media along with other forms of discursive resource in their discussions of GM).

The media content sample is based on that collected for the SCARR project. It is every national daily newspaper (broadsheet, mid-market, tabloid and Sunday) taken between 1 January 2004 – 31 June 2004 inclusive. This produced 323 articles. The sample thus covers periods when the story was at the top of the news agenda and when it fell further down, it is thus both 'representative and significant' (Slater 1998: 235). The newspaper sample was collected by manual searches of hard copy and electronic copies were then taken to analyse from the Nexis UK database. The manual search enabled me to identify images and in the process I discovered the Nexis UK database does not contain every article on a topic. In particular, articles which appear in newspaper supplements are sometimes not stored on the Nexis UK database. Conversely, by checking back to the Nexis UK database, I discovered human eyes (or at least my eyes) are not always reliable. In addition, manual scanning misses articles that appeared in other editions.

I decided to focus on the *British* as opposed to *UK* discussion of GM crops. Although I was looking at the UK press I did not analyse any Northern Ireland editions. Neither did I conduct any focus groups in Northern Ireland. The real world context was very different in Northern Ireland (for example no Farm Scale Evaluations were conducted there, the different regulatory context meant most campaigns were targeted at Britain instead of the UK etc.). I therefore felt I could not draw conclusions about the public discussion in Northern Ireland despite analysing the UK press.

I identified articles about the genetic modification of crops (not just food) – any article which discussed GM crops in the headline, first paragraph or last paragraph was included in the sample – this was to exclude articles that just mentioned GM just once. During my sampling, however, I realised that articles mentioning GM only once were also useful to analyse, as in these contexts GM was used as a 'condensing symbol' for particular frames e.g. 'Tony Blair's style of governance is undemocratic'. I, therefore, include some of these articles in my qualitative discussion (always making clear that these were articles not included in the quantitative sample). I did not include them in the quantitative analysis as the purpose of this was to count how many articles written *about* GM mentioned nature, nation etc.

I conducted a separate content analysis from the one conducted for the SCARR project (although that provided a useful background). The SCARR content analysis included journalist specialism, page the article appeared on, lead risk etc. These categories did not allow for an examination of the representation of either nation or nature. After working closely with the material I knew these were key discursive concepts that I wanted to examine further. I, therefore, developed new coding categories and recoded the 323 articles, using a few of the original ESRC categories and my own more specific coding categories e.g. mentions of nature, mentions of contamination etc.

The transcripts were coded using computer-assisted qualitative data analysis software (i.e. Atlas ti). Holliman says that the use of qualitative data analysis software "facilitates the development of the researcher's conceptual understanding, e.g. through introducing or collapsing categories and investigating their inter-relationships" (2005: 10). However, I found the software most useful in allowing me to quickly retrieve all the quotations for a specific code. The coding and analysis would have been much more time consuming if I had not been using Atlas ti.

The media analysis I conducted included both qualitative and quantitative techniques. Content analysis is valuable when studying coverage over long periods as it enables analysis of trends and the evolution of coverage (Hansen et al., 1998:92). Hansen describes the purpose of content analysis as "to identify and count the occurrence of specified characters or dimensions of texts, and through this, to be able to say something about the messages, images, representations of such texts and their wider social significance" (1998: 94). The positivist aspect of content analysis enabled a close examination of the repeated messages.

Although the strength of content analysis is its positivist nature this is also one of its weaknesses. Thus several researchers recommend it "should be enriched by the theoretical framework offered by other more qualitative approaches" (Hansen 1998: 91,

see also McQuail 1994: 280, Bell 1991: 213). I used a more detailed textual analysis to further study content and meanings in the text. Qualitative analysis also allowed me to consider what was absent from the coverage.

5.3 Focus Groups with Audiences:

I conducted 10 focus group discussions with a total of 64 participants (see Appendix B for participant demographics). Groups were conducted across England and Wales. I conducted qualitative sampling which means that the range and composition of groups were chosen to reflect a diverse array of opinions on a subject. According to Kitzinger and Barbour this approach to sampling can lead to the elicitation of a wider range of responses, which provide greater insight into the research topic (1999: 7). My groups were not intended to be representative of the general population, nor were the groups designed to be variations of soft demographics such as age, class, education, etc. Instead, my focus groups involved people that I believed would produce diverse interpretations of the GM debate. This sampling strategy has been used in several other media studies (e.g. Corner et al., 1990; Durant et al., 1996; Jhally & Lewis, 1992).

In all of my groups participants already knew most (if not all) of the other participants. One of the advantages of working with pre-existing groups is that you can observe how meaning is constructed amongst people who would typically construct meaning with each other. Kitzinger writes:

> "The fact that research participants already knew each other had the additional advantage that friends and colleagues could relate each other's comments to actual incidents in their shared daily lives. They often challenge each other on contradictions between what they are professing to believe and how they actually behaved"
>
> (Kitzinger 1994: 105)

Additionally, participants often feel more comfortable discussing issues among a group of friends (Wilkinson, 1998: 334).

Kitzinger and Barbour recommend holding focus groups of around six people (1999: 8). This number is small enough to give everyone an opportunity to speak, but also large enough to encourage group interactions, which make focus group data so unique. Bearing this in mind I wanted to hold groups of six participants. I, therefore, recruited seven people for each of the groups, with the expectation that at least one person would not be able to make it on the day.

Of course recruitment is unpredictable and in actuality groups contained between 5-8 participants. The two groups that contained 8 participants had an extra person because a participant had invited a friend along.

The information that I gave participants beforehand was limited to a topical issue because I did not want participants to do research in advance of the group. I also did not mention that the topic was scientific. Discussions with other researchers alerted me to concerns that members of the general public are often reluctant to join focus groups about science because they worry that they do not know enough about the topic. Consequently, the researcher often ends up with a self-selected sample of people who are confident talking about science. To avoid this, I told participants they would be discussing an issue that had been in the news.

Because I was recruiting participants as part of the SCARR project I was lucky enough to be able to offer my focus group participants monetary incentives (£15) to take part in the research, which certainly made recruitment easier.

Kitzinger and Barbour emphasise the importance of choosing a focus group location that is quiet, comfortable and conveniently located (1999: 11). The setting of my focus groups varied in order to accommodate the needs of various groups – they were held in university buildings, back rooms in local pubs, workplaces and homes. I found that all the settings worked well; I just had to arrange the furniture to make the setting appropriate and informal – for example in the university rooms moving the tables to the sides and arranging the chairs in a circle. A circle layout takes the emphasis away from the researcher as the leader of the discussion and gives more authority to the participants to guide the discussion.

5.3.1 Group Schedule

The schedule for the focus groups is listed in Appendix C. Even though I had a separate set of questions pertaining to the thesis, I normally didn't have to ask them as concepts of both nature and nation were spontaneously introduced by all the groups without my prompting.

When participants arrived at the focus group, I encouraged small talk in order “to create a warm and friendly environment and to put participants at ease” (Krueger, 1998: 20). I talked through the structure of the group and read out the consent form, before asking participants to sign it (Appendix D). I found it important to explain terms like 'anonymised' to make it clear that I would not just remove their names but any information, like their job position, that could mean they were identified. It is important not to assume literacy or good eyesight and I, therefore, read the form aloud. I asked if

anyone had a particular seating preference or hearing difficulty (although there was no guarantee people would have been happy identifying such impairments in front of the group). I often found groups arranged themselves in 'gender' clusters – i.e. those who identified themselves as female sat on one side of the room and those who identified themselves as male on the other side. I did not consider this problematic as I purposefully wanted some of the day to day dynamics of these pre-existing groups to be captured in the focus group.

I took a semi-structured approach to moderating the discussion. At the start of each discussion, I emphasised that I was looking for participants to interact with one another. I said that I would be happy for the participants to ask questions of one another, or to comment on other participants' thoughts and ideas. I then reminded participants to 'step up' or 'step down'. I explained this meant people should note how much they were talking in the group and if they were talking a lot to try to keep quiet and allow others to air their thoughts or alternatively if they had not said very much to try to contribute to the group as I was interested in what everyone had to say. I also noted there were no rights or wrongs – it was people's opinions I was interested in. I found this reminder worked well because participants tended to feel personally responsible for ensuring that everyone in the group contributed. Consequently, there was less need for me to intervene as the moderator.

Unlike many audience studies, I did not show or ask participants to talk about a particular media output. Gauntlett (2004: 3) points out that media research often treats people as audiences of one particular text, form or genre, often isolating other media sources and the lived experience of people. Gauntlett argues that people are exposed to different media sources which constitute a significant part of their experience and understanding. In later reflections on his encoding/decoding model Hall concedes that it is only by looking over longer time periods that hegemonic conceptualisations are revealed. Rather than just analysing responses to one specific media text it is valuable to trace how a particular group of people frame their discussions around a particular issue (while also trying to understand how and why that articulation is created, and the discursive resource that informed it). By inviting audience members to reflect on an individual television programme or set of newspaper articles the researcher is more likely to miss silences. This is because both the researcher and the audience participants are emphasising a response to a particular text, instead of considering the full ranges of articulations present in an audiences' speech. As I was investigating discourse and frames I did not ask audiences to respond to an individual text (or group of texts) but instead asked them to talk about the topic in general while also asking them to reflect on where they got information from.

I began the discussion by asking which participants had heard of genetically modified crops, what they thought of when I said GM and when was the first time they remembered hearing about GM. I found that relatively few questions would produce a lot of discussion in most groups. At the start of the group I remained relatively quiet, just steering the conversation back to GM if participants went off topic and occasionally interjecting with a new question if conversation got repetitive. During this section participants were asked to explore what they knew about GM, how they knew about it and what they thought of the technology.

After about an hour and a quarter I split the group in half and gave each group twelve photos taken from TV news coverage. I asked participants to work with the pictures to construct and critique a ‘typical’ news bulletin (See Appendix E for photos). This technique is called the 'news game' and was devised by the Glasgow Media Group. By inviting participants to write, and then, crucially, critique a news bulletin the news game is an excellent way of examining both how much media coverage participants can recall and how much they are willing to negotiate or critique that coverage. Using such a staged exercise meant participants 'performed' and I found their reflections on the news game were very critical of the media coverage. When directly asked whether they believed the media, participants invariably displayed large amounts of scepticism. It is therefore essential that 'news game' critique is closely compared with participants' talk at other points in the focus group. Nevertheless, the news game was a useful way to test whether participants could replicate media discourse on GM. I could then compare this with conversations that were had earlier in the group to see if they chose to deploy this resource.

I was worried the news game would break the relaxed dynamic of the group but it had the opposite effect. Groups found the exercise fun, and most produced humorous scripts. By splitting into smaller groups quieter participants were encouraged to speak. It, therefore, also served as a useful way of reinvigorating conversation during the long session. After the news game I took a slightly more interventionist approach and asked questions to prompt new discussions (for example about Britain's GM status).

Quite often during the focus group discussions, a participant would ask me a question about GM. When this occurred, I explained that I was interested in finding out the group's opinions, but that I would share my own ideas at the end of the focus group; I would then redirect the participant's question to the other people in the group. I found that this approach worked well because participants stopped directing questions to me, and became more likely to ask questions of others.

Following the discussion, I took the opportunity to thank participants for taking part in my research, I asked them to fill in demographic forms and sign for the fee. I

then explained how I became interested in the topic and why I felt the discussion was important. I would occasionally correct any factual errors that had been introduced to the group by participants, as I felt if I did not do so my authority as moderator was implicitly endorsing something which I knew not to be true. I did not share my own opinion of GM as I felt this was inappropriate, given that as the group moderator my opinion was likely to be influential in the group. I did, however, share a few examples of how their discussion was similar and different from other groups.

5.3.2 Analysis of focus group discussions

The focus groups were tape-recorded, fully transcribed and coded in detail (e.g. I coded for explicit mentions of nature, contamination, and boundaries). I also used frame analysis to look at the focus group discussions. Kitzinger (2007: 152) states that once audience discussions are the object of frame analysis the question shifts from "how do the media frame this issue?" to "What frames do people use in their thinking about this issue – and how do they relate to the frames presented in the media?". Despite the shift in analytic focus, transcripts from such group discussions can be analysed in a similar way to media texts. I paid attention to the discursive cues and frames that people use. In addition, I also paid attention to participant interactions - noting which ideas, phrases, and metaphors prompted agreement and understanding. This approach allowed me to explore how discursive cues operated in ordinary conversations. I was also interested in assumptions, silences and inconsistencies which allowed me to identify the limits to the frames participants were using. In my analysis, I identified the patterns and themes that emerged from the various data sets, but I also identified examples of opposing views being expressed. This is crucial in identifying opposing frames.

As recommended by Hansen et al., I recorded "*observational accounts of facial expressions, gestures and body language*" during the focus group discussions (1998: 277). I also recorded murmurs of agreement and expressions of group consensus. Then, immediately following each focus group, I wrote down my initial impressions of the discussion. When transcribing the discussions I chose to identify individual speakers in the transcripts because I wanted to be able to identify instances where participants expressed statements that were contradictory to their earlier statements. I also wanted to be able to examine how individual lexical choices, images used and frames offered by participants evolved or changed throughout the focus group discussion.

Throughout my analysis, I try to provide some indication of the numbers of focus groups and numbers of individuals that discussed a specific topic. Sometimes I use

terms such as 'the majority', 'the minority,', 'some' or 'a handful' to convey numbers, but other times I provide the reader with precise numbers. My decision to provide numbers in the analysis is not based on an assumption that my study has quantitative validity; it is only intended to provide the reader with an indication of the number of groups and participants that discussed a particular topic in my research study. The focus group analysis also highlights group interaction wherever possible, by offering excerpts of the groups' discussions, rather than individual comments (Kitzinger, 1994; Wilkinson, 1998).

For inclusion in my chapters I selected quotes that were unambiguous, succinct and representative of the thematic category that they were illustrating. In order to protect the participants' anonymity I use pseudonyms in place of focus group participants' real names.

5.3.3 Searching for Media Effects

Within my groups I attempted to identify media effects. Where participants alerted me to particular influences, be it the media, friends or other sources, I noted this to consider what kinds of information are particularly important in discussions of GM. I also compared the discursive repertoire offered by audiences with that given by sources and the press. While discursive similarity does not automatically prove media effects, if participants replicate particular words, information or argumentative structures present in the press sample this suggests audiences are using the media as a discursive resource.

While I am particularity interested in media influence I recognise that media content interacts with other representations, practices and experiences that shape people's lives. The meaning of texts will be constructed differently according to the discourses brought to bear on them by the reader. I therefore attempted to elicit a wide range of information points that have contributed to the way people discuss and understand genetic modification, be it the traditional media, websites or information labels in supermarkets. In addition, I tried to capture how this information is used in interaction with personal experience, conversations with friends and family and an individual's self-identity or political beliefs.

5.3.4 The value of focus group data

Focus group methods have been criticised for the way in which internal dynamics may 'skew' the views that emerge or how participants can construct identities which are at odds with what they may say in private (Kreuger and Casey, 2000). Yet this

assumes that, as Morley and Brunsdon state in Nationwide, it is possible to analyse individual opinions as “given, neutral and unproblematic”. It does not acknowledge that opinion is an 'extremely derivative, mediated thing' (Morley and Brunsdon, 1999: 228). As Morley and Brunsdon state, “opinion research, which enumerates and appraises all individuals as having equal rights, as dots without qualities, so to speak, ignores the real differences in social power and social impotence” (1999: 228). These differences are as crucial in the consumption and discussion of media programmes as they are in any other fields of social life. Morley and Brunsdon argue that focus groups recognise audiences as members of groupings and are able to partly capture and explore group processes of discussion and debate. It is these collective processes that produce understandings and decodings.

I was not interested in capturing 'individual' opinions (supposedly ‘individually’ authored thoughts are always constructed within a particular discursive context) but instead explored the text that was constructed by that particular group within that particular setting. I was interested in the dynamic nature of arguments and how particular arguments worked within groups (e.g. whether they prompted challenge or consensus). The approach adopted was designed to focus “not on what people ‘think’ as if this were a static snapshot but to explore *how* they construct an issue, and the information they use to talk and argue about it” (Kitzinger, 1994, emphasis in original). The data generated from group interaction results in a better understanding of the social processes involved in knowledge production (Wilkinson, 1998).

When considering the value of focus group data it is important to consider this data from a discursive perspective. Researchers like Stephens et al. (2002) have shown that an important aspect of focus group discussions are the social practices enacted. In other words, the social quality of the text (which means participants express different views than they would when interviewed one to one) is part of what makes focus group texts valuable. When people give accounts of their attitudes these are produced in particular situations that give rise to particular rhetorical activity. Focus group data is constituted by the way in which it is produced; to acknowledge this does not detract from the value of focus groups but merely admits a social truth.

5.4 Frame Analysis

Having outlined the methods used, I am now going to explain how I identified frames as a way of analysing discourse at all three sites in the circuit of communication.

Descriptions of discourse are often theoretically sophisticated but methodologically imprecise, leading to a lack of clarity about how particular discourses can be identified. One form of discourse analysis that offers fairly precise instructions to the researcher is 'critical discourse analysis' (CDA). While I recognise the valuable insights produced by this fine grained method I did not find CDA a useful tool for my purposes. Theoretically it does not match my own perspective. In contrast to Laclau and Mouffe's (2001) concept of discourse, CDA argues that the discursive can only be found in text, talk and other semiological systems. These elements are distinct from other dimensions of social practice (Jorgensen and Phillips, 2002). For Laclau and Mouffe all social practices are discursive; the material is structured in discourse just as semiological systems are. As a media theorist I am concerned with analysing text and talk but it is still important to acknowledge that discourse also structures physical realities – like financial markets, national borders and regulatory regimes.

My study was not concerned with specific semantic relations that can be identified by drilling further into the text but rather with linking outwards to observe how lexical choices, implicit assumptions and particular images relate to other possible arguments and ways of constructing GM technology. As Philo observes, by staying within the text it is not always clear what critical discourse analysis is 'critical' of (2007: 119). Instead he instructs researchers to move outside the text to look at the assumptions underlying it, arguing that individual textual strategies will work to frame a text in accordance with these assumptions. Philo identifies 'assumptions' as the 'master category' of analysis since it is these that underlie the deployment of textual strategies.

5.4.1 Defining Frames and Discourses

As I did not choose to use CDA to analyse my data I needed another approach; I found framing theory a more useful perspective for the kinds of questions I was interested in answering.

As Kitzinger (2007) observes frame and discourse analyses are often used in overlapping ways. The differences between the two are not always clearly defined but they are distinct concepts. Hannigan defines a discourse as “a specific ensemble of ideas, concepts and categorizations that is produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities” (2007: 36). A discourse encompasses all the linked utterances, patterns of association, assumptions or disciplinary practices that create it. It is full and weighty – embodying both the material and semiological.

I would argue that a frame, on the other hand, is the scaffolding upon which a discourse is formed. It is the structure that links elements in particular ways to form the chains of association that create a particular discourse. I analyse frames to understand how discourses work. I will outline some basic tenants of framing theory to explain *how* I use frames as an analytical tool with which to explore discourse.

Framing has been developed and used by many media researchers. Frames create "cognitive windows through which stories are seen" (Pan and Kosicki, 1993: 59). They organise elements so they appear logically consistent and inevitable; in other words a frame attempts to define the way the world works. As with discourse, frames are enabling and constraining. They enable people to make sense of the world by selecting information as relevant but they offer a limited and constructed view as alternative possibilities are excluded by the selection process.

The concept of framing can therefore be used as a way of looking at particular discourses; frames are not limited to media content, they are an integral part of creating discourse and give meaning to many different social elements. Framing acknowledges Foucault's insight that there is not an objective, unbiased reality; accounts must always involve the framing of reality which creates particular discourses.

5.4.2 Media Studies and Framing

Framing has been used by a variety of different disciplines but a number of communication scholars have considered its relevance to the study of the media. Entman (1993), for example, was concerned with the ways frames define some elements of a discussion as more important than others; he therefore instructs the researcher to pay attention not just to what is *present* in a media text but also to what is *absent*. Entman's theories marked a departure from agenda setting theory which concentrated mostly on analysing *what* the media spoke about rather than considering *how* an issue is represented (Kitzinger 2004).

Kitzinger has also utilised framing theory, arguing that frames are integral to the journalist's production of a text that adheres to 'news values':

> "journalists are consummate 'framers' of reality – as are the professional PR workers who help control and shape the supply of information to the media. They are selecting highlights and directing attention to some aspects and not others."
>
> (Kitzinger, 2007 137)

Frame analysis is a particularly suitable method for analysing 'the master category' of assumptions. Kitzinger sets out the kinds of questions frame analysts

might ask: “How have journalists told the story and why did they tell the story this way? What alternative frames could have been used? How might the problem, and the key players involved, have been presented differently? What are the *consequences* of presenting events 'framed' in one way rather than another? How does the dominant framing of this issue impact on public understanding?” (2007:134). Underlying all of these questions is a commitment to unpacking a text's implicit world view and the unacknowledged assumptions contained within it.

Framing theories have been used to study source activities in ways that echo theories of source influence. Miller and Riechart suggest that framing serves elite interests, arguing that frames are “driven by unifying ideologies that shape all content on a topic into a specific dominant interpretation consistent with the interests of social elites”(2000: 46). It is therefore possible to analyse struggles over discourse by looking at how things are framed and how they could have been framed differently.

Framing has also been used to discuss the reception of media texts. Van Gorp utilises Entman’s definition of framing but extends it to the study of audiences:

> “a frame determines which aspects of reality are selected, rejected, emphasised or modified in the production of a media text and, at the same time, provides the audience with a context and suggested meaning.”
>
> (Van Gorp, 2005: 488)

It is therefore possible to use framing theory to analyse the text produced by sources, journalists or audiences.

5.4.3 Condensing Symbols and Discursive Cues

Frame analysts list aspects of the text that it is useful to analyse. It is through identifying these that the construction of a particular discourse is revealed. Gamson and Modiglani (1989:3) claim that frames contain 'condensing symbols'. These are words, metaphors or other signs that evoke a whole frame without having to explain what that frame looks like. Condensing symbols enable the audience to recognise a frame they are already familiar with and place an issue within that frame. By immersing myself in the newspaper articles I identified that 'GM crops are unnatural' was a key frame. Through closer analysis of the articles I then identified 'Frankenstein food' as a condensing symbol.

Instead of identifying condensing symbols, other theorists look for discursive cues (a related but not identical concept). These are elements that are crucial in creating a particular frame (although they do not necessarily evoke the whole frame as

condensing symbols do). An example of a discursive cue in the GM debate is the white suits worn by protesters which evokes ideas of contamination. Analytically I found it useful to categorise condensing symbols as a particular type of, very powerful, discursive cue. I will refer to both terms in this thesis. Kitzinger offers a useful list of easily recognisable textual elements such as labels and definitions that often operate as discursive cues.

Kitzinger's list acknowledges that key discursive cues vary from text to text and discourse to discourse. Her list provides some useful starting points, but it is neither meant to be complete, nor fully replicable. This does not mean frame analysis isn't a rigorous method, but rather the responsibility for that rigour lies with the researcher, who is not given a fail-safe check list but is expected to immerse themselves in their material and stay continually alert to the many different kinds of discursive cues in their analysis. As Philo writes, "*a priori* categories sometimes work to obfuscate rather than illuminate the object of analysis" (2007: 105). Therefore, although I made extensive use of Kitzinger's list, I also ensured I stayed alert to other kinds of discursive cues.

1	Images used
2	types of language used
3	labels and definitions employed
4	explanations offered
5	responsibility assigned
6	solutions proposed
7	narrative structure
8	contextualization and links
9	historical associations invoked
10	similes and metaphors
11	emotional appeals
12	who is invited to comment
13	how different speakers are introduced
14	How different characters, groups, social movements or entities are described

Table 5.1: Kitzinger's aspects of the text which might be examined to identify key 'cues' (2007: 141-2)

Once particular frames and associated discursive cues have been identified it is possible to "map how particular frames dominate the representation of an issue" (Kitzinger, 2007: 142) and explore how different frames compete, or compare how frames shift across key variables. It is the dominance of particular frames that determine what discourses look like. The key question becomes "what signs are the objects of struggle over meaning" (Jorgensen and Phillips, 2002: 30). What are the key elements of struggle within a discourse.

5.4.4 Challenges of Frame Analysis

Frame analysis is a challenging endeavour because the researcher is often positioned in the same discourse as the object of their analysis. As Kitzinger acknowledges “frames are often so implicit that they seem like common sense” (2007: 151). Often the frame that is the hardest to detect is the most powerful. This is because it seems self-apparent – a reality as opposed to a construction. A key technique to help researchers identify the full range of potential frames is to pay attention to statements that do not 'fit' with the frames identified. In my analysis I paid close attention to divergent interpretations and representations to consider the possibilities excluded by the frames being deployed.

Philo (2007) and Kitzinger (2007) both explain the importance of the researcher reading beyond a particular text and spending at least some time immersing themselves in secondary literature – even if no formal analysis of this material is offered. Other sources of information, be it radical campaigning websites, discussions with interested publics who might offer a different perspective (e.g. religious or feminist groups) or looking at a similar debate in a different cultural context (be it a different country or previous era) are all ways for the researcher to 'think outside the box' of the particular frame they are looking at and identify omissions, assumptions and limits of debate in the texts they are analysing. In keeping with this recognition, I read widely and spoke to many different people about my study.

Another methodological problem faced by the researcher is how to say where one discourse ends and another begins. Jorgensen and Phillips (2002) argue that a discourse is a particular way of representing the world (or parts of the world). On this basis they claim the limits of a discourse (and in addition the limits of a frame) are where elements are articulated in a way that is no longer compatible with the terms of the discourse. If, however, you look within that particular discourse you may also discover there are 'micro discourses'.

They conclude that the delineation of frames or discourses depends on the research question. For example, if I was interested in comparing the development of biotechnology with the discovery of immunology I would analyse discussions of stem cell research and GM as part of the same biotechnology discourse. If, however, I was comparing representations of two different biotechnologies, for example GM crops with stem cell research, it makes sense to analyse them as two separate discourses. Jorgensen and Phillips (2002) usefully acknowledge that discourses do not necessarily exist in readily delineated form, it is up to the researcher to both make and then justify this delineation.

I have outlined how I use frame analysis to analyse the structure of particular discourses. This allows me to identify some of the key ways in which discourses work. A discourse is a far richer concept than a frame and therefore harder to analyse. Discourses work across a number of spheres be they textual or material. A frame is a simpler concept, it provides a textual scaffolding around which particular discourses are structured. Looking at frames provides crucial insights into how particular discourses work but does not fully capture the myriad ways that discourses shape society. Nevertheless the useful insights that are offered by analysing frames, make frame analysis an appropriate tool for this study.

5.5 Summary

This chapter has explained the research methods used in this thesis. My study is focused on how discourse is produced at the moments of production, text and reception. It explores this by analysing frames. I carried out eighteen interviews with sources, analysed a six month sample period of newspapers and also conducted ten focus groups with sixty-four participants. I present the findings of this study in the following chapters.

Research practices do not simply 'capture' or reveal the world out there; they generate the conditions of possibility that frame the object of analysis (Skeggs, 2008). Jorgensen and Phillips comment that all research is “a contingent articulation of elements which reproduces or challenges the given discourses in the never ending struggle to define the world” (2002: 49). My study is no different. Researchers who use post-structuralist theory are often asked how they account for the value of their own research. I draw on Haraway's ideas of situated knowledge for justification. Haraway acknowledges that knowledge is always “partial and always produced by following a particular view of the world” (1996: 252). She recognises that research constitutes the world in particular ways and therefore privileges certain possible worlds over others (1996: 37). But this does not lead Haraway into solipsism; she accepts both political and scientific criteria for knowledge production. Haraway argues research can still be evaluated in terms of its political aims, coherent argumentation and transparency. I have used this chapter to justify why my methods were appropriate, rigorous and ethical, yet I must also acknowledge that they are contingent.

Chapter 6: A Modified Nature: The Natural in the GM Debate.

Press Coverage and Source Interviews.

6.1 Introduction

The public debate over whether genetically modified (GM) crops should be grown in the UK has been a polarised one. Public discussion has featured little in way of continuum: actors are either GM champions or fierce opponents and more nuanced positions, such as considering better or worse uses of the technology, are often not included. This polarisation is apparent in the rhetorical strategies deployed by those on either side of the GM argument as they struggle to control the labels, links and images used in discussions of GM. One key site of contest is the agricultural field. Both environmental campaigners and biotechnology companies have produced very different images of a field of GM crops (see Images 6.1 and 6.2). The first image, 6.1, appeared on the BBC news website to accompany a story entitled '*UK farms want to grow GM crops'* (16 March 2005) but the image is in fact produced and supplied by Monsanto. It depicts the sun rising over a golden field of corn – heralding the new dawn of GM crops. The golden light evokes nostalgia for a (mythical) bygone agricultural age and the undulating rows of corn stretching into the distance represent the promise of a land of plenty.

In response to this anti-GM protesters successfully disrupt the GM crop field as a benign space, replacing Monsanto's sun drenched plains with the vision of hell that appears in Image 6.2, which featured on the Daily Mail website illustrating a story entitled "Chief scientist, Sir David King, urges GM rethink to feed growing population" (27 November 2007). It was produced by the anti-GM group the Genetic Engineering Network. It is an image of a crop thrashing protest that took place in 2002.

Plumes of red smoke rise up in the background, as the white suits in the front of the photo serve as a visual marker of the contamination caused by GM crops. The field could not be further away from the rural idyll promoted in Monsanto's picture. The image of a 'contaminated' field (not just *this* contaminated field) has been used by the media many times to illustrate GM stories. The visual symbols: white masks and suits, red smoke and toxic warning signs appear time and again on newspaper pages carrying stories about GM. It has become one of the 'key' images.

Nature is crucial to the conceptual struggle highlighted in these two photos. In Monsanto's image attention is drawn to the field's 'naturalness', in particular an agro-American 'naturalness'. The picture evokes culturally ubiquitous images of the American landscape, in which nature is a provider of plenty and a source of religious

inspiration (marked by the golden sunlight and the picture's perspective which situates the viewer looking down on the field in a typically transcendental subject position). This version of nature dates back to the Seventeenth Century in America, when authors like Washington Irving and James Fenimore Cooper redefined the American landscape to evoke both nationalist mission and biblical quest. The landscape of America was closely linked to the idea of 'manifest destiny' - a concept succinctly expressed by William Giplin, the first territorial governor of Colorado who declared in 1846 that it was "the untransacted destiny of the American people to subdue the continent – to rush over this vast field to the Pacific Ocean...to carry the career of mankind to the peak" (cited in Daniels, 1993: 151). Landscape and nationalism were specifically tied to the idea of technological progress and dominance over nature, with steam trains appearing in paintings of the American landscape (Novak, 2007: 165).

Image 6.1: Monsanto

Image 6.2: Genetic Engineering Network

By utilising this version of nature, Monsanto are creating an image designed to have strong cultural resonances for many viewers, particularly, but not exclusively, North American viewers. Framed in this way, genetic modification is not just a positive development but a way of advancing the American nation. Hansen (2010) argues that adverts in the 1940s-70s were optimistic about the co-existence of nature and techno-scientific developments, in more recent years ads have tended to use more nostalgic versions of nature and to evoke longing for a 'lost idyll' – where nature is free of human influence. In Image 6.1, produced by Monsanto, it is the earlier co-existence of nature and technology that is nostalgically recalled by evoking manifest destiny – a powerful narrative in the American national consciousness.

Key to Image 6.2 is the disruption of the natural – the field, subject to the intervention of 'modern man', is no longer a glorious example of nature's bounty and instead represents a ruined nature, contaminated by the GM material present in its soil.

In the UK, the anti-GM image of a contaminated field has proved dominant both in its use in the media, and in public discussion (Augoustinos et al., 2010). Plants with genetically altered DNA are continuously referred to as unnatural (see Hughes, 2007). It is important to note that *both* sides attempt to deploy the concept of nature in support of their arguments. The predominant labelling of GM as unnatural makes it possible to believe that biotechnology protagonists never tried to present GM as natural. Monsanto's golden field shows that biotechnology companies were aware of the cultural significance of nature and attempted to rhetorically mobilise its power in their own arguments.

Chapter Aims

Within this chapter I am going to consider how the press and sources use nature when discussing GM. 'Nature' is a highly significant cultural and political reference point in relation to many science and technology debates. Existing research highlights its rhetorical importance in public understandings of emerging scientific innovations, and demonstrates how 'nature' is appealed to as a key arbiter of right and wrong.

I shall draw on these insights to consider the role the media played in creating and shaping the discourse surrounding the UK GM debate. I am particularly interested in how media influence operates in relation to deep seated cultural fears and assumptions. In this chapter I want to consider how the media and sources referred to 'nature' to present different views on GM and in so doing explore how news reporting often relies on deep seated cultural narratives.

I shall begin with a brief outline of how the press discussed nature in the GM debate, based on my six month press sample. I shall consider both explicit and implicit uses of nature, analysing how the 'natural' is defined in the press, clusters of association and potential implications of the press' discussion.

After this description of the UK press coverage I shall offer a more detailed analysis of how nature is discussed by media sources: including campaigners, biotechnologists and farmers. I shall explore which risks are promoted through referencing nature and which are overlooked. I shall also consider nature's association with numerous other concepts including purity, family and tradition. Finally, I shall analyse the different linguistic choices made by sources and consider the strategic reasons for these choices.

Nature is a site of struggle: its close connection with what is assumed to be 'common sense' ensures nature is often a site of competing claims. Source discussions of nature therefore provide useful loci for exploring the rhetorical strategies used by different actors. I shall consider what particular utterances achieve in certain contexts, noting the competing versions of nature put forward and considering which frames are echoed in the media and which are ignored. In so doing I shall utilise the theoretical insights of Laclau and Mouffe (2001) who emphasise that different discourses exist side by side and are engaged in a struggle for the right to define truth. I am interested in the battle over commonsense or 'objective knowledge' and the need for groups and organisations, concerned with getting media attention, to ensure their arguments chime with the dominant hegemonic position. In particular I want to build on the work of others (e.g. Anderson 1993, Cottle 2003, Hannigan 2006) to consider source activity within the discussion of environmental issues. I shall pay attention to the implications of the frames and concepts used by environmental groups such as Friends of the Earth and Greenpeace, with the intention of adding to the debate about the communication of environmental bads.

6.2 Pressing Nature: How the media frame genetic modification and nature

I am going to begin this chapter by briefly outlining how nature is spoken about in the UK news media's discussion of GM. I shall base this analysis on a six month sample (January-June 2004) of all UK national daily newspapers and shall outline some key concepts that were present in the press coverage. This sample will provide a context for my source interviews and focus groups. The selection of newspapers provide just a snap shot of the news media's discussion and is focused on only one part of the media - newspapers. I am using my analysis to introduce some of the key concepts shaping the public discussion of GM, rather than providing an extensive analysis of a wider range of UK media.

6.2.1 Explicit uses of the words Natural/Unnatural

My sample produced 323 articles. This represented all articles about GM crops published in the national UK press between January-June 2004. Nature was referred to directly within 22% of these articles (N=72) the vast majority of these (20% of total articles) referred to GM crops as unnatural – either by explicitly describing them as such, or by contrasting them with the ‘natural’ alternative: non-genetically modified crops.

Headlines such as “GM threatens the integrity of natural crops” (Independent 05 May 2004) immediately established GM as a 'bad thing' because it went against nature. The word 'integrity' suggests GM threatens the integral 'wholeness' of natural plants (referencing Williams' first meaning of nature: the essential character of something) but it also introduces a judgement. Integrity denotes moral certitude – a freedom from corruption or the possession of sound moral convictions. This headline neatly captures the interrelated moral and physical threat some media coverage claimed GM was posing.

A popular depiction of nature was as fragile and vulnerable, with a balance that is easily upset and hard to restore. In contrast to this nature is also presented as vengeful: an anthropomorphised nature ensures that humankind also suffers the consequences of its actions. “Nature will fight back in the war over GM crops.” (The Daily Express, 11 March 2004), “Mother Nature always has a nasty way of hitting back when we mess with her” (The Daily Mail, 07 June 2004). Nature's ability to 'fight back' in order to restore equilibrium evokes William's second meaning: nature as an inherent force in the world.

By contrast, conventional foods were described as natural: “According to Greenpeace, the ship was already carrying 30,000 US tons of genetically modified soya beans and came to Paranagua to add another 10,000 tons of natural product” (Mirror, 10 May 2004). It is worth noting that the ‘natural’ soya beans referred to in the article would probably have been produced using intensive farming methods and sprayed with pesticides. In a different context, an article on organic farming for example, it is these soya beans that would have been labelled unnatural. Yet because the article clearly identifies GM soya as the unnatural product, non GM soya is automatically labelled 'natural'. The labelling of any food crop that is not GM as 'natural’ could be found in lots of the press coverage. This suggests that far from being a definitive quality, the label 'natural' is ascribed by the UK press in a *relative* manner.

Although most of the articles that mentioned ‘nature’ explicitly argued that GM crops are a negative development because they are unnatural, there was some diversity in a minority of the articles. Firstly, the unnaturalness of GM was not always described as a bad thing; three articles discuss how the creation of 'unnatural' things is a necessary aid to human progression. One of these articles was in the Sunday Telegraph. This article compares the creation of “that much-loved national institution, the Cox’s Orange Pippin” (07 March 2004) with the creation of GM; arguing that the benign practice of gardeners crossing one variety of plant with another is akin to genetic modification. The article continues: “Why fiddle with nature? The answer is because Man has always fiddled with Nature…Without these processes, civilisation

would never have been established" (Sunday Telegraph, 07 March 2004). In this article genetic modification is depicted as a normal practice in food production which has a long and continuous history. The journalist premises the division between nature and culture to argue that nature is not necessarily a 'good' thing. When opposed to the civilising influence of culture, nature becomes something to conquer rather than respect. In this example a different version of nature is mobilised. It relates to a belief in the progress of society that arose from the Enlightenment; science and rationality are valued as a way for humans to gain emancipation from the sphere of 'nature'. This idea of nature can regularly be found in different debates – particularly those relating to medical science (Bauer 2005). Nature signifies very different things depending on the context in which it referenced. In arguments about the enlightenment nature collates with the irrational and the anti-progressive (Kaebnick, 2011).

Five articles describe GM crops as natural. They all argue that genetic modification is simply an extension of 'nature's work'. Within these articles nature is often anthropomorphised, "nature herself is a promiscuous gene tinkerer, creating superweeds when herbicides are thrown around" (The Daily Telegraph, 10 March 2004). These articles claim that nature is the original genetic modifier and that scientists are just following her (in the press coverage when nature is gendered it is *always* female) lead in continuing this work. This argument directly refutes claims that nature has a certain order which we change at our peril – arguing instead that nature shifts, evolves and even transgresses. Linking GM with the natural emphasises that the crops are safe; indeed one article argued that the difference between genetic modification and cross breeding is that genetic modification is *less* risky because scientists understand which genes they are mixing.

In the final four articles nature is dismissed as an arbitrary, relatively meaningless concept. This was often signified by referring to nature using inverted commas, "what we like to think of as 'natural' and 'unnatural'" (The Times, 12 February 2004), "GM frightens many people because it involves biotechnological manipulation and can be seen as 'not nature's way' but has there ever been a truly cogent scientific objection to it?" (Express, 10 Jan 2004). The inverted commas are used to distance journalists from these arguments and present them as contested. Objecting to the unnatural was dismissed as an unquantifiable, woolly complaint, over which scientific reasoning should take precedence. In these articles it was invariably assumed that all 'scientists' supported GM; science was presented as a monolithic entity espousing objective 'truths'.

Nature is represented in a number of different ways in the press's discussion of GM. The majority of these are used to argue against GM as an unnatural intervention

but sometimes this argument is modified (articles question what is wrong with the unnatural) or nature is deployed in support of the technology.

6.2.2 Implicit mobilisations of 'Nature'

Concepts and ideas associated with nature were not just deployed in articles that directly referred to nature; the natural was evoked in a variety of implicit ways. By analysing the 72 articles that mentioned nature directly, it was possible to identify a number of words and phrases that were closely associated with nature. In addition 116 articles discussed the negative impact of GM threatening or contaminating the 'environment', 'wildlife', 'biodiversity', 'plants', 'insects' or the 'countryside', even if they did not directly mention nature. These concepts are all intimately connected to the natural, their meaning is created in relation to 'nature' and when these words are uttered, a particular discourse of nature is mobilised. The vast majority of these argue that GM will harm the environment, in particular the British countryside. The Daily Star told their readers "Anyone who cares about the British countryside will be delighted by this announcement" (that GM crops will not be planted commercially in Britain) (01 April 2004). Many of the articles that reference wildlife or biodiversity are talking about the results of the Government's Farm Scale Evaluations, these were presented in the press as damning proof that GM crops would harm British wildlife. The Farm Scale Evaluations documented not just the potential harm that GM would cause but also outlined the impacts of current pesticide use on wildlife. Reporting of this point however was confused and invariably GM was blamed for all the damage to biodiversity documented in the Evaluations. An article in the Independent gives a particularly unclear account :

> *"*British Scientists showed GM crops could harm the environment. The three-year exercise known as the Farm Scale Evaluations compared what happened to wildlife and found that the powerful weedkillers used seriously depleted plants, seeds and insects such as bees and butterflies. One weedkiller was so toxic it is banned in Europe*."*
>
> (Independent, 05 March 2004)

Factually this article is correct, but its implications are misleading. The banned weedkiller was not used on GM crops but conventional ones. Yet the harm caused by this pesticide was often linked to GM and used to further the view, already popular in the press, that GM will harm the environment.

A minority of articles presented the Farm Scale Evaluations in a different light, arguing that the results showed GM was good for wildlife, "There will be more weeds in

and around the GM maize crops which provide vital food supplies for a range of insects and small mammals" (Daily Express, 14 May 2004:7). In fact, the results of the Farm Scale Evaluations actually showed *some* applications of GM technology could be better for the environment than conventional crops, but that all intensively farmed crops have a significant impact on the environment. This is a complicated message, not least because it breaks the frame that GM crops are unnatural (and therefore harm wildlife) and conventional crops are natural. A minority of articles reported this complexity, but the majority focused only on the harm caused by GM.

In addition to talking about wildlife, 43% of articles spoke about the potential of GM to contaminate or pollute conventional crop varieties. As discussed in my literature review Western societies (and many non-Western) have perceived human intervention in the realm of the natural as problematic, and have labelled the products of such interactions 'impure' or contaminated. The GM debate is no exception and pollution metaphors were key in the press' discussion of GM. Some articles described GM crops as polluting or contaminating nature, "Non-food uses are likely to bring in contamination of non-GM crops and nature by the back door" (Guardian, 05 May 2004). Within the media sample GM crops were unproblematically presented as contaminated, a distasteful mixing of the natural and the artificial. The link between genetic modification and contamination was presented as self-evident and rarely questioned by the UK press.

This was particularly evident when cross-pollination was being discussed. On most occasions, the word 'contamination' was used instead of 'cross-pollination'. This occurred even in articles which were not making an explicitly anti-GM argument. One article begins with the headline "How GM crops pollute two-thirds of the landscape". It goes on to discuss how "...scientists found that normal American crops are now 'pervasively contaminated' by GM varieties" *(The Daily Mail,* 8 March 2004). The use of the word 'pollute' suggests that non-GM crops have become dirty or corrupted by GM material. The phrase 'pervasively contaminated' implies an irreversible change has totally altered the once 'normal American crop'. The use of the word normal could be substituted for 'natural'. It is human intervention in the crop that makes it both unnatural and abnormal. The interchangeability of natural and normal reinforces nature's association with the assumed, or 'the way things are'. In the above quote it is the 'everydayness' of normal American food, food that was provided by nature, that has been corrupted by the artificial genes inserted into it.

The blurring of the lines between the artificiality of man-created genes and the ones 'found in nature' is continually described as contamination: "Wasn't there a danger that genes from GM crops would spread, contaminating produce and creating

superweeds?" (The Daily Express, 10 May 2004). Of course, contamination implies that the crop has become either dirty or toxic, but no such process has occurred. Contamination, in the conventional sense, has not taken place. Only one article out of the sample questions the use of the word; a scientist who is clearly pro-genetic modification states that "...the contamination analogy is false: GM is a technique, not an additive that scientists mix into our food" (Financial Times, 17 March 2004). This reference makes clear that there is some debate over using the word 'contaminated' and GM advocates prefer the term cross-pollinate. In the press coverage, however, contaminate is continuously used.

24% of articles in the sample used words which evoked monstrousness to describe GM i.e. monster, Frankenstein etc. Haraway argues that 'monsters' signify, they are a condensing symbol that represents the limits of Western thinking. It is the 'monster's' challenge to the boundaries of nature that induces 'yuk' reactions. The press coverage regularly featured descriptions of gigantic or bizarrely mutated crops and linked these abnormalities to the unnaturalness of GM "Giant tomatoes, glow-in-the-dark tobacco and human organs could all be around the corner as boffins play with nature's building blocks" *(*Mirror, 10 March 2004: 06). Some articles also referred to the monstrous in relation to the affects GM crops had on people or the environment. The Daily Mail gave a particularly vivid example, "I heard of farm animals born with deformities; of malformed banana and sweet potato plants; of lakes filled with dead fish" (Journalist reporting his conversation with Filipino farmers, 06 May 2004).

Monstrous imagery is used by the press to paint GM as a hideous perversion of nature. As Haraway shows, within western societies nature's construction is dependent on the historically and culturally contingent practice of boundary making. The transgression of boundaries produces hybrid monsters. Throughout western history hybrids have been reviled as abominations that make visible the pollution caused by boundary transgressions (Latour, 1994). Within the coverage GM crops were depicted as monstrous. 14% of articles spoke about one monster in particular: Frankenstein's. "Government approves 'Frankenstein' crop: why we shouldn't mess with nature" (Mirror, 10 March 2004). "If you ever had any doubts about FRANKENSTEIN FOODS read this litany of deceit, cynicism and manipulation" (Mail, 20 February 2004). The Frankenstein metaphor was used in the press coverage as a short-hand reference to concerns about scientists tampering with nature. Cook et al. (2006) looked at three months of UK press coverage of GM from 2003; they found that the Frankenstein description was more likely to be used by proponents of GM food than opponents and was often used to discredit anti-GM arguments as 'anti-scientific' or 'hysterical'. This finding was not repeated in the 2004 sample I analysed. The majority of mentions that Frankenstein received were made by journalists, not quoted sources: however many

articles placed the word Frankenstein in inverted commas as the Mirror quote above does. Journalists used these inverted commas to distance themselves from the use of the word Frankenstein; to present it as a label that others used. Despite the use of quote marks the majority of articles still used the word to support, rather than discredit, the arguments of the anti-GM lobby.

My search of the Lexis Nexis database uncovered an interesting sub set of articles that were not *about* GM (hence not included in the sample). These casually linked GM with monstrousness; often in a humorous manner. They were usually mocking, using deliberately clichéd imagery that would fit in a low budget horror movie. The Daily Mail, for example, illustrated a picture of a large armadillo next to a pair of boots with this comment, “There was little left at this GM crops laboratory after the giant mutant woodlice ran amok” (Daily Mail 9 May 2004). The ideological implications of these casual references are likely to be important; and noting this proved the value in observing wider trends in articles that were not picked up by my rigid sampling criteria.t I also identified articles that talked about animals which had been genetically modified. They featured a 'GM dwarf rat', a 'monstrous GM Zebrafish' and the 'GM Butterfly':

> “Scientists have created the world's first genetically-modified butterfly by crossing it with a jellyfish gene to make its eyes glow a fluorescent green ...coming as GM maize gets the go ahead for commercial growth in Britain the study brought renewed criticism yesterday about scientists dabbling with nature.”
>
> (Daily Mail, 10 March 2004)

It is not usual for animals created by biotechnology to be described as 'GM', the more common descriptor is 'transgenic' or 'genetically engineered'. The articles that do refer to animals as 'GM' were all written at the height of the genetically modified food debate and by referring to them as 'GM' journalists are presumably hoping to increase the news value of their articles by linking it to GM and wider concerns about 'scientists dabbling with nature'. 'GM' is being used by journalists as a condensing symbol for the unnatural; describing an animal as 'GM' serves to highlight the 'Frankenstein' consequences of such genetic alteration.

The above analysis shows that nature is key to the UK press discussion of GM crops. It gives a snap shot of how the press present GM as unnatural, although it is important to acknowledge some articles did not portray GM in this manner. This is not a comprehensive analysis of media coverage, concentrating as it does on a particular time period and most crucially only one format – newspapers. However, it still identifies some of the crucial ways that nature was being used in public discussions of GM. I shall return to some of the ideas and concepts used here as I explore how sources both influence, and are influenced by, the public discourse on GM crops.

6.3 Natural Enemies: How sources use nature in the GM debate

Welsh argues nature is “a site of intersecting and competing social and cultural definitions and interests” (1998: 158). Nowhere are these competing interests more apparent than in the UK GM debate. The discussion on GMOs became infamous for the acrimonious manner in which it was conducted, and the media coverage reflected this, depicting a battle between two firmly entrenched positions. This animosity was only heightened when the series of public 'GM Nation?' debates began. This Government consultation process created adversarial discussions as industry figures, environmental campaigners, Government scientists and organic advocates verbally sparred in village halls and community centres throughout Britain. The debates were the scene of some explosive encounters – with a few of them ending when panel members walked out mid discussion. Nature was a key stake in these linguistic contests, as each faction tried to claim it as their own. I conducted eighteen source interviews about GMOs, including with people who spoke at the 'GM Nation?' debates and vividly recalled the intensity of those meetings. I am going to use these interviews (coupled with my analysis of the press coverage) to explore how sources attempted to align nature with their interests and define the concept in a way that supported their arguments. I will reflect on the extent to which they were successful in framing the media coverage and explore the complicated rhetorical tricks they had to engage in to align their views with the concept of 'nature'. I shall consider which versions of nature were deployed and to what effect and how the views presented by sources fit or jar with the dominant media messages. I shall revisit the work of those who have theorised about the growth of environmental social movements to consider who 'won' the discursive tug of war over nature and what this adds to our understanding of how environmental social movements use the media.

The words 'natural', 'unnatural' or 'nature' were used without prompting by most of my interviewees (see Table 6.1). All but 3 of the people I spoke with spontaneously mentioned one of these words. Nature, however, was not often discussed at length, although one interviewee referred to nature 10 times, the average was just over 3 times during the course of an hour and a half interview. Interestingly, actors who were anti-GM explicitly referenced nature the most *and* the least, whereas protagonists for the technology fell in the middle. I also counted the use of words which were closely connected with nature: environment, sustainable, biodiversity, wildlife etc. Environment was the most popular word with every category of interviewee using it the most: on average it was used 11.55 times during an hour and a half interview and was popular with both advocates and opponents. Counting word frequencies provides a quick snap shot of the lexical choices made by my interviewees, it does not, however, account for

the differences found. I shall explore these differences in the discussion of my qualitative findings below.

6.3.1 Quantitative Findings

	Nature / Natural / Unnatural	Environment	Sustainable/ Sustainability	Biodiverse/ Biodiversity	Wildlife
NGO's	1.17	16.17	0.67	1.33	1.33
Organic Farming Representatives	8.67	11.67	2.33	0.33	0.33
Welsh Assembly Representatives	3	12	2.33	0	0
Scientists	2	8.6	0.2	0	0.2
UK Government Representatives	2.33	12.33	1.33	0.67	0.33
Industry	2.5	8.5	6	0	1
Average across all groups	3.28	11.55	2.14	0.39	0.53

Table 6.1 showing the average number of times source groups used words associated with nature per interview

NB: Some interviewees were counted in more than one category. For example, Doug Parr, Chief Scientist for Greenpeace, was counted in 'NGOs' and 'Scientists'.

6.3.2 Explicit mentions of nature

Of those who were anti-GM it was the three interviewees connected with organic farming that used the words nature/natural/unnatural the most. These were Gerald Miles, a GM Free Cymru campaigner who works as an organic farmer, Michael Green of the Soil Association (an organic lobby and certification organisation) and Mick Bates a Welsh Assembly member and also an organic farmer. This was the only group of

interviewees who stated explicitly that GM was wrong *because* it went against nature. Gerald Miles gives a typical example:

> "and we have got to be sure of what food we eat; that it is natural, what this planet has given us, and once we start interfering with it we will be combating things that we didn't even…haven't even dreamt yet."

(Gerald Miles, GM Free Cymru)

Miles' claims echo the press coverage as he argues it is the role that humans play in creating GM crops that renders them 'unnatural'. The definition of nature offered by the three farmers sits neatly with Williams' third meaning – that nature is the material world not including humans.

Anti-GM campaigners presented nature as delicately balanced. Some of the interviewees argued that nature cannot resiliently endure human interference; small actions were shown to have huge consequences by knocking nature's balance out of kilter. By presenting nature as balanced, these sources conclude that nature must be treated with caution; a caution which the advent of GMOs has thrown to the seed bearing wind:

> "Nature has developed over millions of years and has got a balance, and the balance has got perimeters and it works within these perimeters, and by using GM technology you are crossing over these borders"

(Mick Bates, Welsh Assembly Member, Liberal Democrat)

In this quote Bates is linking two different concepts of nature together; firstly nature as balanced and secondly nature as ordered. He argues that human interference can disrupt nature's order as its borders, boundaries and perimeters are breached.

Nature's complexity was also highlighted by anti-GM campaigners. It was claimed part of the reason GM is so risky is that humans are still ignorant in the face of nature's complexity, and therefore by 'interfering' with nature scientists are tampering with something they do not understand.

In the quote below Jocelyn Davies, who is not a farmer but a Welsh Assembly Member, portrays GM scientists as arrogant and foolhardy:

> "But we are insecure in the nature, and I think that it's very arrogant of us to interfere with nature in such a fundamental way. Do we know what the long term consequences are of putting fish genes into potatoes?"

(Jocelyn Davies, Welsh Assembly Member, Plaid Cyrmu)

Accusations of arrogance were used to dismiss the knowledge of geneticists who create GM crops. In the above quote Davies depicts scientific knowledge as inadequate. She claims the breaching of the species barrier is such a fundamental change that current knowledge is of no use when trying to understand what the consequences will be. Part of the reason genetic modification is depicted as more unnatural than pesticide sprayed conventional crops is because the practice is framed as changing the very essence of a plant; the genetic make up itself.

The three organic farming representatives I interviewed all framed nature as 'right'; they claimed it prescribed the correct way of doing something and, therefore, must be respected. A crucial reason for this is that they are all associated with organic farming:

> *"*Organic farming is based upon using natural processes and assistance to produce food …and any kind of quick fix or magic bullet to producing food which by-passes these natural processes, we treat with caution*"*
>
> (Michael Green, Soil Association)

Green's suspicion of 'quick fixes' arises from the same frame that depicts nature as complicated and fragile. 'Magic bullet' technologies are viewed with suspicion by the organic movement because they do not take a holistic view of nature and therefore do not respect its complexity or precise balance.

One of the organic farmers instilled a religious element in nature. Gerald Miles argued that humans are playing God with something they do not understand:

> "when they first found it they thought it was brilliant, 'we were going to become gods', you know, but what they're finding out now, there is 3 million protein cells that we are unaware of…what are they there for? What are they doing? Well only God understands that."
>
> (Gerald Miles, GM Free Cymru)

The spiritual is often closely connected with nature; anthropologists have shown that many societies find their Gods in the physiological world around them (Beattie and Steinhouse, 2007). Associating nature with 'God's design', grants those who wish to 'defend it' moral virtue. If nature is the 'work of God' then changing it will lead to inevitable disaster. Of course, in more secular societies this argument has less credence; nevertheless it is still referenced.

The organic industry are reliant upon marketing themselves as 'natural'; not only do consumers buy organic products because of their connection with nature but regulatory support for organic farmers was only forthcoming when bodies such as English Nature formally recognised the value of organic food as an 'environmental public good' (Tomlinson, 2002: 483).

As Gerald Miles explains:

> “British farmers are trying to market themselves as this great green country we live in and it's our selling point, we need to market it as such. It's only common sense, our natural assets are all around us, it makes us unique”.
>
> (Gerald Miles, GM Free Cymru)

It is Britain's innate 'naturalness' and its image as a 'great green country' which Mr Miles is positing as a marketable commodity. Marketable 'heritage countryside' is of particular importance to farmers who diversify into tourism as a means of supplementing their incomes. This is certainly true for Gerald Miles and his family, who together run the farm and a B&B. It also reflects an EU-wide restructuring of agricultural subsidies to promote biodiversity and sustainability while reducing the various produce 'mountains' resulting from previous subsidy regimes. Organic farmers recognise the economic importance of nature for their business; the ability to sell Britain as a country with a beautiful natural landscape is something which Gerald Miles claims GM Crops would undermine and within the interview he was keen to depict his own farming techniques as opposed to GM. This opposition pivots on organic being the epitome of the 'natural'. By considering the socio-economic position of farmers, it is possible to understand why this group of interviewees chose to reference nature explicitly and to frame nature as 'right' and GM as 'unnatural' and therefore wrong.

6.3.3 Dismissing Nature

The discursive construction of nature offered by advocates of GM was very different from that provided by the organic farmers and most of their references were citing the arguments of opponents, which they then dismissed as meaningless. They argued that nature cannot be precisely defined and therefore it is not a logical reason to oppose GM. Vivian Moses was interviewed as a spokesperson for cropGEN – the group of scientists paid by the biotechnology industry to publicly support GM and to gain media attention for a pro-GM viewpoint:

> “there are those who, for reasons which I don’t understand, take a type of Prince Charles attitude, messing with God, upsetting the natural order, Natural Law Party, that type of thing.”
>
> (Professor Vivian Moses, cropGEN)

Nature is referenced here to dismiss the organic lobby's campaign against GMOs; all of the biotechnology industry spokespeople I interviewed characterised those against GMOs as either opportunistic media manipulators, who were mainly concerned with recruiting more members (the environmental NGOs), or naïve, well-meaning do-

gooders who did not understand 'proper' science and wanted to protect the facile concept of 'nature' (the organic industry). When deploying this argument those speaking for the GM industry were quite happy to place themselves in opposition to nature but were still orientating themselves in relation to ideas of the natural to support their arguments. By premising the binary divide between nature on one side and enlightened rationality on the other, the GM industry depict themselves as representatives of civilised progress and rational argument. Those siding with nature, by comparison, are depicted as emotional and irrational, caring but misguided. This opposition between rational commitment to progress/culture and irrational allegiance to nature has been well documented, especially by those concerned with challenging racial and gender discriminations (Mayerfeld Bell, 1998). Here the GM industry is casting nature and those who support it, like the organic industry, as irrational and emotional.

Kaebnick (2011) notes that appeals to 'nature' are quite different depending on the context in which such appeals are made. Nature is not a static concept and can be deployed in a fragmented and inconsistent way. This means that the GM industry may produce an image like that shown in Image 6.1 aligning itself with nature, while at other moments the industry premises the allegiance with science by declaring that those who argue against GM crops have an irrational belief in nature. My findings fit with those of Burchell (2007, 52) who observed the biotechnology industry switching between frames of equivalence (often created by linking GM with the natural) to deflect demands for extra regulation and frames of difference in order to maximise the potential for patenting specific agricultural biotechnology products.

When GM industry figures choose to depict their technology as natural, they often did not use the word nature directly. As Table 6.1 shows, GM industry representatives referenced sustainability more frequently than any other interviewee group. It might be assumed that words like 'biodiversity', 'wildlife' and 'sustainability' are synonymous with 'nature' and that 'nature' is simply the lexical choice of non-specialists. This is not always the case as these alternate words are often located in different discursive repertories; they prompt different associations, mobilise different modes of argument and elicit different responses. (Cook, 2004). Colin Merrit, a spokesperson for Monsanto, is the interviewee who referenced sustainability the most. He talks about how GMOs contribute to ‘sustainability’, because they increase the efficiency of agriculture:

> “So, sustainability is about producing economically for demand, it’s an anthropogenic definition, it’s about what human needs are as well as the environment, its about preserving whatever the consensus opinion is of the

environment...I would say crops that can produce more food in the same area from less inputs, are better quality, and are making a contribution to sustainability."

(Colin Merrit, Monsanto)

Merritt is using sustainability to define nature as something which includes human beings. The idea of 'sustainable development' was pushed to the forefront of policy-making in 1987 when the UN's Brundtland Report was published. This defined sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Human need was firmly integrated with 'nature's' needs as the UN attempted to co-join environmental and developmental concerns.

Yet, despite the influence of the Brundtland report, clarity on what constitutes sustainable development has proven hard to find; Fricker writes "As a concept sustainability has captured our imaginations and aspirations. As a tangible and identifiable goal it eludes us" (Fricker, 1998: 368). 'The needs of the present' and 'The needs of the future' are two subjective concepts; and definitions of sustainable development vary greatly. Critics claim sustainable development has become a tool of legitimation for Governments and companies who wish to give a nod to environmental concerns while continuing 'business as usual'. Tryzna argues that "Sustainable development is brandished as a new standard by those who do not really wish to change the current pattern of development" (Trynza, 1995). Merrit is using the concept of sustainable development to open up a debate about what constitutes nature; shifting the concept to encompass human needs. Nature is no longer presented as fixed and definite; instead Merrit argues its value is dependent upon human perception and a shared cultural consensus.

Professor Vivian Moses of cropGEN expands upon this notion:

"there's another interesting philosophical question and that is who cares aside from us, do plants and animals care what their environment is, are they caring beings like we are and if they're not what does it matter?"

(Professor Vivian Moses, cropGEN)

Moses shifts to talking about 'the environment' instead of 'sustainability' but he is also arguing that nature's or the environment's worth is contingent upon the human value accorded to it; as such it is not something that automatically needs preserving. Instead its significance, and the level of protection afforded to it, must be negotiated. GM industry figures framed nature as something that has no value in its own right; it is only the values humans place upon it that are significant. By framing nature this way

industry representatives are able to dismiss those who claim to talk for nature's interests.

6.3.4 Keeping a distance: NGOs

I interviewed six people who worked for environmental NGOs: three campaigners, two press officers and a scientist. These interviewees used the words 'natural' or 'nature' the least; rarely referring to nature directly (three did not mention nature at all). At first I was extremely surprised by this finding, given how often the media portray environmental campaigners as 'defenders of nature' I expected the interviews with NGO spokespeople to be full of references to nature. Upon analysing their interviews I discovered NGO spokespeople still drew heavily on images of nature and used words that are conceptually linked with nature, like the environment, even if they don't use the word nature directly. The interviews also reveal some of the reasons environmental NGOs have deliberately chosen not to use the word 'nature'.

One of the central concerns NGOs have is environmental. FOE and Greenpeace both define themselves as 'environmental NGOs' and are keen to articulate their central concern as an environmental one – on average they used the words environment/environmental etc. just over 16 times in each interview (excluding mentions of organisations and job titles e.g. references to the Environment Agency or the Environment Minister – see Table 6.1). 'Environment' was used far more often by NGO representatives than 'nature'. NGOs were particularly concerned about the relationship between the environment and farming, and the harm that further intensification of agriculture would cause:

> “the core environmentalist objection is something to do with the way in which we do our farming and the consequences it has for the environment and particular objections to intensive agriculture”
> (Ian Willmore, Media Co-Ordinator FOE)

> “People understand the value of British farming, they value what the countryside looks like and they do understand about the risks of contaminating organic farming, non-GM food and especially things like wild flowers in the UK and British flora.”
> (Ben Ayliffe, Greenpeace)

By linking GM crops to agricultural industrialisation, anti-GM campaigners link GM to a historical template which evokes fear about environmental degradation and human health risk (Hughes, 2007). The processes of agricultural industrialisation that occurred in the global North and South (popularly known as 'the Green Revolution) increased

crop yields but were also connected with a number of adverse human health and environmental consequences (Hughes, 2013). In the UK it is these negative consequences that are popularly evoked in discussions of agricultural industrialisation and the 'Green Revolution'. The death in 2009 of Norman Borlaug, the agronomist credited with developing the high-yield crops that played such a major part in the Green Revolution, produced a spate of articles talking about GM crops as part of Borlaug's legacy, Leo Hickman's comment piece in the Guardian provides a typical example:

> *"*This was the man who arguably did more than any other to nurture the era of monocrops, GM foods and the intensive use of petrochemical pesticides and fertilisers."
>
> (Guardian, 15 September 2009)

Tying GM to a history of agricultural industrialisation ensures it is primarily discussed as a technology that will harm nature. Environmental campaigners have successfully promoted this connection, linking GM to a model of intensive agriculture and environmental degradation.

Environmental NGOs claimed they were using the GM debate to articulate wider concerns about the degradation of the British countryside and the effects of decades of intensive farming on British wildlife. Neil Verlander, Press Officer for FOE Britain, explains that he was using the GM debate to talk about the need for sustainable agriculture in Britain:

> "And we use huge numbers of pesticides and farm birds, farmland birds are dying out and then there's problems with insects and hedgerows being rubbed out and all those things, and we should be looking at sustainable agriculture instead of high-tech fixes which are just excuses to use old pesticides really."
>
> (Neil Verlander, Friends of the Earth Britain)

It is clear from my analysis of the press coverage that these concerns were not portrayed in the media. The Farm Scale Evaluations (FSEs) represented the most comprehensive survey of the effects of intensive crop production in the UK; they found that *all* intensively produced crops have a significant impact on biodiversity. But because the key aim of the FSEs was to compare GM with conventional crops the media primarily discussed the harm GM crops caused to the environment – in comparison non-GM crops were depicted as environmentally benign and in many cases were described as *natural*.

This frame was, in part, promoted by NGOs themselves who were keen to use the results of the FSEs to further their case for a continuation of the ban on commercial planting of GM crops in the UK. Both Greenpeace and FOE commented on the results

of the Farm Scale Evaluations on the day that the results were published – they spoke only about how harmful GM crops were:

> "This study shows GM is bad for farmers, bad for the organic food industry and bad for the countryside"
>
> (Sarah North, Greenpeace, The Times, 11 January 2004)
>
> "ACRE refuses to rule out the commercial development of GM beet and oilseed rape, despite overwhelming evidence of the damage it would cause"
>
> (Pete Riley, Friends of the Earth, The Times, 11 January 2004)

Greenpeace and FOE provided quotes which fit the frame that conventional crops are benign by concentrating only on the harm caused by GM and remaining silent on the wider problems of intensive farming. My press and source analysis suggests that NGOs were not successful at using the GM debate to encourage a wider debate about the harm *all* intensive agriculture causes to the environment.

Certain anti-GM newspapers like the Daily Mail (who FOE specifically targeted with their campaign) used the word 'nature' extensively in their coverage. Nature was explicitly referenced in 26% of Daily Mail articles. Given the popularity of 'nature' in the newspapers NGOs were targeting, it is notable that NGO employees, including press officers, chose to talk about 'the environment' rather than nature. Part of the reason for this decision is likely to have been that NGOs were already talking about 'the environment', they are important actors in the environmental movement. As discussed in the literature review, the concept of the environment has been used by NGOs to draw attention to a wide range of problems or 'environmental bads' which threaten national borders and human bodies. This discourse of the environment is often used to mobilise fear and elicit calls to action.

Clearly, the environment and its association with a particular kind of global, pervasive threat is a useful concept for anti-GM campaigners. Yet, it would have been possible for campaigners to talk about both the environment *and* nature; they were not just promoting the word environment but avoiding using the word nature. When NGO representatives did reference nature they, like GM advocates, often distanced themselves from the word.

Part of the reason is nature's collocation with the irrational. Several NGO interviewees attempted to distant themselves from arguments about nature that could be depicted as unnatural:

> “there are people who are just opposed on principle to the idea of genetically modified crops although that’s an interesting, essentially religious, belief in nature or God argument rather than a worked through objection…”
>
> (Ian Willmore, FOE, Media Officer)

Willmore characterises arguments based on concepts of nature as 'unworked through', such phrases imply they are illogical or unscientific. Willmore connects nature with the emotional and the irrational. By distancing his arguments from these 'beliefs' Willmore is attempting to align FOE's views with the repertoire of science (Gilbert and Mulkay, 1984).

Julian Rosser expressed his concerns about the way the GM campaign was perceived as anti-scientific:

> “I was happier with the climate campaign, there we can clearly say we're with the weight of scientific opinion. With GM it was always campaigners against science and I never, I never felt comfortable with that”
>
> (Julian Rosser, Friends of the Earth Cymru)

Being portrayed as simply ‘pro-nature’ and implicitly or explicitly 'anti-science' was clearly a concern for the environmental campaigners I interviewed. My interviews with biotechnology industry representatives suggest this was a legitimate concern as the industry was attempting to portray a section of opposition as irrational. This accounts for a significant part of NGOs caution about referencing nature and their attempts to disassociate themselves from particular 'nature' arguments. NGOs were aware that in certain discursive contexts nature is aligned with the unscientific and anti-progressive. Keen to avoid these associations, NGO interviewees did not reference nature directly – preferring to use the word 'environment'.

6.3.5 Nature's Collocations

However hard interviewees worked to avoid the word 'nature' they *all* utilised images of the natural world. For example, several GM protagonists painted nostalgic scenes of traditional or 'natural' cross-breeding and then argued there was no difference between this and GM technology. They introduced a frame of equivocation to align GM crops with what is natural. These interviewees produced remarkably similar images to make this link: they described a father in the garden shed industriously producing a juicier tomato or tastier peas (the crop varied but the father and the shed were ubiquitous). Colin Merritt gives a particularly vivid account:

"Even good old-fashioned father in the potting shed, crossing plants is based on natural selection, mutation caused by gamma radiation, from the sky. Changing genetics is a part of everything that goes on out there."
(Colin Merritt, Monsanto)

Merritt is linking 'old-fashioned' with 'nature'; in my qualitative analysis I observed a collocation between nature and words like tradition, the past, old-fashioned or 'the ways things used to be'. These links were made by all categories of interviewee, not just industry representatives. Merritt is linking the 'old-fashioned father' with 'natural' methods of plant breeding. In silent opposition to Merritt's 'father in the potting shed' stands another image – that of biotechnologists in laboratories using complicated equipment to alter the DNA of plants. Merritt questions the automatic contrast between these two images by introducing a new discourse – that of science fiction. The 'gamma radiation, from the sky' evokes alien horror films and Merritt introduces it here to argue that even 'naturally' occurring mutations can be depicted as alien and unnatural.

In scientific terms it may be possible to define nature as 'meaningless' but in cultural terms it is impossible. 'Nature' is a fundamental category that structures the way people think about themselves and the world around them. People may not always be consistent in what they term as 'natural' or 'unnatural' but this adds to the concept's power rather than undermining it. Given this observation it seems unlikely that Merritt's arguments against nature will resonate widely. Merritt does not address the hegemonic discourse surrounding genetic modification. Although scientific rationality dominates many technological debates in the discussion of GM it is cultural notions, such as nature, which frame dominant messages. The cultural significance of such notions cannot be overcome by talking only about whether a concept is scientifically coherent.

As well as 'old fashioned' I observed that 'nature' also collocates with words like 'community' and 'family'. This association was made by several interviewees. Here Helen Mary Jones, Welsh Assembly Member, talks about the contrast between Monsanto and Welsh farmers:

"it's about small businesses, if you live in Wales, the sort of farming community as a conglomeration of small businesses in Wales, supporting nature and standing up to the big corporations like Monsanto"
(Helen Mary Jones, Assembly Member, Plaid Cymru)

A sense of geographical specificity, value and integrity is linked to the local community which is closely tied to nature due to its agricultural base. Biotechnology companies utilised concepts of community and family.

Colin Merrit from Monsanto is keen to appropriate the family as a trait which is connected with the biotechnology industry. This is evident when Merritt is discussing the case of Percy Schmeiser, the Canadian farmer who was controversially sued by Monsanto for planting GM crops without purchasing GM seed. Schmeiser claimed he was a victim of cross-pollination and had not wished to have the GM plants on his land:

> "He portrayed himself as a poor, old farmer, family farmer, when in fact he runs Schmeiser Corporation which is a seed selling company, and has done for many years"
>
> (Colin Merrit, Monsanto)

By stating that the farmer runs 'Schmeiser Corporation' Merrit is disassociating Schmeiser from the image of a traditional family farmer and instead links him to the world of big business. In a similar manner Merrit is careful about how he chooses to portray hundreds of Argentinian farmers who rely on agriculture to support their families, "Some systems, in the rush to produce for a very profitable market, say when price was low, grew more soybean than was probably healthy for the rotation" (Merrit, Monsanto). This quote from Merrit is describing problems with monoculture in Argentina. The 'systems' he is describing are 150,000 Argentinian farmers who were encouraged to grow only GM soybeans instead of their usual variety of crops – this depleted their soil's nutritional content so that eventually they could grow very little. The word 'system' suggests artificial, mechanical production – not the thousands of Argentian women and men who were growing soy to support their families.

Yet, when it comes to another corporation, Monsanto, Merrit is keen to highlight that employees belong to families:

> "we have a company worldwide of about 18,000 people, and we all have families and beliefs, and we all believe in the same things as many of the opponents of this technology"
>
> (Colin Merrit, Monsanto)

Merrit attempts to invest virtue in Monsanto by painting its beliefs as family ones. The focus group discussions (see Chapter 7) demonstrate why Merrit is so concerned with questioning and re-appropriating tradition, nostalgia and family values - these are all categories which participants link closely to nature. Community, family and nature are all 'traditional' categories, they often play a significant part in constituting a person's identity and are key to the way in which Western societies have historically organised. As such they are 'condensing symbols' crucial in the discursive evocation of security. Yet, for different reasons, the assumed coherence of all of these categories is being challenged in late capitalist societies. Merrit recognises the connection between these

traditional categories (including nature) and is keen to reassert the importance of family, tradition etc. and to link Monsanto to these concepts.

6.3.6 Contaminated Nature

In Image 6.2 the red smoke, white suits and gas masks are all signs of contamination caused by GM crops in the otherwise 'natural' field. Contamination is a key discursive cue within the GM debate. Those arguing against GMOs often describe the technology as contaminating. This is organic farmer Gerald Miles listing his objections to the GM maize variety Chardon LL:

> "maize has 14 wild varieties in the UK, so you're talking about 14 varieties there that could be contaminated. Now you multiply that; you will have a contamination that can't be stopped."
> (Gerald Miles, GM Free Cymru)

It is the abundance of varieties of maize that Chardon LL could cross pollinate with that Miles claims is worrying: the multitude of genetic lineages that could be polluted by GM crops. Greenpeace campaigner Ben Ayliffe links the word contamination specifically with the unnatural and gives one of the few examples of an environmental NGO spokesperson using the word nature directly:

> "I think it's fair enough to talk about contamination because these are crop species which could never have existed in nature, they couldn't be naturally created and yet they're being released into open nature."
> (Ben Ayliffe, Greenpeace)

It is the mixing of varieties that arise naturally with those that do not which NGOs call contamination The implication is that 'natural' crops are genetically pure and that 'unnatural' crops are impure - by mixing the two nature's purity is defiled.

Ben Ayliffe demonstrates that Greenpeace proactively chose the word contamination by utilising it in contexts where contamination would not commonly be used: "it would have been a very brave farmer to put it in the ground because I know for a fact that people would have gone along and decontaminated his fields for him" (Ben Ayliffe, Greenpeace).

The 'decontamination' that people are undertaking is more often described as crop-thrashing, an act of protest used by Greenpeace (and others) which involved destroying GM plants grown in Britain during the Field Scale Evaluations. Decontamination is a much more useful descriptor for Greenpeace as it legitimates the action, encapsulating protesters' reasons for destroying the crops. It becomes an act of defence – protecting the field from the pollution caused by the GM plants. By

comparison the word crop ‘thrashing’ is unhelpful, because it focuses on the destruction of plants, not on the *reasons* for their destruction.

While anti-GM campaigners proactively chose to use the word contamination, spokespeople for the GM industry consistently avoided the term. Several chose to challenge the idea of contamination by questioning whether altering a plant's genes fundamentally changes that plant. Merrit, spokesperson for Monsanto UK, highlights that it is impossible to tell GM and non GM foods apart by sight, taste, smell, touch. He therefore argues that labelling them separately and saying one food has contaminated the other does not make sense:

> “and these beans are no different from those beans, well they may have been grown in a different way or come from a different genetic background, but they are another variety and as safe as the standard bean, therefore they can be grown and mixed together.”
> (Colin Merrit, Monsanto)

Vivianne Moses of cropGEN also challenges the importance of labelling, claiming it is “absurd to take objection to a quality in a product which can only be detected by elaborate laboratory testing”.

Biotechnology industry representatives refused to use the word contamination, yet other interviewees, who were in favour of the technology, but not paid by the GM industry (such as Government advisers and non industry biotechnologists), did use the word, although they were keen to qualify what they meant by it

Chris Pollock is the Research Director of the Institute of Grassland in Environmental Research and also the chairman of the UK Government's Advisory Commission on Releases into the Environment at the time of the Farm Scale Evaluations. Although he is not working on biotechnology, he is paid to work as a consultant for the agricultural industry and made it clear he supports GM. Pollock does not object to the word contamination, stating instead that he refers to it as advantageous contamination: “We have used the words advantageous contamination to describe seed lot pollution” (Chris Pollock, ACRE).

Chris Pollock is aware that contamination is now a permanent descriptor of cross-pollination and is attempting to detach the word from its negative connotations. Contamination, however, connotes pollution and toxicity – negative associations. Therefore the phrase 'advantageous contamination' appears nonsensical as contamination is an unwanted quality. It is unlikely that advantageous contamination is going to become a popular way of describing cross-pollination, especially as, in the

current regulatory context, any non-GM farmer who discovers that their crops have been 'advantageously contaminated' would no longer be able to sell those crops.

Professor Denis Murphy, the University Biotechnologist, also argues that it is possible to talk about contamination in a way which does not imply whether the technology is good or bad:

> “the language is there and we can’t control it. I’m just using it, not in a value-laden way but I know people do. Um, in chemistry um, or in ecology, you talk about water, fresh water, being contaminated with salt water. We’re not saying that’s bad or good, it’s just a fact – one mixes with another.”
> (Professor Denis Murphy, Department of Applied Sciences, University of Glamorgan.)

In scientific discourse it may be possible to refer to contamination in a value free way, but when Murphy uses the word in public discussion his intentions will not determine the word's meaning. As Lewis (1994) argues meaning is determined by the audience. Murphy cannot wish away the multitude of associations and implications that load language; individual words signify many things and tap into a deep range of cultural references (Seale, 2001). The word contamination triggers ideas of pollution – it is an intrinsic part of what the word signifies.

Contamination is ubiquitous in the media's coverage of GM crops. It is a key discursive cue that frames GM as an unnatural technology. In most other contexts the pollen of two plants mixing would be described as cross-pollination. It is only in discussions of GM plants mixing with non-GM plants that the word contamination becomes the dominant phrase. That such a powerful word is used routinely in media discussions of GM reflects the success of the anti-GM lobby.

6.3.7 Monstrous Imagery

Not only did environmental campaigners reference contamination to frame GM as unnatural, they used images of monstrousness to similar effect. When I asked the campaigners I interviewed to describe the visual images deployed in their campaigning, almost all of them cited images centred around the natural or the unnatural in some way: examples they gave included Frankenstein's monster, a giant bumble bee, the (in)famous white contamination suits, an anti-GM scarecrow, a tomato fish and giant corn on the cobs. This is Julian Rosser of FOE Cymru talking about the GM scarecrow,

> “We’ve been kind of rolling out this idea of the anti-GM scarecrow um because a scarecrow is seen as a traditional sort of defender of crops and fields and

scarecrows, it's interesting that they can either be seen as really quite friendly or really quite sinister."

(Julian Rosser, FOE Cymru)

As Images 6.3 and 6.4 show, the scarecrow can either act as a defender of nature, protecting the field from the contamination Monsanto wish to unleash or it can embody the 'scare' part of its name to become a sinister figure, no longer a traditional part of farming but instead a genetically engineered monster, an agricultural Frankenstein defending its mutant crop.

Image 6.3: Michael Meacher and a 'friendly' scarecrow at a lobbying event as part of to FOE's GM Free Scarecrow Campaign.

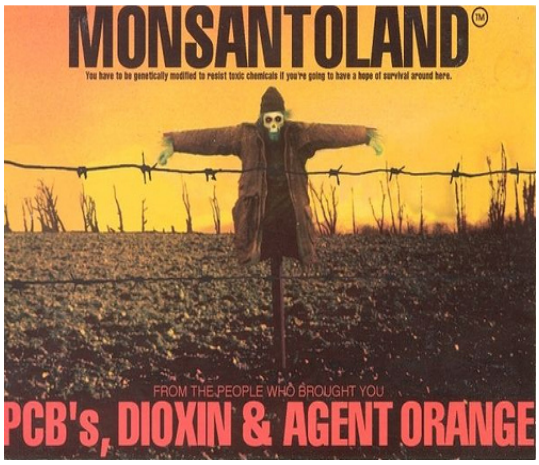

Image 6.4: A mutant Monsanto scarecrow. The text reads "You have to be genetically modified to resist toxic chemicals if you're going to have a hope of survival around here." From *Monsantoland:* a documentary by ARTE (2007).

The success of the scarecrow as a campaign image depends in both cases on the scarecrow's relation to nature – either a guardian of nature or a zombie representation of the unnatural. Similarly other images also act as discursive cues evoking particular ideas about nature: the giant/mutated crops or ladybirds represent mutant versions of 'natural' plants and insects and the white suits mark the contamination present in the field. My analysis of the press coverage showed that images of the monstrous were fairly successful: not only did 24% of articles in the sample use them but I also

observed that articles not ostensibly about GM linked images or references to monsters with genetically altered plants in a casual or joking manner.

As with the press coverage, sources referenced one monster more than others: Frankenstein. Interviewees from anti-GM campaign groups recognised Frakenstein as a discursive cue that triggered fear about GM and were keen to claim it as their own; they did however qualify what the word meant. All of the FOE interviewees stated that the phrase 'Frankenstein Foods' originated from FOE's press team:

> "it has to do with human arrogance in the face of nature…it's all about misuse of science and so on, and so it's an entirely appropriate image, it also works because everyone's heard of Frankenstein."
> (Ian Willmore, Friends Of the Earth)

Willmore argues that references to Frankenstein are a powerful comment on humanity's relationship with nature. Earlier in the interview, however, Willmore commented that FOE's campaign against GM foods was not based on 'a belief in nature' but was 'a worked through objection'. Here, Willmore reveals that a key image of GM, one that was heavily promoted by FOE, and they claim originated from their press office, is based on just such a belief in 'nature'. This shows that campaigners are inconsistent. At certain points they discuss appeals to nature as emotional and irrational and link their organisation to scientific discourse by using alternative words like 'environment'. Yet, at other times, campaigners directly reference nature constructing the natural world as 'right' and 'good' and do not consider how 'rational' that argument is.

It's clear from the press analysis that campaigners promote words and images associated with nature: contamination and Frankenstein being the most significant. These were popularly deployed in the media coverage and used by journalists to discuss nature itself. Despite not wishing to directly use the word 'nature', environmental NGOs still focused their discussion of the impact of GM on the natural world.

6.4 Discussion

My quantitative analysis (as outlined in the introduction) revealed that anti-GM NGOs dominated the media coverage. They were the most quoted source – providing 28% of direct quotes. Biotechnology companies, by comparison, only provided 8% of direct quotes. This finding reflects the observations of Anderson 1993, Cottle 2003, and Hannigan 2006, who have charted the shift of environmental NGOs from marginalised 'outsiders' to legitimate 'insiders'. Anderson argues that, "A few powerful

environmental organisations have become significant players in the global policy-making arena and have become highly attuned to the demands of the news media" (2000:93). Cottle makes it clear that the situation is not one of 'open and equal access' for all – it is the voices of larger environmental NGOs, most typically FOE and Greenpeace, that are heard in the media. I also found that media access was only achieved by large campaign groups: three anti-GM lobby groups (FOE, Greenpeace and the Soil Association) provided almost all the direct quotes that came from anti-GM campaigners (Genewatch were the only other quoted source and they provided just two quotes). Smaller, grassroots groups who were campaigning exclusively on GM and organised the majority of the crop thrashing protests (Anti Genetix network and GM Freeze being the most notable) were not quoted once in the sample period.

Fenton has written about the professionalisation of NGO press teams. The press staff at FOE have strong links with journalists; they are adept at providing reporters with useful information that can easily be incorporated into stories. This chapter reveals that the same press staff also have a sophisticated understanding of news values; their frames achieved dominance in the press coverage. Words and images promoted by anti-GM campaigners (like contamination and Frankenstein foods) were often used in the press and GM was predominantly presented as a danger. Many of the words and images NGOs used were specifically linked to nature, yet anti-GM campaigners were keen to highlight the scientific reasoning and rationality behind their arguments. Nature's popular association with the irrational meant they often choose to talk about the 'environment' or 'biodiversity' as opposed to 'nature'. Although these words are similar their deployment evokes different discourses: both words (especially biodiversity) are more usually associated with scientific discourse.

GM advocates criticised arguments that were based on appeals to the 'natural'; highlighting them as irrational and woolly. Yet these same sources also relied on nature to promote GM technology. Biotechnology company representatives spent much of the interview time trying to redefine what nature meant, disputing its importance or attempting to link GM to the natural. The press coverage suggests such strategies have been unsuccessful – the majority of reporting did not reflect the arguments or the lexical choices of GM advocates. Part of the reason for this lack of success is that agribusiness was forced to respond to a frame anti-GM campaigners had already established. Another reason is that they ignored the discursive context of the GM debate. They attempted to argue against the depiction of GM as unnatural by claiming concepts of 'the natural' were meaningless. The natural may not be easily defined by science but it nevertheless has a significant cultural role in structuring how people understand the world. Its cultural connotations cannot be eradicated no matter how 'unscientific' they may be.

It is notable that several interviewees spoke in remarkably similar terms, for example there was a overlap in the frames offered by environmental NGO representatives. They promoted similar discursive cues, highlighted particular problems and presented matching arguments – the same can be said for representatives of the biotechnology industry. This demonstrates that each interviewee is drawing on a similar discursive repertoire and utilising a shared frame. Each interviewee was spoken to as a representative of a particular organisation, I recruited them as such and addressed them as representatives during the interview. Participants were therefore encouraged to present a professional identity and locate their speech within a particular context; that of their workplace. Interviewees drew on a stock of words, images and associations that were promoted within their particular organisation – their speech was structured by that discursive context. My interviews can therefore be used to deduce wider discursive patterns amongst different types of organisation.

It is notable that, at different moments, both pro and anti GM sources attempted to align themselves with, and distance themselves from, the concept of nature. In addition they were both cautious about what version of nature they deployed. This is because nature's meaning cannot be assumed: while nature is sometimes aligned with common sense and 'the way things should be', at other times it is depicted as anti-scientific and irrational. Such variation depends on the discursive repertoire utilised – be it 'rational enlightenment', 'nature as morally right' or 'environmental bads'.

While sources were keen to associate themselves with the positive elements of nature and recognised that such associations are critical in determining public reactions to GM, they were equally keen to disassociate themselves from the negative associations. This explains why environmental NGOs and biotechnology companies relied on words and images closely associated with nature, despite dismissing arguments about the natural as illogical. Nature's rhetorical ability to embody contradictions is part of the reason it is a key site of discursive struggle; as a concept it can easily be moulded to fit arguments but is also readily cited by opponents as a criticism of those arguments.

Whether judged quantitatively or qualitatively, anti-GM campaigners were more successful than biotechnology companies at framing the debate. Not only did they influence the media's coverage of the GM planting decision but their frames also had wider cultural purchase, as demonstrated by articles that were not directly about GM but which used genetic modification to signify the monstrous. GM was used as a condensing symbol for the unnatural.

Yet, despite their apparent dominance of coverage, I would still question just how successful environmental NGOs were. It was clear in my interviews that environmental

campaigners (especially members of their press teams) viewed the GM campaign as one of their most influential – catapulting the issue up the political agenda by ensuring it was taken up by the popular press (particularly the Daily Mail). There is no doubt that the activity of anti-GM groups mobilised vocal opposition to the technology and made it politically difficult for the Government to approve the commercial planting of GM. This was partly because the media reflected the frame offered by environmental NGOs; a frame which, thanks to the continual use of discursive cues like contamination and Frankenstein, depicted GM as unnatural. To judge NGOs success, however, it is also important to ask whether the frame they promoted allowed them to present their preferred message, or whether it was chosen because it fit well with established news values.

It is worth considering *which* risks get promoted in a discussion that centres on nature. Framing GM as unnatural allows it to be presented as a risk to the environment and to human health, both of which are threatened by their exposure to unnatural material. It is therefore not coincidental that these two risks dominated the press coverage. Such a frame, however, makes the discussion of other risks difficult. If GM crops are rejected because they are 'unnatural' then they are dismissed in their entirety. GM is represented as a 'fundamental' change: altering a plant's genes is depicted as an irreversible degradation of that plant. As such 'better or worse' uses of GM technology are not considered: human alteration of genes is presented as risky and wrong and this will not vary according to how genes are altered or who is doing that alteration.

During my interview with Friends of the Earth Cymru campaigner Julian Rosser he recalled his appearance at a debate on GM near the start of FOE's campaign. He described some of the issues he raised:

> "I made the point that maize doesn't have any wild relatives, I made the point that maize doesn't over winter, but then I made a number of other points about why I thought it shouldn't be planted but I was still reported in the Western Telegraph as saying GM's fine...the problem is you can't necessarily apply general arguments about environmental harm to all GM crops...but it's bloody difficult to explain that to a local journalist who just wants to get a story in the paper"
>
> (Julian Rosser, Friends of the Earth Cymru)

Since this incident Rosser has closely stuck to the frame offered by environmental NGOs: that *all* applications of GM threaten the environment and human health. This demonstrates how NGOs had to alter their preferred message to fit the media's need for simplicity. Another example is the presentation of the Farm Scale Evaluations as proof that GM crops damage the environment (rather than NGOs preferred message

that all intensively farmed crops fundamentally damage the environment). NGOs create frames that they know will be popular in the media; in so doing they have to adapt their preferred message to fit media frames.

This tactic limits the critique that NGOs are able to offer. GM crops can be developed for very different purposes; some are created to survive in drought prone regions, tackle particular health problems or allow the production of cheaper drugs – yet they are all dismissed with the same argument: it is unnatural. There may be valid arguments against these applications but labelling them *all* unnatural does not allow consideration of these more nuanced arguments. Framing the discussion around nature marginalises democratic considerations. The majority of GM seeds are still produced by biotechnology companies and the concentration of GM ownership in the hands of corporations increases the risk of the monopolisation of food production through the use of intellectual copyright on genes. In addition the Global South's take up of the technology could lead small scale farmers to become further dependent on agribusiness (Smith, 2009). GM is often depicted in the press as a technology that belongs to multinational companies (such representations furthers its association with the unnatural). There is, however, little consideration of GM's role in increasing the democratic deficit present in the current agricultural system or whether citizens or farmers could benefit from GM technology if they had greater control over both its application and its profits.

Fenton argues that rather than "challenging normative conceptions of news criteria" NGOs do "their best to fit these normative conceptions in order to gain more coverage for their organisation" (2009, 158). By promoting GM as unnatural, NGOs are silent on questions that would be central to a critique that came from an environmental justice perspective. Such a critique would focus on the power differentials endemic in the system in which GM is produced. It would consider not just the risks posed by the technology but who controls it, who is profiting from it and how citizens can exert more influence over how GM is used. Such a nuanced position is rhetorically challenging to NGOs: it is unlikely to be successful in the media because criticising current social arrangements jars with the hegemonic view that economic growth is crucial to societal progress.

Within the GM debate NGO's offered a pragmatic frame – one that was likely to achieve success. This has important consequences for the way GM is discussed. Environmental groups have begun embracing an environmental justice agenda, such a move has been necessitated by the increasing internationalisation of environmental NGOs. As a consequence, Northern based groups have taken up the more justice based demands of partners in the Global South (Della Porta and Tarrow, 2005). There

is also popular support amongst NGO staff and leadership for this agenda (as I observed working in a number of campaigning charities). Environmental organisations' support for environmental justice is sometimes made public: for example on Friends of the Earth's website they state that they stand for three ideas:

1 **There is a tomorrow**

We need to use the planet like there is a tomorrow. This means living within the limits of the natural world.

2 **Everyone gets a fair share**

Everyone, everywhere, now and tomorrow, deserves to have a good life.

3 **Change the rules**

We need to change the rules so that the economy works for people and the environment, not pit one against the other

(www.foe.co.uk/what_we_do/about_us/friends_earth_values_beliefs.html – accessed March 2011)

These three ideas are predicated on social justice. Number three commits the organisation to challenging current economic arrangements, and in the process critiquing hegemonic concepts. Yet by ensuring their arguments fit dominant media frames FOE are avoiding the kinds of arguments that could create a popular consent for a changing of the rules.

Chapter 7: A Modified Nature. The Natural in the GM Debate. Audience Discussions

7.1 Introduction

In this chapter I am going to consider how audiences use the concept of nature when discussing GM. I shall build and reflect on the previous chapter's exploration of how nature was used by sources and journalists. This chapter will consider how nature is deployed in the focus group discussions, when the natural is appealed to and what kinds of argument it is used to support. I shall pay attention to particular lexical choices, discursive influences and rhetorical strategies. The chapter will explore the links between the discourses mobilised in audience discussions, source interviews and the media coverage itself.

7.2 Talking Nature

In the focus groups the words 'nature', 'natural' and 'unnatural' were referenced *more* often than alternative words (e.g. environment, sustainably etc). This contrasted with the source interviews where the word nature was used *less* often than alternative words. As shown in Table 7.1 focus group participants use these words 197 times, an average of 19.7 times per group. The over 60s referred to nature 42 times in total. Other words were rarely used although it was notable that participants made different lexical choices when taking part in the 'news game'. Several groups used words in the news game, like the 'environment' and 'wildlife', that they did not mention at any other time in the discussion (see Table 7.1). The 'environment' and 'wildlife' were words most participants knew, and identified with media discourse, but they did not choose to use these words in discussion with one another. This demonstrates that audiences preferred the word nature over other similar words. It is possible to argue that nature is simply a lay word for the environment but, as discussed in Chapter 6, its discursive connotations differ. As shown in my literature review, nature has a far wider discursive remit than a word like 'the environment', which is deployed in a narrower range of debates (Cook, 2004). Linking GM to nature places the debate in a different discursive context.

As Table 7.1 shows, three groups (Conservationists, Bioscience Students and 25-35 yr olds) *did* use the words environment and/or wildlife as often as they used the word nature (and not just when participating in the news game). Some members in all three of these groups identified themselves as scientists. As was discussed in the previous chapter 'nature' is not a word frequently used in scientific discourse - the Farm Scale Evaluations, for example, discussed GM's effect on biodiversity not nature.

I would argue the reason these three groups used words other than nature is that some participants were drawing on a scientific discourse, often identifying themselves as scientists through their lexical choices.

Within all ten focus groups genetic modification is defined by its opposition to nature, just as it was in the press sample. Although the depiction of GM as unnatural was sometimes unpacked, explored and even challenged, all the groups began by first acknowledging this definition. I opened each of the ten focus groups with the same question: “What's the first thing that springs to mind when I say the words genetically modified crops to you.” All the groups responded to this question by referencing nature:

“Aberration. It’s something that is GM modified, is not natural. So the first thing you think is that, it’s very much a unnatural product or thing.” (Scott, Urban2)

“It’s not a natural food.” (Talos, Urban3)

“Genetically modified always seems to be quite – or like associated with fake stuff. So kind of not real, nice normal foods.” (Ulrika, 25-35 yr olds)

In all of the group's opening comments GM was defined as the opposite of nature. The immediate link all groups made between GM and the unnatural suggests that they are all drawing on the same, publicly prominent frame.

Many participants stated early on in the group discussions that because GM foods were unnatural they were also undesirable and/or unnecessary:

“natural things are more - better for you'. (Clara, Urban 3)

“It’s man made, it’s not a natural thing. It’s mucking about and why do we need it? If it ain’t broke don’t fix it.” (Keith, Rural)

“We don’t want them, thank you very much. We don’t want our food tampered with.” (Nancy, Over 60s)

Another response participants often gave to my first question was that GM food had been 'tampered' or 'messed' with:

“Something that’s been tampered with” (Ursula, 25-35 yr olds)

“Playing with food products with genes” (Ben, Urban 1)

“messing with the building blocks” (Kerry, Urban 2)

	No. of times used word				
Group Description	**Nature / Natural / Unnatural**	**Environment**	**Sustainable/ Sustainability**	**Biodiverse/ Biodiversity**	**Wildlife**
Urban 1	25	5*	0	0	5
Urban 2	15	1*	0	0	0
Urban 3	25	2	0	0	0
Rural	23	1	0	0	1*
Conservationists	8	4	1	14	8
Bioscience Students	16	8	0	0	11
Over 60s	42	0	0	0	0
16-19 yr olds	14	4*	0	0	3*
25-35 yr olds	15	16	4	0	0
Crop Trial Area	14	3	0	0	2
TOTAL	**197**	**44**	**5**	**14**	**30**

Table 7.1 Showing the total number of times words associated with nature were used per focus group

***** means the word was only used during the news game

NB: Words in titles e.g 'The Environment Minister' and non-relevant uses of nature. e.g. 'naturally I buy the cheaper product' were not included in the totals

It was human intervention in the genetic sequencing of crop varieties that participants argued made them unnatural. The words 'tampered', 'played' and 'messed' depict the activity of geneticists as careless and child like; they also imply that nature has an order for us to 'mess' *with*. Genetic modification is presented as frivolous 'play' but that frivolous action has serious consequences, for it is the building blocks of life that we are altering: “No, and I don’t think its chemical. GM to me is you’re actually going into the genes of the plant” (Scott London, CDE). GM was “tampering with nature

itself" (Ken, Urban 1). As in the press coverage human intervention is seen as altering something fundamental, reflecting Williams (1983) first meaning of nature: the essential character of something.

All the focus groups began by characterising GM as unnatural. In so doing they mirrored much of the press discussion of GM. This, however, is not proof of media influence. When reporting new scientific developments journalists rely on readily available cultural scripts and frames. One popular script is that scientific progress interferes in the processes of nature, creating dangerously unpredictable results. This interference is depicted as morally 'wrong' (Turney, 2010). This frame was deployed by journalists in relation to GM; its cultural purchase as a narrative is part of its power. Journalists reinforce that narrative by attaching it to new issues. While it seems likely that focus group participants were drawing on the media discussion of GM, they are also likely to be utilising a frame they are already familiar with from the discussion of other scientific innovations. The media coverage is utilising a template (Kitzinger, 2004) that audiences already understand, this is part of the reason the template is so successful. The frame does not entirely originate from the media coverage of GM, instead it successfully interacts with frames that already structure audience understandings. Just because media effects cannot be linked to one specific story they are still very real, indeed it is through their interaction with other cultural representations that individual media texts achieve their power.

7.3 Concepts of nature

Audiences characterised nature in several ways. One characteristic of nature is that it is balanced, "Do you think we're upsetting the balance of nature here by messing?" *(*Nelson, Over 60s). The press also characterised nature as balanced. Once again they are drawing on a popular cultural frame. The idea of nature existing in a fragile state of 'equilibrium' was popularised by, among others, Lovelock's (2000) Gaia theory. Many participants described nature as balanced:

> Mac: "I've got a large garden, I grow vegetables, I grow fruit, I grow flowers, I feed the birds, I fight the rabbits, I mean it's all part of the pattern and I wouldn't want to do away with any of them...because they've got a place, everything has got a place, starting from the ants right through to us and I believe that everything's there for a purpose. You know I'm not religious but I still believe that we've got a hierarchical structure and …"

Danielle: “That’s right, otherwise you’re breaking the circle aren’t you.”

Mac: “Yeah, that’s right everything’s got a place.”

(Crop Trial Area)

Mac deploys his identity as a gardener to support his argument that 'everything has a place'; Danielle supports his argument by referring to a circle. Mac argues that this structure can be damaged by humans; although his own battles with the rabbits do not harm the planet's balance, if all rabbits were killed this certainly would.

Nature’s response to human disruption was often described in contradictory terms by participants – nature was either presented as fragile and vulnerable (therefore disrupting its balance would cause nature to collapse), or alternatively nature was vengeful (therefore human interference with its balance would hurt us rather than the Earth). This is Mac again, discussing the idea of nature’s vulnerability, of particular concern to him was the development of pesticide resistant crops, “we are really upsetting the balance. Our world will be barren, for a gardener that's a terrifying thought” (Mac, Crop Trial Area). Here Mac describes nature as fragile; it is easily destroyed by having its balance upset.

Interestingly, Mac also described nature as vengeful when discussing repercussions from upsetting its ‘balance’, “it’s flying in the face of nature’s balance and eventually it’s going to bite back” (Mac, Crop Trial Area). Mac frames nature as in battle with humans – a battle where nature will win. Mac’s use of opposing traits (fragility and vengeful strength) demonstrates that nature can be characterised in contradictory ways. Even though Mac ascribes contradictory characteristics to nature he always depicts the natural as a positive quality. This was true for most of the participants.

Another characteristic participants ascribed to nature was complexity, this was also present in the press coverage. Nature, participants argued, is so complex that humans will never fully understand how the Earth works and therefore cannot predict the effects of 'meddling' with nature. Uwe from the group of bioscience students talks about his concerns. To support his argument that nature is complex, he identifies himself as a scientist, arguing that his work has given him a first hand knowledge of how complicated nature is, “the reason I work through the lab is because what happens in the field is far too complicated” (Uwe, Bioscience Students).

As well as being complex, the natural world was also presented as uncontrollable and for this reason, some participants felt GM would always be risky:

“I don’t think you can control the escape. In fact I know you can’t control the escape because I know that they found genes from GM crops in wild bird seed

which shouldn't be there, and they can't even track how it's got into the food chain. It's impossible to control anyway, because you can't control the natural world and how it's moving about."

(Kathlyn, Conservation Charity)

Kathlyn is a scientist working for a conservation charity. She reinforces her argument by displaying specialist knowledge. Her first statement "I think" is an expression of a lay opinion, she immediately revises this statement stating "In fact I know" and then cites an example which she knew from her job. It is notable that participants, including scientists, displayed their expertise to lend legitimacy to their characterisations of nature. The characteristics participants identified are popular cultural depictions of nature (see Shaw, 2002) but despite their common usage participants still wanted to justify their arguments by displaying expertise.

Participants may have used the word nature more frequently than the sources I interviewed, but the images and vocabulary they used to talk *about* nature and the associations they made *with* nature were often similar to sources, in particular anti-GM campaigners. This indicates that even if campaigners did not reference nature directly, many of their arguments are deliberately utilising, and chiming with, public understandings of 'the natural'.

One key characteristic that participants *and* environmental NGOs identified nature as having is purity: "everything needs to be going back to nature and purity and things like that maybe it's just another aspect of people wanting it to be pure" (Udele, Bioscientists). The cross-pollination of conventional and GM crops was described as contamination just as it was in the press coverage and by NGOs, "any fool can see that that is going to spread and cross pollinate - it makes you wonder whether that was the intention all along that you contaminate all the surrounding crops..." (Quincy, Crop Trial Area), "The bees will pollinate and can contaminate" (Faith, Over 60s), "Obviously that land is contaminated" (Quentin, Urban 2). The majority of participants viewed all cross-pollination between GM and non-GM plants as 'contamination' - many even mixed the two words referring to 'cross-contamination': *"*It has been suggested that animal feed is cross contaminated." (Seymour, Over 60s), "you know people were worried about cross contamination with plants" (Uwe, Bioscientists), *"*It's very difficult to have two different systems because of the sort of cross contamination*"* (Kerry, Urban 2).

The depiction of cross-pollination as contamination was specific to the GM debate (although the depiction sits within a popular cultural frame that nature is pure). Participants (even those who knew the word cross-pollination) continually spoke about contamination; it is likely that people knew the word from media coverage. It was anti-GM campaigners who framed cross-pollination as contamination. This was mirrored in

the focus groups, the press sample and other source interviews, demonstrating how successful this lexical choice was.

Part of the reason contamination was such a successful concept is that NGOs created a powerful visual representation of a contaminated environment. As Image 6.2 in the previous chapter shows, protesters who took part in the crop thrashing all wore white boiler suits and face masks. These suits and masks are usually worn by people dealing with toxic material, and were deployed by protesters as an icon of toxicity. When asked for their first memory of GM crops one participant from almost every group spoke about seeing people in white suits. Billy from the group of bioscientists was one of these people. He remembers the image accurately but not the story that accompanied that image:

> "I remember seeing on the news people in white protective suits walking through fields, that was the image...it might have been a research project and they had to close it down because people were adverse to the effects. What they had done was dangerous"
>
> (Billy, Bioscientists)

Billy does not remember the story that accompanied the image but because he knows white boiler suits are worn as protective clothing he associates the image with a story about GM crops harming human health; an experiment that went wrong. Billy, like many other participants, talks about images of 'white suits' as one of his first memories of GM. When faced with the image of toxic white suits Billy is only able to offer one interpretation – the crops were a threat to human health.

Other participants had similar reactions:

> "I remember Greenpeace wearing white suits because the field was contaminated" (Sunil, Urban 1)
>
> Faith: "those are the ones who put themselves at risk, because they had white overalls on"
>
> Sybil: "yes destroying the contamination"
>
> (Over 60s)

The only group that did not remember the white suits or use the word contamination was the group of 16-19yr olds. They did not remember much of the media's discussion of GM (which had been at its height a few years previous to the focus groups, when these participants would have been children). However this group did refer to GM as unnatural, suggesting this association is drawn from a readily available cultural narrative.

As well as referring to contamination, participants also discussed the monstrous; again utilising images that were promoted by environmental NGOs. Many participants expressed profound unease at the breaking of the boundary between plants and animals; an example of moving frost resistant genes from a fish to a tomato invariably produced disgust and revulsion amongst participants: “a fishy tomato – ick!” (Isobel, Urban 1), “putting like animal genes in things into plants, I shudder” (Scott, Urban 2). Several groups labelled these reactions 'irrational' but were still unable to dismiss them. In the group of young professionals, participants discussed reasons why the movement of genes from one species to another should not be a cause for concern but despite this discussion Ulrika still concluded: “Given the choice I'd still rather eat my vegetables without fish genes in.” (Ulrika, 25-35 yr olds). 'Yuk' reactions were not negated by other participants' appeals to rationality.

In all the discussions participants expressed their horror by using monstrous imagery to list a liturgy of disturbing and grotesque side effects. It was in the news game that participants most often utilised repulsive imagery. Eight out of the ten groups described at least one unnatural horror in their scripts - everything from 'bleeding corn', 'gigantic cows' and ‘spider monkey goats’ were referred to (even though these images were not straightforwardly presented to them in the pictures – see Appendix E). A lot of humour was used in the scripts and the imaginative element freed participants to consider future applications of GM. Part of this focus on the disgusting was prompted by participants knowledge of the media’s propensity to focus on health scare angles*:* “If it's news it's going to be really like, oh my God, it's going to kill us” (Ulrika, 25-35 yr olds). The humorous images mirrored the references to monstrous GM creations that I discovered when looking beyond my sample to articles that mentioned genetic modification in passing. This news game script from Urban 2 gives a typical example:

> “However farmers continue to feed this radioactive maize to the cows which are growing at a phenomenal rate. These cows are only three weeks old. (Picture B, Appendix E). The ladybirds have been genetically modified to taste like prawns (Picture E, Appendix E)”.
>
> (News Game script, Urban 2)

In the discussion after the exercise this group commented that although they could not actually envisage ladybirds that taste like prawns, oversized cows was an application of genetic technology that they would not be surprised to see developed in the future. Environmental NGOs often use monstrous imagery in their communications: mutant tomatoes, fluorescent carrots and zombie scarecrows are costumes that have been used on protests and pictures that appear in campaign materials. The focus

group discussions suggest that, despite these images being humorous (or maybe because of that humour), they were successful. Many participants referred to such images, enjoying their creative and playful element, but also used the visual imagery to reinforce GM's association with the unnatural.

Participants also referenced Frankenstein. All the groups, apart from one, spoke about Frankenstein, this reflected the predominance of the image in the media. As in the press coverage, and source interviews, Frankenstein was a discursive cue for the dangerous implications and immorality of scientific interference in nature "Frankenstein food...it's all engineered in a lab...It's not … it's not natural" (Talos, Urban 3). Talos uses the Frankenstein metaphor to argue food created in a laboratory is monstrous. The frequent references to Frankenstein in the focus groups parallels its popularity in the press.

One group didn't reference Frankenstein in the discussion. This was the group of 16-19yr olds who had not seen much of the news coverage of GM; when I asked the group if they had heard of "Frankenstein Foods" or "Franken Foods" they had not. The group could easily guess that the phrase was used to depict GM as unnatural but did not recognise the phrase when I introduced it. This suggests that when people referenced "Franken Foods" they were repeating a phrase they had heard in the media. The 16-19 year olds understood what 'Frankenstein Foods' meant because it references a well known cultural narrative; it is a discursive cue. This, in part, explains why the phrase became so dominant. As with the word contamination, it was environmental NGOs that particularly promoted the phrase "Franken Foods" - Friends of the Earth press team even claimed that the term originated from them. This is another example of environmental NGOs successfully linking powerful cultural narratives with GM. Once these links are made they appear self-apparent. This is because they fit with a culturally popular template - that new technologies harm nature.

The final characteristic participants ascribed to nature was that it is 'right'. Within their discussions the majority of participants referred to nature as 'correct' and things that went against nature as 'wrong'. People stated that they were against GM simply because it was unnatural and felt no need to explain why the unnatural was undesirable; participants assumed the rest of the group would share this view and the majority of times other participants accepted that the natural was undesirable. *"*Anything that interferes with nature is wrong." (Elaine, Crop Trial Area), "Nature does its own job and I trust it's right" (Isobel, Urban 1). Being 'right' is nature's most universal characteristic (Cook, 2004), Western societies are preoccupied with the category of nature precisely because the natural world is used to make statements about 'the way things should be'. I was, therefore, not surprised to find nature being characterised as

'right' in the focus group discussions, the press sample and by sources. When nature is described as right it is often ascribed agency. Nature is depicted as an independent actor shaping the world according to a design that it is not for humans to question.

A few participants linked the idea that nature is right to religious convictions. Nancy, from the group of over 60s, described how her morning bible reading reminded her that food should be natural:

> Nancy*: "*We – we shouldn't have to interfere with nature. It wasn't – I'm not going to say God didn't intend that way because I don't want to get into the God thing. But nature didn't intend it to be that way*."*
>
> (Over 60s)

Nancy is aware that religious arguments are controversial, stating that she 'doesn't want to get into the God thing'; instead of arguing 'God didn't intend it that way' she switches to talking about nature. In this example Nancy is utilising William's second meaning, that nature is "the inherent force which directs either the world or humans or both". This is nature's most ideological usage. While the mobilisation of a moral discourse is visible in references to religion, the moral discourse contained in claims about nature often remain hidden. This is because nature connotes the 'way things are', the common sense or self-apparent; hence Nancy seeks to win support for her arguments by referencing nature instead of God. When Nancy speaks about nature, it is clear she actually means God; yet she finds talking about nature a more successful strategy for winning consent for her arguments. Nature is a less debated concept than God.

When participants discussed applications of GM they disapproved of, particularly ones they felt were immoral, they often referred to these as unnatural. The following extract is a quote from the first urban group; here they are discussing the terminator seed:

> Isobel: "It's like saying you can have one wonderful baby but we've killed all your reproductive systems so you can't have anymore."
>
> All: "Yeah."
>
> Isobel: "And that to me is what they're saying."
>
> All: "Yeah. Hmm."
>
> Isobel: "Now to me that's not natural"
>
> Tamsin: "It's not nature is it?"
>
> (Urban 1)

In the above extract nature is interchangeable with the word right, the two concepts are synonymous. It was notable that when participants argued particular applications of GM technology were positive they did not refer to these as unnatural; the unnatural was only used to discuss applications which were viewed as negative.

In a minority of the discussions participants shifted from discussing crops to discussing people instead, in the group of over 60s participants listed a liturgy of 'unnatural horrors': botox, battery chickens, IVF treatment and the contraceptive pill:

Nell*:* And women of sixty odd become pregnant

Female: Have babies*.*

Nell*:* it's horrible, it shouldn't be allowed

Faith*:* Yeah and the contraceptives, the pill

Nell*:* Encouraging girls to have sex

Faith*:* No, that's not natural is it? Yeah. Terrible*.*

(Over 60s)

Feminist theorists have documented how the concept of nature is used to justify societal subordination of women (Mayerfeld Bell, 1998). In the above extract a group of women are discussing technological advances that have allowed females greater control over their own bodies and have increased their ability to choose when, and whether, they have a child. These advances are depicted as unnatural and therefore wrong. In addition the group implies the choices of these women are also wrong because they are engaging in behaviour that is unnatural.

In another group (Urban 1) when participants were listing examples of things that were unnatural they talked about the promotion of homosexuality on television which means children now accept "it's ok to be gay". Their view was that it was 'not ok to be gay' and they justified this argument by claiming that homosexuality is unnatural. The oppression of gay men and lesbians has historically been predicated on the censure of 'unnatural' behaviours. Both of these examples demonstrate why organisations concerned with social justice should carefully consider when and how they use nature in their public campaigns. Describing GM crops as 'wrong' because they are 'unnatural' mobilises a frame that has been used to justify discrimination against many kinds of people. Depictions of nature as 'right' prompted some participants to express a dislike for particular people or behaviours, as well as a particular technology.

The reason socially progressive organisations appeal to a potentially illiberal concept like nature, is that such appeals are often successful. By linking certain concepts to GM foods (like contamination, the monstrous and Franken Foods) NGOs

were able to harness a powerful cultural narrative that is readily understood by journalists and readers. Monsters demarcate the limits of Western imagination (Haraway, 1991), they signify the unknown, the hybrid and the feared and are therefore rejected or censured.

Connecting GM with the unnatural, the monstrous and the impure ensures the risk from biotechnology is no longer just about biophysical harm; instead, it is a moral transgression. It is a risk which cannot be dealt with by risk assessment alone. As Levidow writes: "Pollution metaphors convey a moral threat, irreducible to scientific measurement or management" (2000: 327). Biotechnology's disruption of two of the most important categories for Western culture - nature and the body - means that for many even if the biophysical risk was zero, the moral threat that biotechnology poses would still be unacceptable.

Within the focus groups, participants demonstrated that they both understood and utilised these powerful cultural scripts to argue against GM. Participants linked GM with contamination, Frankenstein and the monstrous because of what they read in the media. These concepts, however, evoked a deep-seated cultural frame which participants discussed with ideas and associations drawn from many different experiences.

7.4 Risks discussed

In the introduction I observed that the two main risks discussed in the GM debate were health and environmental risks. In the last chapter I argued that framing the debate around nature promoted the discussion of these risks and excluded debates (like who should control the technology). I am going to consider whether framing GM technology as unnatural encouraged participants to discuss some risks instead of others.

7.4.1 Health Risks

The health implications of GM foods were at the forefront of participants' minds. This was apparent at the start of the groups when I asked participants what was the first thing that they thought of when I said the words GM *crops* – almost everyone replied that it was the unnaturalness of GM *foods* that they thought of: "Well GM's not more natural because it sort of, well everything's not grown. Things are done to it – chemicals and everything so it's not really natural food anymore" (Davina, 16-18s). The switch from crop to food shows that participants were most concerned about eating GM. This reflects both the media's focus on health risks and wider cultural norms. Food

is culturally significant as Bell and Valentine write “For most inhabitants of (post)modern Western societies, food has long ceased to be merely about sustenance and nutrition. It is packed with social, cultural and symbolic meanings” (1997:38). What we ingest is significant, the idea of 'unnatural' crops growing in our farms may concern many people, but this is outweighed by the fears people have about eating 'unnatural' foods. Crops may be in our soil, but food enters our bodies.

During the focus group discussions participants mobilised three different discursive cues in support of their assertion that GM was unhealthy because it was unnatural: (1) the body as natural, (2) fears about processed foods and (3) nostalgia for nature. It is notable that these cues allowed participants to spend a considerable part of the group discussing GM as a health risk while not talking about the actual ways in which it is claimed GM poses a risk (increases in allergies, increases in colon cancer, ability for GM traits to pass across the human gut etc). These details were included in the media coverage but were not immediately accessible and required specialist knowledge to understand. Instead participants used GM's connection to the unnatural to claim it was unhealthy.

(1) The body as natural

It was the eating of GM food that made its genetic alteration particularly irksome for participants, with several expressing concern about unnatural traits being developed by the humans who eat GM. Participants spoke about children growing taller than their parents, people developing ‘luminous’ skin from too many artificial colourings etc: “what am I putting into my body if I eat enough of this over time? Am I going to grow a third arm you know or something like that?” (Udele, Bioscientists)

Udele, a bioscience student, is clearly aware that she won’t literally grow a third arm but is using the image, in a self-mocking gesture, to express her concern about absorbing GM material when digesting GM food. Given the media's discussion of unwanted GM traits (like antibiotic resistance crossing the human gut during digestion) it is clear these apparently exaggerated concerns did not spring from purely fictional references, but in part reference the media's discussion of particular risks.

The absorption and assimilation of GM foods challenges people's sense of bodies as bounded, natural entities. In this sense GM crops are a typical 'environmental bad'; they expose the body's vulnerability. When focusing on GM's impact on the human body, participants recall frames previously associated with other environmental risks. For example, the images of people with extra limbs and luminous skin offered by some participants recalls the fears raised in the 1980s debate on nuclear power (see Welsh, 2000). Framing GM as unnatural evokes a template from previous environmental

debates which is about the integrity of the body being threatened by unnatural contamination.

(2) Fears about processed foods:

I asked participants when they first remembered hearing about genetic modification. At least one person in every group (apart from the group of 16-19 yr olds who all cited their biology text books) said the supermarket was the first place they heard about genetic modification.

> "When you go to the supermarket" (Faith, Over 60s)
>
> "A lot of supermarkets, I mean I went into Marks and Sparks and there were big signs up that none of their produce is GM." (Ken, Urban 1)
>
> "Iceland is what really springs to mind for me...because they were the first supermarket to come out and say you know we will not have any GM foods in any of our own brand products." (Kerry, Urban 2)

Participants argued that food was unhealthy because it was unnatural; they connected GM with a range of other unnatural foods – ready-meals, fast-food, e-numbers. They were all labelled quick, fake and nutritiously bereft. "this plastic perfect apples, plastic foods" (Jill, Urban 2), "It's the fast food" (Keith, Rural). Within the press sample or source interviews fast-food and GM were not connected in this way. I would suggest that participants are drawing on a wider range of influences - supermarket information, food adverts and labelling - to connect GM with foods that are perceived to be both artificial and unnatural.

This finding contrasts with other studies which found that in the discussion of 'abstract' social issues, such as scientific or environmental debates, participants get most of their information from the media (Livingstone and Lunt, 1994: 8). When it comes to relatively removed issues like climate change, nuclear power or bird flu people tend to rely on newspapers, television and the internet for information, having little personal experience with which to understand these debates. I had expected GM to be similar. Yet the focus groups discussions revealed an important source of information that I have not seen considered in other studies on GM – the supermarket. In many of the discussions people demonstrated an extensive knowledge of which supermarkets and products claimed to be 'GM' free and were keen to discuss and display this knowledge "It's interesting though that Tesco value soya milk used to be GM free whereas the brand stuff wasn't" (Esther, 25-35 yr olds). The supermarket's role as a source of information reinforced the framing of GM as a health risk.

Many participants spoke about trying to choose 'natural' foods when they went shopping. It was noticeable that female parents in particular were keen to affirm that

they fed their children 'natural' food. Lunchboxes were referenced in several different groups: “I'm starting doing their lunch boxes now. I always put fruit, something fresh” (Kat, Urban 1), “They want Sunny delight in their lunchbox but when they brought that out all the kids were turning orange weren't they? It's natural orange juice they get” (Daisy, Rural).

Some female participants displayed their identity as caring mothers by discussing their efforts to ensure their children ate 'natural' food. They spoke of assessing the fat content or ‘e-numbers’ in the food they fed their children and the need to prepare fresh meals ‘cooked from scratch’. The importance of parents enjoying shared meals with children was also referenced. Within the groups, there was an expectation that conscientious parents would feed children 'natural' foods. A connection between good parenting and the consumption of fresh, natural foods was established. No participant said they fed their child convenience or processed foods. Given the prevalence of convenience foods it seems unlikely that parents never fed their children these items but there was certainly a reluctance amongst participants to discuss this.

Participants framed GM in a different way from the media – linking it with a different public debate about processed, unhealthy foods. The health risks from eating foods with large amounts of salt or fat in are well established; far better established than the risks from GM food. By connecting GM with other foods perceived to be both unnatural and unhealthy participants create consensus around GM's 'unhealthiness' without discussing the actual claims being made about GM in relation to health.

In six of the ten groups participants linked GM with 'junk' food. Although this connection was not made in media coverage, participants were drawing on a discourse already present in the media – that processed, 'artificial', foods are bad for your health. Emily discusses how TV programmes extol the virtues of natural cooking:

> “I mean a few years ago everybody ate ready meals all the time and now all of a sudden there’s this more natural, natural cooking is better for you and we shouldn’t be eating ready meals every single day. I think its sort of coming back, you know people are realising that there is all these television programmes, You Are What You Eat, all these sort of things”
>
> (Emily, Urban 2)

It is not just TV programmes that instruct people to eat natural food: health columns, food adverts, product labels and supermarket signs continually tell people not just to eat natural but to *buy* natural. As discussed in the literature review the natural world has become an important tool in the promotion of consumerism: companies use nature to sell products. Nature is a prominent discourse in the promotion of food

products, and the majority of participants used this discourse to frame their discussion of GM.

(3) Nature and nostalgia

Participants referenced nature to express nostalgia for other times and places. As discussed in Chapter 3 advertisers use nature to evoke a wistfulness for an idealised past. Many discussants spoke about their parents' or grandparents' generation; describing their way of life as one that was more in harmony with nature:

> "I think that's all from, say, my mum's generation. They did take things out of the garden, didn't they? You know, like they all grew their cabbages and it was all good food. And they never seemed to be ill"
>
> (Clara, Urban 3)

Their lifestyles were not only depicted as healthier but also fuller, more enriched by community or family ties. These preferable lifestyles were closely connected to the presence of natural food in their lives: "You know, they say: well not like the good old days, the good old food" (Beverley, Urban 3). Many participants recounted memories of family life where food and nature played a central role. The group of over 60s took obvious pleasure from their recollection of past gardening practices; in particular their shared memory of collecting horse manure from the street for fertiliser:

> Nancy: So we had naturally organic food. We didn't have slug pellets and all these – and if you had manure, it was manure. It was from the horses or –
>
> Nell: Yeah. Out in the street.
>
> Nancy: Or whatever. Out in the street?
>
> Female: Yeah. It's (laughter, all talk at once)
>
> Female: With a shovel, yeah. (laughter, all talk at once)
>
> Female: Yeah.
>
> Seymour: And tomatoes.
>
> Female: Yeah.
>
> Nancy: You see we grew up in a world where things were both –
>
> Sybil: Natural. Yeah.
>
> (Over 60s)

This extended extract from the group demonstrates how collective the older groups memories were, with different participants contributing to the groups' recollection. Nature was used to fondly evoke childhood.

As well as discussing the past, participants also recalled other countries. Two participants in the groups of over 60s emigrated from the Caribbean in the 1950s. One vividly described when she took her granddaughter to visit the Caribbean for the first time:

> Sybil: I went back to the Caribbean, I took my two little granddaughters and they'd never been to the Caribbean. But when we went over there the – it was like another – well, it is another world.
>
> Oprah: It's tasty.
>
> Sybil: They were – they were surprised. One was nine, she's you know, very bright. And she was surprised at all the things, all the interest – well, we just –
>
> Oprah: Natural fruits and –
>
> Sybil: They picked them themselves really. So then you know, it was really nice.
>
> Oprah: Yeah.
>
> Sybil: Because the taste was so different there.
>
> (Over 60s)

Sybil describes how her granddaughter experienced the Caribbean through the surprise she felt when tasting the fruit there and the activity of picking it. Participants used the tastes, the colours and the flavours of food to talk about memories, countries and explain their cultural identity to others. Stories of food were used to express participants' sense of self.

Such discussions indicate nature's importance as a category of security, participants evoked nature to discuss their traditions, their families and their childhoods. By recalling these stories in relation to GM, participants move the discussion beyond biophysical risk vectors; the evocation of such powerful stories allows participants to silence those who are arguing that the technology is safe. In one discussion in Urban 3, Ted is arguing that GM foods are actually healthier because they can be developed to have less calories, fat or salt. In response to this other participants argue that GM foods are artificial, bland and unhealthy:

> Madeline: "And those green tip strawberries where they've actually developed them to be tasteless so they last longer, no nutrition either"
>
> Ted: "well there's only one strawberry, that's the English Strawberry"
>
> (Urban 3)

The discussion ceases to be about risk and instead shifts to be about culture and identity as expressed through food. Ted stops arguing GM foods are healthier and

joins in the group's discussion about the importance of local food. Food is powerful; it carries culture, identity and memories. Participants focused their discussion of GM on the naturalness or unnaturalness of *food*. Group members own experiences of eating food, buying food and feeding others shaped the way they spoke about and understood GM. The centrality of food within the GM debate gave most participants an immediate way into the conversation, even if they were unsure of scientific procedure or the regulatory environment, they could talk about the experience of eating. It also meant that the debate was not just about the health risks GM posed but was used to express much deeper, but also more intangible, concerns about the loss of culture and identity.

7.4.2 The Environment

In addition to health concerns, all of the groups discussed the potential for GMOs to damage the environment, albeit this was of secondary importance. In these discussions nature was again a key concept. Three groups focused particularly on the environment; these were the group of conservation employees, the group of bioscience students and the group who lived in the area where the Farm Scale Evaluations had taken place. Each of these groups had a particular reason to focus on GM's impact on biodiversity; either their job or their experience of seeing GM crops being grown, meant the environment was an important concern.

Amongst focus group participants the view that GM crops could cause great harm to the environment was almost unanimous, only a couple of participants disputed this and some participants believed this even if they did not think GM had the potential to harm human health. This is Olive and Esther from the group of 25-35 yr olds:

> Olive: I don't see it as a risk to health at all...I see it more as a risk to the environment.
>
> Esther: Yeah, I agree totally. I wouldn't have any qualms about it, if someone said this is a genetically modified courgette, I'd eat it, it'd be fine.
>
> (25-35 yr olds)

Most participants argued it was the creation of crops that could be sprayed with increased amounts of herbicide that was particularly harmful to the environment. For example, Oliver opens the conversation had by a group of conservation charity employees: *"*They will try and breed crops that you can spray with their worst herbicide and it won't affect the crops, it'll just kill everything else*"* (Oliver, Conservationists). One participant even confused GM crops with pesticides – when asked to describe what came to mind when he heard the word 'GM' he spoke about pesticide pollution, "I

remember something about it all, people complaining because it was running into the rivers, off the farm land and stuff. And it was like killing fish, mutating them or something else like that…" (Dennis 16-18 yr olds). Dennis merges the risks from pesticides with GM so the two technologies become synonymous. It is pesticide run off that pollutes rivers. Dennis doesn't remember the details of either story but he does remember the harm that intensive agriculture does to the environment and therefore merges both technologies within this frame.

Concern about pesticides meant that, as in the source interviews, GM was closely linked to fears about a further intensification of agriculture and the potential harm this could do to the environment. Two participants who most clearly articulated this were both individuals who had personal connections with agriculture: Uwe, from the group of bioscientists, had spent a year working in farming. His experience of organic and conventional farms meant he was extremely cautious about the technology:

> " Because, because I know; I've seen a battery farm producing hens. I've seen pigs stuck in boxes, you know and I've seen - I've seen conventional farm foods, and it makes me very suspicious of GM"
>
> (Uwe, Biosciences)

Mac, from the crop trial area, has an allotment and grows most of his own vegetables organically. Here he is comparing the soil in his allotment with that of a larger scale farmer across the road from him:

> "it's full of worms [my allotment soil]. Yeah, because it's all compost going back into the soil. It's beautiful. Then across the road when you look at all the Miller's fields and they're just earth to support the crop that gets fed chemicals basically. There's nothing in the ground because it's been year after year, crops go in."
>
> (Mac, Crop Trial Area)

Mac mobilises his personal knowledge of organic gardening to support his anti-GM position. GM's connection with intensification of agriculture furthers the sense of it as an 'unnatural' form of farming. Within the press sample, journalists did not link GM to other intensive forms of farming; indeed these other forms of farming were often positioned as natural in comparison to unnatural GM varieties. When I interviewed environmental campaigners I discovered they were keen to highlight the link between GM and other forms of intensive agriculture and discuss the damage they do to the environment. Yet when discussing the Farm Scale Evaluations NGOs divided conventional and GM crops into natural and unnatural to galvanise public opinion against GM.

The focus groups' discussions suggest this was a sensible strategic move by environmental NGOs; although press coverage of GM did not link it with other types of intensive agriculture, audience members still made that connection. This may be because articles that talk about intensive farming in general (such as the ones about the death of Norman Borlaug quoted in the previous chapter) *do* tend to link GM to practices like pesticide spraying and inorganic fertilisers. It could also be that intensive farming provided a readily available template for participants to utilise when arguing GM would harm the environment. It is also perhaps due to the choices made by the biotechnology industry. GM crops have primarily been developed by pesticide companies and the most common trait in commercially grown crops is herbicide resistance.[7] Perhaps if the biotechnology industry had first developed applications that allowed crops to thrive in drought conditions, or that brought nutritional benefits, rather than creating crops that could withstand more pesticide spraying, then they would have been more successful at framing the technology as environmentally benign.

The framing of GM as unnatural encouraged participants to focus on health and environmental risks, as it meant participants focused their discussions on physiological elements (bodies and landscapes) which are, along with food and plants, also supposed to be natural. There was little discussion of wider debates about who should control the technology etc. These kinds of debates are not centred on phenomena which are commonly characterised as 'natural' and therefore are not instantly triggered by the frame 'GM is unnatural'. If technology is entirely rejected because it 'goes against nature' then *who* controls it and *how* it is used are less important considerations.

7.5 Going against the Grain: Alternative concepts

Some participants mobilised nature in different ways - they either did not accept that GM was unnatural or, in a few cases, that the natural was necessarily best. These participants went against the grain of the general discussion to question appeals to nature. In this section I shall look at these arguments in order to highlight the diversity of viewpoints. I shall explore why participants argued against dominant concepts and how they did this. I shall also look at the mutability of the concept of nature and how it is deployed in contradictory ways.

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7 http://www.gmo-compass.org/eng/agri_biotechnology/gmo_planting/145.gmo_cultivation_trait_statistics.html

Within the ten focus groups conducted for this thesis there was considerable diversity with clear demographic distinctions: age, class, nationality, occupation etc. Some of these demographic differences contributed to the variation in views, yet these differences do not paint the whole picture. Those who fell into a distinct demographic category did not necessarily show the most variance in opinion; indeed some used their own demographic difference (especially transnational difference) to confirm the dominant viewpoint that GM was unnatural. Instead it is necessary to pay attention to the sum of what an individual reveals about their biography and self-identity in the course of the group discussion. People not only implicitly revealed aspects of their identity but also consciously mobilised aspects to warrant particular positions.

One variation was the language used to talk about GM. Most participants regularly referred to nature, but, just like some of the source interviewees, some people chose not to use the words 'nature', 'natural' and 'unnatural'. This was the case for those groups who had specialist scientific knowledge and was particularly evident in the discussion had by the group of conservation employees. They only used the word nature (or a derivative) eight times (and five of those were in response to a question where I specifically asked them about 'the natural'). This is in stark contrast to Group 5 who referenced nature/natural etc. 42 times in their discussion (see Table 7.1). As conservationists they were concerned about the effect that GM could have upon the environment, but used words like biodiversity, herbicide resistance, and ‘selective pressure' to discuss these concerns.

The group displayed their specialist knowledge from the start of the discussion, when I asked them what was the first thing to spring to mind when I said the words 'GM crops' one participant responded “Are we talking about all GM crops or just GM herbicide tolerant crops?” (Robert, Conservationists). He was immediately displaying a level of knowledge and a vocabulary not present in many other groups. Everyone in the group was concerned about the potential of GM to harm the environment and they had long discussions about these worries. Words like nature, contamination and unnatural, however, were hardly mentioned, “And then there’s that knock-on progression of weeds and things becoming herbicide resistant” (Kathlyn, Conservationists). The group of conservation employees all worked together and we met during their working hours in their meeting hut. For participants, the discussion was framed in the context of their work. They were sat in the hut where they usually explain conservation concepts to public groups and were talking to colleagues with whom they are used to using a particular vocabulary. This perhaps explains why scientific conservation terms were so regularly used by these participants.

By comparison the group of bioscience students, who actually had an even more detailed technical knowledge, used the word nature twice as often. These students did not meet in their department and they did not all work on the same projects. Although this group discussed GM using technical vocabulary, they employed a wider range of words and also spoke about the natural and unnatural. They stepped outside of their roles as bioscience students and drew on other experiences and knowledge, be it living in a different country, working on an organic farm or an article they had read in a newspaper. This suggests that the *setting* of the focus group can have a significant impact on the discussion. This is because people deploy different identities in different contexts; lexical choice can relate to the identity a person wishes to display.

Although the group of conservation volunteers used a different vocabulary to talk about GM, their view of the technology as harmful to the environment fits with most other participants. Some people, however, expressed very different views. The group with the largest number of participants that questioned the relevance of nature was Urban 3. This was a group who lived in central London and fell within the 'DEF' socio-economic category. Only one person in this group was in full time employment – everyone else was either unemployed or in part time work. Several people in the group spoke about the financial difficulties they had as they were living on disability benefit, a state pension or job seekers allowance.

The group began by defining GM as unnatural, just as all the other groups did. Only one member of the group questioned this view - a pensioner called Ted who was clearly a strong advocate of new forms of technology and also very pro-American as his wife was American. Having travelled to America and eaten GM food he felt strongly that the technology was a positive development. He rejected the claim that genetically modifying a plant was an important change and argued that no fundamental barrier had been breached. Ted echoed the arguments used by biotechnology industry interviewees as he likened GM to cross-breeding which occurs 'naturally', or without the use of sophisticated technology, and has been providing humans with new crop strains for many hundreds of years. GM, Ted argued, is simply an extension of this process and therefore not unnatural:

> "there's nothing different between the way strawberries have been developed over thirty years has been by cross pollination, by crossing them. So we've done it with strawberries, we've done it with other fruits... And that's why you get your varieties of apples and things like this. They don't just grow".
>
> (Ted, Urban 3)

Ted displayed considerable knowledge about GM. He had not only watched media coverage but had actively sought out information on the internet. He listed

several sources from which he remembered getting information on GM including the BBC, the British Medical Association and the Agricultural Biotechnology Council (although he was not aware they represent the Biotechnology Industry). The similarity between the arguments that he made and those put forward by the biotechnology industry (in particular the reference to apples and conventional breeding) suggests that the arguments put forward by the biotechnology industry had most resonance for Ted.

Although at the start of the group Ted was the only proponent of GM technology, other participants shifted their view as the discussion progressed. Within the discussion the group make it very clear that the price of GM would determine their attitude; if it was cheaper then they would buy it:

> Facilitator: "So in terms of GM then, what … are there any kind of benefits that would make you definitely say yes, no question, we'll take GM?"
>
> Clara: "Cheaper. That's the one thing people think."
>
> Madeline: "Yes."
>
> Ibrahim: "Yes, cheaper food."
>
> Ted: "I think absolutely yes, cheaper."
>
> (Urban3)

The group also discuss the price of organic food, something they all agree is too expensive to buy:

> Ted: "But you look at the prices, difference in the prices in organic …"
>
> Denise: "Yes, that's astronomical, isn't it?"
>
> Ted: "And you're adding probably twenty per cent to your food bill a year, and not many people can afford that, that are on benefits. I can't afford it."
>
> (Urban 3)

In contrast to the other discussions, participants in Urban 3 clearly state that price is the main factor in the foods they choose to buy, and that even if organic foods seem desirable they cannot afford them. Most other participants expressed a belief in their own economic agency and felt they would not be forced to eat GM as they could purchase non-GM.

After Urban 3 discussed both how they are unable to buy more expensive foods and the relative cheapness of GM, the group as a whole began to negotiate their position, in particular they began to question how important 'the natural' is as a trait in food. For example the group discuss how food lasts longer than it used to. This is a point observed in several groups; most participants felt that a longer shelf life for foods

is a bad thing as it is a sign that food is 'unnatural'. Participants in Group 7 start off making this point but then reassess:

Talos: They can keep it on the shelves for longer.

Denise: Yes.

[Multiple speakers]

Talos: As well, yes.

Ibrahim: But I mean is that a bad thing?

Talos: Yes, we don't know what it does to us though, do we?

Ibrahim: Because it - I mean obviously it lasts longer when you get it home as well.

(Urban 3)

The group are suspicious of food that lasts longer but they also recognise the advantage of this trait. It is a theme that is developed in the group as they discuss whether the natural is necessarily the advantageous quality it is assumed to be. This leads the group to shift their position on nature, eventually stating that although nature may be nice it is not always pragmatic. Nature is inefficient and cannot provide for everyone's needs:

Ibrahim: So, you know, from that point of view, you can say, yes, it's nice but if it's too natural it doesn't last as long. It's tastier, but the quality and the quantity is not enough to sustain everybody.

Facilitator: So that's interesting. So, in a way, you're almost questioning the extent that natural …

Ibrahim: Well I'm questioning, you know, I mean it's alright on a small scale but when you're trying to feed the world

Clara: Yeah, also, yes, when you've got a big family and things like that you just can't do it.

Ibrahim: Yeah, you know, you're trying to feed the world here you've got to think well, yes, it's lovely if we can all have our home-grown tomatoes and potatoes, but it's not viable in the big picture.

(Urban 3)

In this discussion the group mobilise a pragmatic discourse casting nature as a frivolous quality; something which is nice but by no means essential. Urban 3 renegotiate their attitude towards the natural in the context of their discussion about the

kinds of food they feel they can afford. The discussion suggests it is a lack of economic power that prompts them to reconsider whether nature is an essential quality in food. Rather than accepting that they will be forced to eat unhealthy and less desirable food, they re-evaluate their original assumptions to conclude that nature is not the essential characteristic they first portrayed it to be. Urban 3 come the closest of any group to a dismissal of the importance of nature. It is a dismissal which is linked to their inability to purchase and therefore access 'natural' foods.

In the group of bioscientists two participants questioned GM's assumed 'unnaturalness', these participants were Keefer and Barbara. Everyone in the group of bioscientists were students or early career staff within a biosciences department. Because of their similar occupations I expected the group to share similar opinions, I found this was not the case. Most participants regularly referenced nature and were suspicious of GM for the same reasons as other groups – in particular they were concerned about the damage GM could cause the environment. Keefer and Barbara, however, expressed a different view.

Barbara (the quieter of the two participants) answered my first question about what 'GM crops' bring to mind by talking about nutritional benefits. This shows that she strongly associates GM with positive applications “And getting more nutrition into potatoes and rice” (Barbara, Bioscientists). Keefer also viewed GM as a positive development, in particular for the environment. He argued that GM crops would be better for the environment than other farming techniques. This was because of one potential application: the ability to create disease/pest resistant crops – crops which do not need as much pesticide sprayed on them because they are modified to withstand certain diseases or insects. Keefer argues “they can remove a lot of the chemicals by using for instance glyphosate which is not harmful to anyone so you get the whole food chain back in line.” Keefer also challenges the idea that cross-pollination between GM and non-GM plants is contaminating, indeed it is 'natural' cross-breeding that he views as polluting:

> “you do normal breeding and the way you do it is...you take cells and you mix them in the lab and you create very, very sick hybrid cells and from those you re-generate plants and you have to take them through many generations before you can actually use them for anything. And, still you don't know and what you get out of it is a much less, what can you say, a pure product where you risk that the mix of these two will combine to produce toxic compounds that were not there in the first place.”
>
> (Keefer, Bioscientists)

Keefer challenges the idea of 'natural' cross-breeding, stating that it creates sick hybrid cells that could result in toxic compounds. He argues that the serendipity of cross breeding means there is a larger risk involved; by contrast GM is safer. Because genetic modification allows for a greater degree of human control, and assists in human understanding of cross breeding, Keefer argues, it is likely to produce 'purer' foods than traditional cross-breeding. Keefer's views echo those of the biotechnology industry. Within the press sample biotechnologists were also quoted arguing that GM allows scientists more control.

Why do Keefer and Barbara present different arguments from the rest of the group when they have such similar occupations? Part of the answer is revealed in the way participants introduced themselves. Keefer and Barbara described themselves as plant biotechnologists but none of the other participants did. Billy introduced himself by saying he was "writing a PhD on bird behaviour". Udele finished her PhD several years ago and was now working as a freelance photographer; she was only working in the biosciences department to make some extra money. Uwe had just started a PhD after a year working in farming, this was the first thing he spoke about when he introduced himself, "I was amazed by the barrenness of the land when you're actually on the farm" (Uwe, Bioscientist). It is only Barbara and Keefer who identify themselves firstly as plant biotechnologists, as such it is not surprising that they chose to highlight the positive aspects of GM.

As the discussion continues Barbara and Keefer reveal more reasons why they could have a different viewpoint from others in the group. They are both from Denmark where they say the media do not report much on GM, as a consequence most of their information is from their time at university, "University mostly, professors and so on I have worked with" (Keefer, Bioscientist). As most of their opinions are formed from working in biotechnology it is, again, not surprising that they defend the technology. The apparent background similarities between this group made the difference in opinion appear surprising, but I found convincing explanations for why these differences occurred when I considered how participants chose to identify themselves within the group.

The final two participants who questioned dominant concepts about GM and nature were in the group of 25-35 yr olds. These again were two people who identified as scientists. They were very suspicious of anti-GM arguments because they viewed them as 'anti-science'. Olive and Esther were particularly concerned by the use of phrases like 'Frankenstein Foods' and what they viewed as sensationalised reporting of the potential health risks from GM.

Olive and Esther ridiculed the depiction of GM as monstrous, which they felt had been created by the media: "Franken Foods! nanny state! political correctness gone mad! that's the Daily Mail" (Olive, 25-35 yr olds). They found the monstrous element of the debate ridiculous: "Franken Foods, which always makes me laugh because it's so ridiculous" (Esther, 25-35 yr olds). Olive and Esther are keen to question the idea proposed by other participants that GM crops are unnatural. It is Olive's and Esther's dislike of how GM crops are reported that influences their viewpoint; both talk of their suspicion of big companies. They both buy organic food and Esther is a member of Greenpeace – much about their identity matches those who argue GM is a perversion of nature. Yet their self-identification as scientists trumps this, and they both argue against a view which they clearly feel alienated from: "mad raving scientists going to kill us all with mutant crops, I see the issues as social ones, scientists aren't lunatics" (Olive, 25-35 yr olds).

Esther spoke to me after the group; she told me she almost left Greenpeace as she felt their GM campaign was anti-science. As with Keefer and Barbara, how Olive and Esther view themselves is a key part of why they question the association between GM and the unnatural.

Within the focus group discussions GM was predominantly framed as unnatural, but there was some variation in view. Where participants did vary they often echoed the arguments put forward by the biotechnology industry, using strikingly similar images and associations. This suggests that through both the media and other sources (like cropGEN who were paid to talk in favour of biotechnology) biotechnology companies were successful at disseminating their views and, where people had a particular reason to support GM, these views had resonance. The majority of people who went against the grain of argument identified themselves as scientists. It was not access to scientific language or knowledge that led to people rejecting the idea that GM is unnatural but how people chose to identify themselves. Those who presented themselves firstly as scientists were more likely to argue in favour of GM than those who presented themselves firstly as farmers, conservationists or citizens and secondly as scientists. This was not just related to scientific experience or access to scientific knowledge but to how people self-identified. The other participants who rejected the notion that GM was undesirable, because it is unnatural, were the group who felt they could not afford to buy anything else. After articulating their own lack of choice and their inability to avoid choosing GM, this group renegotiated their position so they no longer claimed the unnatural as necessarily undesirable. The discussion suggested it was the disempowerment participants felt that prompted this reconsideration.

7.6 Discussion

Like the press, most focus group participants claimed GM was an aberration of nature. Participants linked specific concepts like contamination, Frankenstein and monstrousness to GM because of what they had read in the media. This was demonstrated by the group of 16-19 yr olds. They had very few memories of the media coverage (as they were children when GM coverage was at its peak), however they argued GM was unnatural. This suggests GM's framing as unnatural is a readily available concept; participants did not need to have watched news coverage of GM to evoke it. Key discursive cues, however, like the white suits or references to 'Franken Foods', were *not* spontaneously introduced by the group of 16-19 yr olds. This suggests that participants in other groups knew these associations from the *media coverage*. When I introduced these concepts to the group of 16-19 yr olds, they were easily understood and appropriated by the group. This demonstrates that NGOs promoted ideas and images which were easily understood and incorporated into the existing frame that 'GM was unnatural'.

Environmental NGOs restricted their use of the word nature as they were cautious about aligning themselves with voices that are predominantly labelled 'irrational'. The focus group discussions suggest this fear is well founded. Participants who primarily identified as scientists had clearly been alienated by the campaigns of NGOs. Despite not using the word nature, the images and ideas NGOs promoted, in particular the concept of 'Franken foods', was objected to by people who identified as scientists. Such participants argued NGOs were adopting an anti-science position and, as a consequence, were hostile to the campaign.

Participants utilised many different ideas and associations in their discussion of GM that were drawn from a wide range of experiences. Participants creatively built on media discourse, synthesising a wide range of cultural influences to support their arguments. Audiences by no means simply reproduced the frames on offer and were active in shaping the debate. Journalists also draw on a wide range of cultural influences so it was not always possible to distinguish which arguments originated from the media and which arose from other arenas. As theorists have noted, communication is a circuit (Miller et al., 1998) and it is sometimes impossible to locate where media effects end and other influences begin. Despite participants creative engagement with media discourse most did not question the ideas presented in the media and the additional experiences and concepts they deployed supported the dominant frame rather than countering it. There is no question that participants were active; but they were actively producing the hegemonic viewpoint.

The mobilisation of different parts of people's identity was a key factor in how people chose to talk about GM. Some people chose to mobilise a part of their identity in support of the consensus view, others to counter it. It was self-presentation of identity, as well as discursive resource available, which often proved the decisive factor in people's responses to the dominant view. All the participants who were employed as scientists had access to a different discourse which they could use to question some of the assumptions and ways of talking about GM, but only some chose to mobilise it. This depended on whether people firstly identified as scientists. Those who did, displayed their identity by using words, arguments and concepts that were part of scientific discourse. Those who did not, mobilised other discourses and presented other identities as gardeners, conservationists, citizens etc.

Laclau and Mouffe (2001) use the concept of articulation. They argue that identities are not fixed points of social difference but the result of 'political construction and struggle'. Unity between actors is not a social given, instead identities must be created through their articulation. My focus group data supports Laclau and Mouffe's observations, showing how some people chose to articulate a particular identity at certain moments while others, with the same discursive resource, did not. The identities people displayed did not easily correlate with one social factor; instead they were informed by people's full biographies. People also displayed different identities during the discussion, for example, at one moment talking as a scientist and at the next as a mother. Identities are multifarious; people choose to articulate different identities in different situations and mobilise words and concepts that support that articulation. This was evident in the focus groups.

Participants echoed the media coverage by mainly discussing health and environmental risks. The dominant portrayal of GM as unnatural encouraged participants to focus on these risks. Participants associated unnatural foods with unhealthy foods and linked debates about nature with concepts like the environment and biodiversity. Participants referenced the 'unnatural' to bypass a discussion of biophysical risk vectors. A discussion of the mechanisms by which GM might pose a health risk required a specialist vocabulary and a detailed knowledge which many participants did not possess. To frame GM as a risk they instead linked the technology to processed, convenience foods attaching it to a far better established set of risks.

A socially conservative version of nature was mobilised in some of the focus groups discussions and, as was shown, it was used to attack people as well as plants. Sometimes the concept of nature was utilised by participants to mobilise a discourse of morality. Because nature connotes common sense or 'the way things are' the moral discourse within it is often hidden; therefore Nancy found nature a more useful concept

than religion to make her arguments. Nature has historically been used to justify discrimination against many kinds of people. It is a concept that can easily be appropriated within discourses that are used to oppress, discriminate and subordinate. The arguments against women who take the contraceptive pill and against gay and lesbian people were isolated occurrences but nevertheless show how a discourse promoted by social justice organisations can be used to justify discriminatory attitudes.

The focus group discussions also make apparent the reason why environmental NGOs framed discussions of GM in this way: they are very effective. By linking certain concepts to GM foods (like contamination, the monstrous and Franken foods) NGOs were able to harness a powerful cultural narrative about a threat to the integrity of nature and the food we eat. When rearticulating these narratives participants also rejected GM technology.

Many researchers have considered how biotechnology is calling what counts as nature and 'nature's boundaries' into question. As sociologists have observed, the processes of globalisation have destabilised and undermined the categories and concepts which traditionally dominate the way people think about themselves and the world around them. In response to such threats theorists like Bluhdorn have charted the rise of 'simulative politics'. This is the practice of responding to fears about unravelling categories of security by symbolically premising those very categories. As Beck writes "The deconstruction of tradition goes hand in hand with its reconstruction; in fact the latter process supports and enables the former" (1997:67). Debates in biotechnology provide an insight into the symbolic maintenance of nature as a meaningful category. NGOs found it effective to premise arguments that claim nature is a coherent concept and can be defended as such. Audience groups also focused much of their discussion on the importance of defending of 'nature's' boundaries and, in the process, re-posited nature as a clearly defined concept. Participant who questioned the coherence of nature found that their arguments were not successful. These discussions recreated certainty in the face of biotechnology's challenge to nature. The importance of certainty is something I shall consider further in the following two chapters where I look at the concept of nation in the GM debate.

Chapter 8: A Modified Nation: Nationality and Citizenship in the GM Debate. Press Coverage and Source Interviews

8.1 Introduction

As the UK press coverage of the growth and consumption of genetically modified crops exploded in 1999 journalists identified GM crops as a risk to the nation. GM crops were not just harming the countryside but specifically the British countryside; they were not just a threat to people's health but Britain's health. Nature was not the only concept strategically battled over; nation was also a key discursive reference point. This is again evident in the images produced. FOE created Image 8.1 as the logo for their anti-GM campaign and mobilised supporters with an urgent call to defend the nation's borders. Image 8.2 is a more recent image from Monsanto UK's homepage. The landing page displays a Union Jack and Image 8.2, which is of a British rural idyll. The rolling plains of America shown in Image 6.2 are replaced by the hedgerow edged fields of Britain. The pretty yellow fields of oilseed rape show an imagined British GM future – Monsanto produce several GM varieties of oilseed rape (although none have been approved for commercial growth in Britain). Monsanto's country specific landing page, complete with images of the British landscape, demonstrates the company's sensitivity to national contexts and identities. Such cultural sensitivity has not always been displayed by Monsanto. In 1999, when the GM debate began, the main image promoted by Monsanto UK, was of a typically American, as opposed to British, landscape – as shown in Image 6.2. This chapter will consider how the press and sources reference national identity in the GM debate and some of the reasons why nationality became a key rhetorical stake, forcing Monsanto to develop a PR strategy that was sensitive to cultural differences.

It was not just campaigners and biotechnology companies who used national concepts when discussing GM - the Government did too, calling their debate on GM: 'GM Nation?' and the press featured headlines such as 'GM ship set for Britain' (Daily Mirror, 28 February 2000), 'GM food is being foisted on Britain' (Daily Mail, 3 June 2003) and 'Ruling that could flood Britain with GM foods' (Daily Mail, 28 December 2005).

Image 8.1: Friends of the Earth GM-Free Britain Campaign (2005)

Image 8.2: Monsanto UK Homepage (2009)

Other studies have found that nationality is a key concept in the discussion of many risks: BSE (Brookes, 1999), human genetics (Groggin and Newell 2004; Chekar and Kitzinger 2007) and also GM. Harper discusses the importance of national identity in Hungarian citizens' anti-genetic modification stance. She concludes that "National cultures and identities structure how GM issues are made to matter" *(*2004: 489). In this chapter I shall draw on a combination of in-depth textual analysis of national newspaper coverage, and interviews with key media sources, to explore how discourses of nationality and citizenship are promoted by different actors, and how the UK press mediate these different viewpoints according to their own news values and reportage categories. I shall draw in particular on Brookes' study of the BSE crisis. Brookes concluded that 'a symbolic regime' was structured around the nation as BSE was predominately presented as a threat to the nation's health (1999: 260.) I shall consider whether GM is also presented as a threat to British people's health. Brookes' study only looked at press coverage, whereas I shall also analyse source interviews to consider factors shaping the media's use of nationality.

Kitzinger discovered that facts which fit 'existing sets of images and beliefs' are seized upon in risk reporting to lend plausibility to arguments (1998: 178). I shall explore how national stereotypes are deployed to reinforce elements of risk.I shall also consider how the discourse of nationality interacts with that of globalisation. Our relationship to nationality has shifted as the articulation of identity has diversified, offering people multiple ways of defining themselves. Bauman writes about how nationality and globalisation interrelate in discursive and material ways, claiming this has produced a 'political economy of uncertainty'. He argues that people feel powerless in the face of new forms of international power, over which they have no influence. In some cases globalisation has led to a greater premising of national borders as a discursive response to this uncertainty (Calhoun 2008: 429). I shall explore when uncertainty is acknowledged and discussed and when ambiguities are ignored by framing GM as a battle over one key border - the nation's.

Researchers have argued that consumerism is a defining characteristic of globalisation. I shall explore the moments when consumerism is premised and analyse whether societal efficacy is offered to members of a nation of consumers or a nation of citizens.

By linking GM to a nationalistic rhetoric, the technology is associated with a range of other 'national' concerns. I shall consider the implications of these associations; in particular immigration debates. Finally, I shall discuss the consequences of nature and nation's simultaneous deployment within the GM debate. Both are traditional categories providing people with a sense of continuity and certainty, but both concepts have historically been used to exclude and discriminate against people. The public discourse surrounding GM utilises both concepts as key ways of framing the discussion and this has significant implications for how the risks from GM are understood.

8.2 Press Coverage

8.2.1 The GM-free Nation

In the press Britain is regularly referred to as a place that is, or could be, GM-free. Two national newspapers, the Independent on Sunday and the Daily Mail, ran campaigns based on defending Britain's status as a 'GM-free zone': 'Let's make Britain a GM-free zone now' (Daily Mail, 23 February 2006) and 'GM-free Britain may fall to Monsanto' (Independent on Sunday, 31 March 2002). Many other articles also

describe Britain in this way: just over half of the articles from the 6 month sample described Britain as 'GM-free'.

Despite the media continually describing Britain as GM-free this is actually misleading: the presence of GM food products, animal feedstock and the possibility of contamination from GM field trials (see Chapter 1) means that Britain contains GM material. While the English Channel represents a clear divide from continental Europe, there is evidence that gene flow is possible between Britain and France (Bond et al., 2005). In addition, the existence of global supply chains means that if the rest of the world decided to grow GM crops it would be almost impossible for British citizens to avoid products containing GM ingredients. Such transboundary flows are subject to multiple levels of regulation with discrete nations being only one tier. In the case of Britain, Westminster legislates in the context of European Union (EU) directives; the Welsh Assembly and Scottish Parliament also have significant powers and local authorities can declare themselves GM-free. Beyond this lies a global regulatory tier: the World Trade Organization, which is intended to formalise and regulate access to world markets (Welsh, 2006). This multi-layered regulatory and commercial context enhances the potential for recourse to nation and nationalism in the face of risks perceived as foreign in origin, as it provides a clear and easily understood site of regulation. To borrow a phrase from Brookes, this constructs a 'symbolic regime' around Britain which partially mirrors regulatory borders and physiological ones (the island boundaries) but ignores the complex flows of world trade that mean decisions are not just made at a national level.

Brookes argues this symbolic regime reinforces a sense of national community, "Communities and identities are to some extent constructed through threats to the boundaries of those communities" (1999: 255). Brookes demonstrates how dominant representations of nationhood deny complexity and contingency, despite the continuing forces of globalisation. The GM debate also shows how complexities and ambiguities are ignored so that clear national boundaries can be rhetorically maintained. The use of Britain as the automatic political and cultural unit also reduces subnational complexities. There is little attention paid in the British national press to England, Scotland and Wales as distinct. They discuss Britain as a single unit : "Keep Britain GM-free" (Daily Mail, 12 May 2004), "Labour are surrendering Britain's status as a GM-free nation" (Sun, 10 March 2004). The decision about growing GM crops is presented as one that will affect all regions in Britain equally. Either the whole of Britain remains free of GM products or none of it does. Despite both the Scottish Parliament and the Welsh Assembly having the power to stop GM crops being grown anywhere in Britain they are only mentioned in 13 of the 323 articles sampled and feature in only 3 as the main focus. Subnational voluntary 'GM-free zones' are mentioned in only 8 articles,

with 2 making it the main focus. The dominance of Britain's 'GM-free' status means there is almost no recognition that the nation is made up of different countries with different levels of governance.

National reporting also takes no account of regional and local implications. In East Anglia, for example, a large amount of wheat and barley are grown, with farmers producing more than a quarter of England's supply of these crops8. The established availability of GM versions of wheat and barley would result in higher environmental levels of GM pollens in East Anglia compared to Wales, where livestock farming dominates. Such differences illustrate the diversity of stakes and publics associated with the GM debate which contrast the unitary depiction of nation.

Giesen observes that "Precisely because borders are contingent social constructions, because they could be drawn differently, they require social reinforcement and symbolic manifestation" (Giesen 1998: 13). The national press play a key role in providing this social reinforcement. Discursive representation is crucial to the formation of national identity and this is why communication technologies have played such an important role in the formation of nation states and their continued maintenance (Anderson 1991).

Within the GM debate nationality is reinforced by referring to the British people as a homogenised whole. This was particularly evident in the reporting of Bayer's decision to not grow Chardon LL commercially in Britain. The decision was framed as a tale of people power; where the British public force a corporation off their soil and protect their country's sovereignty. This was evident in many of the headlines:

> **Article 1**: "Victory to the people! The GM saga provides inspiring proof the ordinary people CAN defeat conglomerates and politicians" (Daily Mail, 1 April 2004)
>
> **Article 2:** "Public joy at GM U turn" (Daily Mirror, 1 April 2004)
>
> **Article 3:** "Public force GM firm to drop plans to grow GM maize in Britain" (Guardian, 1 April 2004)

The regulatory context in which the decision is taken, and the circulation of national newspapers, implicitly defines the public as 'British'. The British people are presented as a uniform whole who all react with 'joy' at the news that Bayer will not grow GM crops commercially. Throughout the coverage public opinion is often presented as homogeneously anti GM technology; one way in which homogeneity is demonstrated is the citing of opinion polls. This fits with the findings of Lewis et al.,

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8 www.nfu.co.uk

who note that the citing of opinion polls is a key way that the media represent public opinion. One poll received more attention than others and this was the Government's Farm Scale Evaluation:

> "The growing of genetically-modified crops will be approved today despite widespread public opposition…A Government survey last year found that 90 per cent of Britons oppose growing modified crops and the sale of foods derived from them." (Daily Mail,13 January 2004)
>
> "Last year a Government survey found 90 per cent of people opposed GM food." (Daily Telegraph, 14 January 2004)
>
> "Last year the Government attempted to test public attitudes [and] concluded that more than four out of five people were against GM crops and that just 2% would eat GM foods." (Guardian, 19 February 2004)

Horlick-Jones et al. (2007) argue that the media's representation of the GM Nation? debate as indicating widespread disapproval of GM farming is simplistic. They claim the dominant construction of the British public as a homogeneous entity with consensual views about GM, is at odds with the actual findings that the 'public' are diverse and hold a wide range of nuanced and complex views about the technology. GM Nation? was not simply a referendum on public opinion (as it was often depicted in the media) but a more complex qualitative consideration of public opinion. The media frame of a consensual, national public excluded the variations and ambiguities in public opinion.

In contrast to the representation of the British public as uniformly opposed to GM, the British Government was mainly represented as favouring the technology and determined to proceed with commercial planting despite public resistance. This rhetorically positioned the British government as undemocratic and beholden to corporate interests, which undermined the government as an independent sponsor of the GM Nation debate.

> "The minutes of the Government's GM committee, agreed by the Cabinet last week, revealed a government determined to force GM crops on an unwilling British public" (Independent on Sunday, 7 March 2004).

The homogenisation of British people's views is not unusual in reportage; it is often used as a way of positing the nation as the natural unit through which to discuss an issue. Part of the reason the media instinctively revert to the unit of nation is that the news value of stories which affect a particular community or social group is much smaller than the news value of stories which "potentially affect the abstract community of nation" (Brookes, 1999: 261). A risk to the nation is relevant to every reader. As

Anderson (1991) shows, although newspaper readership varies according to age, gender, ethnicity, social class and so on, the default readership is the nation. The distribution of national newspapers, therefore, helps to reinforce the focus on nation. Billig's (1995) theory of 'banal nationalism' demonstrates that the media remind readers of national identity in ways so familiar that they go unnoticed – their continual references to public opinion as both national and uniform is an example of the 'banal nationalism' Billig describes.

8.2.2 A nation of citizens or of consumers?

In the reporting of Bayer's decision not to commercially plant GM crops, the British public were ascribed certain characteristics; not only were they uniformly anti-GM they were also consumers. Although the headlines reported Bayer's decision as a victory for the British people, the articles that followed attributed the victory to a certain section of the British public: consumers. The following extracts are taken from the first lines of the articles whose headlines were quoted above. They no longer talk about the British people:

> **Article 1: "**For consumers, it is game and set in the most important contest yet for the future of Britain's food – and, increasingly, it looks as if they will win the match, too." (Daily Mail, 1 April 2004)
>
> **Article 2:** "Consumers declared victory yesterday after a major firm abandoned plans to grow GM maize in Britain" (Daily Mirror, 1 April 2004)
>
> **Article 3:** "Green and consumer groups yesterday claimed one of their greatest successes in a decade as the German biotech company Bayer withdrew its application to grow a variety of GM maize" (Guardian, 1 April 2004)

The people who delivered the body blow to the 'major' biotechnology firm are the buying public, it is purchasing power that has halted the entry of GM into Britain. Within the articles the public and consumers are presented as synonymous but as Morley (2000) reminds us addressing a national audience automatically excludes, as well as includes, people – here it is not just those who are not citizens of Britain that are excluded but also those who do not purchase food.

My analysis reveals that throughout the press sample consumer power is a central concept in the discussion of GM: it was what people chose to buy, rather than what they chose to do, that newspapers claimed would ultimately stop GM. Part of the reason that consumer power was so important in the discussions of GM is because the Government were depicted as undemocratic. As discussed above, the Labour

Government were continually shown ignoring the opinions of the majority of citizens by publicly supporting the commercial growth of GM crops in Britain.

In 2003, Britain and America invaded Iraq because, both government's claimed, Iraq was developing weapons of mass destruction. This claim was later disputed, leading the UK press to criticise the Government's decision to join the American invasion and their willingness to mislead the British public in order to further their own objectives. Before the war started, an estimated 1-2 million people marched in London against the invasion.[9] This is still Britain's biggest ever political demonstration. The level of opposition to the war furthers the claim that the Government were willing to ignore the views of the public. GM crops and the Iraq war were both held up as examples of how undemocratic Tony Blair's governance was. Tony Blair himself was portrayed as power mad, slightly crazed and completely unwilling to listen to the British people:

> "Why now? Why the rush? We hear the cries go up whenever the Prime Minister gets the Messianic bit between his teeth, on subjects from tuition fees to Iraq. Now they are going up over genetically modified crops and food, the latest issue where Mr Blair's passion for a cause is putting him on a collision course with public opinion." (Independent on Sunday, 7 March 2004)
>
> "When it comes to mass protests against the Iraq war or GM crops, Tony Blair seems to ignore public opinion." (The Times, 16 March 2004)
>
> "Last year, one and a half million people marched against the war in Iraq. Mr Blair ignored them. Since then, thousands have been killed and no WMD have been found. Now, it seems, despite public opinion GM crops will be introduced. So much for Mr Blair's 'big discussion' " (Guardian, 17 January 2004)

Linking GM crops to the Iraq War increased the news value of the GM story; it became part of a political struggle around Blair's unpopular leadership. This increased the amount of coverage GM received and linked the technology to a number of other issues, including tuition fees and drugs policies; both of which were also cited as examples of Blair's dictatorial style of governance.

When a government are continually framed as arrogant, unresponsive and undemocratic then citizen action is automatically presented as pointless; it makes no sense to lobby a government that will not listen. It would have been illogical for the media to encourage people to lobby their MPs, or march, when they had already presented such actions as futile. Democracy was presented as defunct and this

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9 http://news.bbc.co.uk/1/hi/uk/2765041.stm

excluded a range of actions that people can be asked to take as citizens, actions which involve engaging with political decision making structures. Instead of engaging with political processes, the media suggested the supermarket was the most effective site for action; consumer action was presented as the way people could express their views on GM and halt the commercial planting of GM.

8.2.3 The Island Nation

A significant part of the symbolic importance of Britain's borders is derived from the nation's island geography. As such Britain is isolated, set apart from other countries by the water that surrounds it. The nation's boundaries are indisputable, visibly marked and represented by the iconic emblem of the white cliffs of Dover. The power of Britain's status as an island is evident within the coverage of GM as the sanctity of the coastal boundary is premised. This was a prominent feature in coverage of a Greenpeace action that took place during the sample period. The action involved protestors using inflatable dinghies to stop a cargo of GM animal feed being delivered to Bristol docks. The story featured dramatic images of protestors, framed by a stormy-looking sea, sailing out to defend Britain from the cargo vessel of GM produce. This classic example of staged iconic praxis (Welsh, 2000) emphasised the nation's border; some pictures portrayed Britain's coastline in the background with the cargo vessel floating menacingly in front. In most of the articles the story ends with the ship being unable to dock in a British port, and the readers are left to assume that Greenpeace's aim of returning the ship to America was achieved. Only one article, in the Independent (22 June 2004), mentioned that the ship would be able to dock the following morning. By focussing on the temporary stoppage imposed by Greenpeace the impression of an inviolate boundary is implicitly maintained in the majority of articles.

There are other references that evoke Britain as an island nation within the sample, as the following quote from Sarah North, a Greenpeace campaigner, demonstrates:

> "Tony Blair has picked a fight with the British public. There are thousands of people ready to fight this decision in the fields, the streets, the courts and the supermarkets." (Daily Mail, 5 March 2004).

This quote constructs a single community of British people, all of whom are opposed to GM. The description of different spaces recalls Winston Churchill's famous 'we shall fight on the beaches' speech delivered during the Second World War. Within this speech Churchill makes specific reference to Britain's status as an island – 'we

shall fight in the fields and in the streets'10. By echoing this speech, the quote from Sarah North draws on a historical discourse which posits Britain as a strong island nation that is used to defending its borders, be it on the beaches or in the supermarkets.

8.2.4 The Unique Nation

The media coverage of genetic modification repeatedly defines the British nation as both important and unique. Articles consistently refer to the importance of Britain's genetic modification decisions at an international as well as a national level: "Britain's decision to back the commercial growing of a GM crop will have huge ramifications around the world" (Daily Mail, 10 March 2004). Britain's genetic modification status matters, the article implies, not just to British people but to the citizens of the world. Within the press coverage the British countryside is also represented as unique. One article stresses that "Only a narrow range of existing GM crops were suited to British conditions" (Independent, 5 March 2004). As shown in Chapter 6 this uniqueness is often associated with purity: "Frankenstein crops spell ruin for a British agriculture that can only survive in the future by producing pure, high quality foods" (Daily Mail, 21 February 2004). The symbolic importance of rural landscape in the construction of British identity has been noted by many scholars (Daniels, 1993; Taylor, 1995; Matless, 1998). By threatening the British countryside, then, GM crops threaten an important symbolic marker of nation, as the distinctiveness of Britain's landscape helps to define the nation as a unique and coherent entity.

8.2.5 Corrupt America and Guardian Europe

Europe is also presented as unique and pure within the press coverage. This contrasts with the USA, which is presented as tainted due to its extensive growth of GM crops. The two continents are frequently depicted fighting each other: "the papers, which were sent to the WTO last week are sure to ignite a battle between the US and Europe . . . If American victory is not total in round one" (Guardian, 27 April 2004). The continents are often framed as having irreconcilable cultural differences; which are expressed in the approach each takes to food:

> "Many Americans view food as fuel that keeps bodies operating and mealtimes merely necessary interruptions. It is common for them to gulp down their meals...In

10 www.winstonchurchill.org

Europe, dining is the highlight of the day. Food is savoured at length and is integral to culture." (Financial Times, 13 May 2004)

Both the USA and Europe are stereotyped in extremely crude ways in this example, but this allows the journalist to place the two continents in opposition to each other. The USA, the home of fast food, is mechanistic and functional. Food is a part of the system - 'a fuel'. Europe, by contrast, attaches cultural importance to food and still clings to the traditional practice 'of lingering over food for hours'. The European way of life represents integrity. Europe is the guardian of tradition, protector of innocence and family life; "European farms are family run, the foods they produce become a source of family pride" (Financial Times, 13 May 2004). The journalist chooses to ignore the fact that much of Europe's farming practices are also heavily industrialised and implies that it is the European link with the natural world which gives it an inherent integrity.

It is interesting to look at how the relationship between Europe and Britain is portrayed in this article. Within its own press, Britain is often framed as distinct from Europe; it is frequently portrayed as an island state separated from the rest of Europe by the water that surrounds it (Hardt-Mautner, 1995). In the article cited above, however, Britain is merged with Europe. The description of people lingering over food could describe France, Italy or Spain, albeit in clichéd ways, but Britain is not usually imagined as a nation of lingerers. By portraying Britain as a fully integrated part of Europe, the journalist is able to connect Britain with the integrity invested in Europe, an integrity which also makes Britain unsuitable for GM crops.

A common frame in the UK press is that European interests are antagonistic to British ones (Brookes, 1999), however in the discussion of GM this was not the dominant frame. Instead Europe is depicted as a guardian of Britain's genetic modification purity, acting as a first line of defence against the USA:

"The Bush administration has gone to the World Trade Organisation to try and get it to force Europe to take its GM products. For six years the EU has maintained a moratorium on GM crops, helping keep GM food out of Britain" (Daily Mail, 12 May 2004).

This shows how the dominant view of a particular nationality can be subverted if it does not fit with a particular argument; like nature, nationality, is dependent on the discursive situation within which it is articulated. The relationship between states, the boundary surrounding a nation and the characteristics of a particular country can all be shifted according to the discursive context in which they are deployed.

8.2.6 Countries in the Global South

Within the sample there were not many articles that mentioned countries in the global south – 15 in total. One story about a mystery illness in a Filipino village produced 4 stories. The cause of the illness was presumed to be the growth of GM maize in the village. The story also featured the horrific deaths of several animals: “The belly swelled, its mouth started frothing and it slowly died” (Guardian, 3 March 2004). Another three stories were about the problems of monoculture in Argentina and one was about the problems Indian farmers were having with GM. One story was written by GM advocate Dick Taverne; he used the press space to claim that “The strongest argument in favour of developing GM crops is the contribution they can make to reducing world poverty, hunger and disease” (Mail on Sunday, 3 March 2004). Four other articles argued that those who claim GM will help 'developing' countries are disingenuous: “Bad for the poor and bad for science: Genetically modified crops will not help the developing world” (Guardian, 20 February 2004). None of these articles framed southern countries as agents; they were depicted as passive, unable to exert their own influence against global trade systems and the decisions of multinational companies.

Two articles did discuss a story in which a southern country was able to turn away GM food. This story was in Brazil where the President, Lula de Silva, had suspended a nationwide ban on GM. The articles focus on the actions of Greenpeace activists who are able to stop a freighter containing GM beans from docking. As with the story of UK activists stopping a cargo ship docking, only the moment of victory is discussed - the action is reported as proof that “it is possible to keep the port clean” (Mirror 10 May 2004). The article does not acknowledge that other GM imports would continue to arrive at that port. It is activists, rather than the Brazilian Government, that are discussed as powerful. None of the articles showed Southern countries choosing whether or not their nation imported GM food. This matches the depiction of Western governments as ineffectual; however the media did not discuss people in Southern countries as consumers - which was how people in Northern nations were identified as powerful.

8.2.7 The Double Threat: Foreign Food and Foreign People

The focus on national boundaries, coupled with the language of purity and contamination (see Chapter 6) has some very real consequences for the coverage of GM. Haraway has written about the genetic modification of humans, animals and plants; she claims that debates about genes have the potential to become inflected with “the unintended tones of fear of the alien and suspicion of the mixed” (Haraway,

1997: 61). Such inflections are evident in the British GM debate. One example of this is the way many articles, in both tabloid and broadsheet coverage, alluded in conscious and unconscious ways to the immigration debate. In recent years asylum and immigration have been extremely contentious issues in the UK, with the media playing a central role in framing the debate. Media coverage of asylum seekers has been "overwhelmingly negative and hostile" (Buchanan et al., 2003), with tabloid papers, in particular, continually reporting an asylum 'crisis'. The xenophobic tone of asylum reporting has undoubtedly "influenced the presentation of successive government policies" (Buchanan et al., 2003), which have become focused on reducing the numbers of asylum seekers entering the country and 'extending and securing Britain's borders' (Buchanan et al., 2003).

A popular image in the sample was that of flooding. A headline from the Independent on Sunday reads: "GM soya and maize were flooding unnoticed into the UK" (7 March 2004) and The Times writes about: "The extraordinary move which will open the floodgates to GM crops" (19 January 2004). Overall, 21% of articles refer to flooding. As Welsh (2007) argues the control of floodwaters is a defining feature of Western civilisation and the metaphorical link between inundation by water and inundation by immigrants is a long-established means of framing this issue. Given the centrality of flows in constituting globalisation (Lash & Urry, 1994), flooding metaphors point to the ways in which flows of people challenge established dynamics within nations, as they introduce different ideas, religions and literatures, all of which call national identity into question.

The flood is the ultimate threat to border, washing distinctions and divisions away. It is the archetypal 'matter out of place', as Douglas (1966) would phrase it. When discussing how GM crops traverse boundaries it is a very powerful symbol. The flooding metaphor discursively links the asylum and immigration debate with the GM debate by evoking a rhetoric made familiar in previous decades, most notably through Margaret Thatcher's use of swamping in 1978.

The use of this sort of imagery was particularly noticeable following the expansion of the EU which took place on 1 May 2004. One of the risks that the newspapers focused on was the entry of GM foods from accession countries. On 14 February 2004 a headline in the Guardian read: "EU races to thwart influx of food from east" following attempts by the US administration to get 'new Europe' (Poland in particular) to accept GM crops. No direct comparisons are drawn between genetic modification and asylum debates, but the language used means it is easy to make the connection; the word 'food' could easily be replaced with the word 'people'.

Furthermore, the reigniting of the immigration debate at the time of EU expansion meant that these connections might have been prominent in readers' minds. Press coverage about EU expansion carried headlines such as: "Britain faces influx of Europe's gypsies" (The Sunday Times, 18 January 2004), "Sweden acts to stop influx of EU workers" (Guardian, 31 January 2004) and "We'll halt the EU influx" (Daily Mirror, 5 February 2004).

In the sample, 26% of articles used the terms 'unseen' or 'hidden'. Asylum seekers are often portrayed as an unseen threat, creeping into Britain in the dead of night, hiding in the back of lorries. Implicitly such portrayals mirror Beck's emphasis upon the invisible nature of contemporary risks. Similarly, several stories report problems with detecting GM. One story discusses how GM tomatoes were grown unnoticed at the Eden project, and the Daily Mirror coverage of the cargo delayed by Greenpeace protestors portrayed it as "arriving unseen in the middle of the night". Several stories also ascribe agency to GM crops: for example, the Daily Mail (20 May 2004) writes: "Mr Bryne admitted that GM food is sneaking unseen into the food chain all over the world". GM crops are sneaky and deceptive, creeping in whilst our backs are turned. This echoes, almost exactly, the description of asylum seekers often offered by right leaning newspapers".

Bluhdorn writes about the way in which the need for certainty has shifted certain issues like:

> "the defence of ethnic, national and cultural identities; internal and external security; border control and defence against migration . . . The transition from modernity to late modernity can be seen as a movement from an inclusive to an exclusive society, that is from a society whose accent was on assimilation and incorporation to one that separates and excludes."
>
> (Bluhdorn, 2002: 64)

One reason why the asylum and GM crop debate share a similar language is because they are both concerned with reasserting certainty. The linking of environmental risk and race, through the evocation of asylum issues within the media coverage of GM, amplifies the sense of uncertainty already present as the threats to the nation's boundary multiply. Both debates are concerned with the anxiety produced by the intrusion of foreign substances and counter this by positing the nation's boundary as strong and, if not impenetrable, then at least defensible. As such, both debates utilise the categories Bluhdorn outlines: borders, defence of national identities and defence against migration. In effect both debates are a response to the flows of globalisation - be it the flow of people, the flow of products or, pertinent to both, the flow of risks. The response to the anxieties produced by these flows is to discursively

retreat to the imagined firm boundaries of the past, even if in reality these barriers were, and still are, permeable.

8.3 Sources

8.3.1 Holding the Line: the need for certainty

The frame utilised by anti-GM environmental groups once again matched that offered in the press, as these organisations also portrayed Britain as GM free. As shown in Image 8.1 FOE's main GM campaign ran under the tagline 'Keep Britain GM Free'. By contrast those broadly in favour of the technology readily acknowledged that GM was entering Britain and used the presence of GM to argue that a commercial planting ban was futile. Those who developed GM technology argued Britain was not embracing the economic advantages offered by GM, while also failing to remain GM free, "and in the UK we're importing the GM material anyway, so our farmers don't benefit, the food isn't any cheaper" (Derek Burke, CropGEN). Sources chose to acknowledge, or not, the permeability of Britain's borders depending on the claims they were trying to make. Those concerned with halting the commercial planting of GM framed Britain's border as a key site of struggle, and mobilised people with the call to defend Britain's 'GM free status'. Those who supported the commercial growth of Chardon LL called attention to the GM material already in the country, to undermine campaigns premised on a non-GM status quo.

The previous analysis of press coverage reveals that, as with most debated concepts in the GM debate, it is the frame offered by environmental NGOs that is shared by the media. Yet, when interviewed, campaigners acknowledged that Britain is not GM-free. Julian Rosser, Director of FOE Cymru, admits that when establishing the campaign in Wales, the slogan 'GM-free Wales' was not their first choice:

> "…when we started it in 1999, we called it 'The GM-free Welsh environment campaign' because we wanted to be, I suppose a bit more honest about this, we couldn't, we weren't stopping soya coming into the country…almost everybody else would always call it the 'GM-free Wales' campaign anyway."
>
> (Julian Rosser, Director of FOE Cymru)

Indeed FOE's 'Keep Britain GM free' campaign is not actually about maintaining the barrier of nation but encouraging local authorities to ban the planting of GM crops on their land. Clare Oxborrow, a GM campaigner for FOE Britain, describes the campaign as a specific way of bypassing national Government:

> "We felt it was pointless trying to direct a campaign at the UK government because they'd already made up their minds, weren't going to listen. So what we did was deliberately took the campaign back to the local level".
>
> (Clare Oxborrow, GM Campigner, FOE Britain)

Strategically FOE understood that political advocacy directed towards a very pro-GM national Government was futile, so instead they directed their lobbying activity at actors they believed to have less entrenched positions – local councillors. But in order to create an effective campaigning slogan FOE still found it had to rely on the symbolic power of both boundary and nation. It was Britain that had to be spoken about and for Britain's boundary to remain meaningful the nation had to be represented as GM-free.

FOE's focus on Britain's boundary fit well with the news values of the national press, as demonstrated in the stories discussed above. Securing media coverage was not, however, the only reason FOE focused their campaign slogan on 'keeping Britain GM free'. In my interviews, campaigners described why they found the focus useful. Clare Oxborrow cites the ability to discursively construct a border as one of the key advantages of campaigning on GM:

> "The other thing that is quite possibly unique about GM is that, especially in the UK and Europe, we're still at a point where we haven't got GM, well in any significant way, obviously there are problems and it is coming in and out of our food and whatever, but there is still an opportunity to kind of keep Britain GM free, still a sense of holding the line".
>
> (Clare Oxborrow, GM campaigner, FOE Britain)

Clare Oxborrow describes how advantageous it is to create a sense of a tangible barrier. Even though GM material moves in and out of Britain, as she herself acknowledges, the absence of commercial GM crop planting sustains the sense of a meaningful border between Britain and other countries. As Oxborrow states "there is still an opportunity to kind of keep Britain GM Free"; in order to create an effective campaign it is necessary for FOE to ignore Oxborrow's 'kind of' qualification – the potential gaps in Britain's borders are overlooked in order to instil the idea that a line is being held.

The contemporary world is characterised by uncertainty and insecurity caused by the processes of globalisation. A key feature of such uncertain politics lies in "the prohibition of politically established and guaranteed rules and regulations, and the disarming of the defensive institutions and associations which stood in the way of capital and finances becoming truly *sans frontiere*" (Bauman, 1999: 173-4). Under these conditions it would be extremely difficult for regional powers to keep their county,

country or continent 'GM-Free', as evidenced by the World Trade Organization's breaking of the European moratorium on GM produce.

As the global economy cuts across the borders of the world's political structures, people feel powerless in the face of new international structures over which they have no influence. As Bluhdorn writes, "The major challenge for late-modern society is to restore certainty, or at least to find effective strategies for the management of uncertainty, which is an unavoidable consequence of ongoing processes of globalization" (Bluhdorn, 2002: 64). The search for certainty leads society to retreat back to familiar modernist categories.

Although physical risks may cross boundaries, society is still preoccupied with old divisions and frontiers. What the GM debate, and the plethora of other risk debates drawing on the discourse of nation are undertaking is a discursive reconstruction of the mythic assumption that it was once possible for a nation to control what crossed its borders.

Oxborrow claims, in words strikingly similar to Bauman, that "what scares people is that loss of control, that feeling of not knowing where you're going to end up." By mobilising people to defend a clearly defined boundary FOE is attempting to install a sense of agency or control; a discursive reconstruction of certainty is provided. The complexities of global flows and the multiple ways in which people could come into contact with GM are reduced down to a single line, a boundary which must be maintained at all costs.

Oxborrow compares GM with campaigns on climate change and recycling. These, she says, are much more difficult to communicate because it is hard to see how to solve these problems easily:

> "a lot of things like climate change it's you know the threat's there, it's happening and it seems like an insurmountable problem to some people with things like, I don't know, you know even waste and recycling it's kind of a problem that it's there and it's how to deal with it whereas GM it's kind of like holding the line"
>
> (Clare Oxborrow, GM Campigner, FOE Britain)

GM, in comparison to these other issues, is easier to communicate about as it is possible to create an impression that a defensible barrier, a line, can be maintained around 'the nation'.

Despite most of the interviewees referring to Britain as GM free, none of them described Britain as pure. Sources only suggested Britain was a fragile or unique country: this was evidenced both in the interviews and in the attributed quotes

contained in the articles. In contrast to this, articles regularly referred to Britain as a pure country. Environmental NGOs did however argue that the environment would be contaminated or impure if GM crops were grown in it; when the image of people in white suits and discussions of contamination are coupled with the slogan 'Keep Britain GM free' (as they were in several press pictures staged by FOE and in FOE's campaign materials) the ideas of Britain's contamination is evoked even if NGOs don't directly make this link. Once again NGOs are using discursive cues that evoke both nation and nature, to implicitly make an argument they believe to be effective and popular. The media eagerly utilise this imagery as it fits with commonly used templates, ensuring it is easily understood by readers.

8.3.2 Consumer vs. Citizen

Within the source interviews 'consumers' were discussed far more often than 'citizens', mirroring the press coverage. Campaign groups, in particular, referenced consumers. It is clear from the interviews, the groups' campaign websites and their campaign materials that Friends of the Earth, Greenpeace and the Soil Association predominantly offered people a consumer model of action. They claimed purchasing choices were the key way to halt GM and presented economic power as the most viable way Britain could be kept 'GM free'.

FOE were the first to launch an anti-GM campaign and it was exclusively consumer focused. FOE targeted different supermarkets to pressure them to commit to being GM free, as Neil Verlander the press officer recalls “we were forever ringing up supermarkets to find out which supermarkets had cut it out, and once a supermarket fell we’d put out a press release saying Sainsbury’s rules out GM food, or Iceland, or Tesco – that was quite a big one.” It is intriguing that a press officer should spend so much time ascertaining the GM status of different supermarkets – a piece of work that you might expect a policy officer to do when compiling a report, but Verlander discovered that even revealing if one supermarket had stopped selling GM products created a newsworthy story.

Ian Willmore, FOE's media co-ordinator, revealed that the consumer angle had an interest for one paper in particular: the Daily Mail:

> “Well certainly for the Daily Mail because it’s a big health scare story, it’s a big consumer story, it’s got a big female readership, so people who actually spend the money at the supermarkets and decide what to buy...so all those things together make it an absolutely perfect Daily Mail story which is why they were so keen on it, it’s very unusual for the Daily Mail to take an interest in an environmental

campaign. You could say, well on the one hand it certainly gave the environmental movement a central role in politics which it had never had before”

The health scare consumer story appealed to the Daily Mail's readership in a way that a story about protecting wildlife or corporate control of the food chain would not have – of course environmental NGOs were able to get some coverage for these angles, but this was dependent on the journalists' interest in the story as a consumer issue.

The Daily Mail's take up of FOE's anti-GM campaign is something their press officers are very proud of; they rightly recognise the political power of this newspaper – if the Daily Mail gives a large amount of attention to an issue it places it on the political agenda. This is because politicians are traditionally believed to be interested in the Mail's representation of the views of 'Middle England'; an often referenced but rarely defined group of citizens from whom it is claimed support must be garnered if electoral success is to be achieved. Others have spoken about the importance of the Daily Mail in getting politician's attention, particularly for environmental issues which are sometimes perceived to be marginal and not of concern to the majority of voters. This is Richard North, the Independent's Environmental Correspondent:

“She (Thatcher) would read the same thing millions of times in the Guardian, The Times and the Independent and say these people are whingers. But when the Daily Mail takes it up she realises it must be a genuine popular concern and she is sensible enough a politician to follow their lead”

(cited in Macnaughten and Urry: 1998)

By framing GM as a consumer (and a health) risk FOE ensured the Daily Mail covered the story; if they had framed it as an environmental or economic justice issue they would have been unlikely to get the Daily Mail's support.

FOE offered their supporters consumer based actions. This has been a feature throughout their campaign on GM. In 1999 they urged customers of Tesco to lobby the supermarket to remove GM products, in 2003 they asked customers of several supermarkets to campaign against the GM animal feed in products and in 2010 they targeted ASDA urging them not to drop their policy which prohibited the use of GM animal feed in their own products. All of the actions were accompanied by statements reminding supporters that “consumer pressure can change supermarket's behaviour” or “consumer action can stop GM animal feed imports”. These were not the only actions on offer, for example, they also ran a campaign targeted at local councils, but consumer actions dominated campaign activity.

The Greenpeace campaign against GM differed from FOE's. They led on crop-thrashing, which was the kind of dramatic, illegal, direct action Greenpeace has become famous for taking. Greenpeace claimed that by destroying the crops grown in the Farm Scale Evaluations they were 'decontaminating' the fields – stopping GM material spreading to neighbouring fields. It was a 'direct action', as opposed to a 'protest', because it involved directly stopping the practice objected to (in this case the growth of GM crops), rather than lobbying someone else to make this change. Like consumer action, it is based on bypassing the political system, but, unlike consumer action, it involves a significant level of commitment and involvement because it is based on a high level of participation. Consumer actions, by contrast, are premised on a limited model of involvement, as Lewis et al. write:

> "Unlike the citizen, the consumer's means of expression is limited: while citizens can address every aspect of cultural, social and economic life...consumers find expression only in the marketplace."

Greenpeace, however, encouraged only a minority of supporters to take part in crop-thrashing. Greenpeace had to organise the actions in secret, due to their illegality, and they were not mass participatory actions. Those who took the action were seasoned and trained Greenpeace activists. Instead, Greenpeace offered supporters other actions in which they could get involved. The main one was the *Scary in the Dairy* campaign. This campaign was run in 2003 – 2004, it ran simultaneously with the crop thrashing actions. *Scary in the Dairy* was targeted at Sainsbury's asking them to introduce non-GM milk. As a result of the campaign they introduced a milk which was guaranteed to be free of GM animal feed, it was slightly more expensive than milk which was not guaranteed to be GM free and cheaper than organic milk. Greenpeace hailed the campaign a success - the main result of the campaign was greater consumer choice.

Image 8.3: Scary in the Dairy campaigners outside Sainsburys

Image 8.4: Greenpeace campaigner with 'GM free' mlk

When interviewed, Greenpeace campaigner Ben Ayliffe talks about other parts of Greenpeace's campaign that addressed people as shoppers:

> "We've done things with supermarkets, things like Shopper's Guides, so we have like an online Shopper's Guide to GM food, so we had like red, amber and green lists...so people can go online and see what's you know, in their shopping basket."

The Soil Association, the third most quoted anti-GM group, also predicated a consumer based model of action. An article written by their policy director, Peter Melchett, is a clear example. It is headlined: "When it comes to food it's better to contact your supermarket than your MP" and discusses how consumer action, as opposed to engagement with political structures, kept GM out of Britain. As Michael Green, Soil Association Policy Officer argues, "the rejection of GM crops in this country has been an overwhelming victory for consumer power and choice". It is less surprising that the Soil Association premised consumer action, they are a lobby group for the Organic Farming industry. A significant part of their work is providing an Organic certification with the aim of 'winning consumer trust for organic products'[11]. As Green states the Soil Association "represents farmers and processors who produce organic food, so we're representing a £1 billion market". The messages they promoted reinforced the media frame that GM was a 'consumer issue' and this fit with the dominant frame was part of the reason they were quoted so often. In contrast the 'Anti-Genetix Network' (who offered an explicitly anti-capitalist analysis and urged people to take 'direct action') did not receive a single quote in the media, despite images from one of their protests (Image 6.2) being reprinted many times in the press.

Interviewees advocating GM spoke about consumers less, they also, however, claimed that consumer action would decide the future of GM. Although advocates spoke about public opinion as currently being anti GM, when I asked them about the future of the technology interviewees often switched to talk about consumer actions – claiming that when GM technology creates individual consumer benefits (such as healthier foods or foods that lasted longer after they were purchased) consumers would switch and start buying GM products. While the biotechnology industry often berated the public for being 'irrational', they did not criticise consumers for irrationality. Consumers were framed as future GM purchasers, who would actively choose GM products once the GM industry developed products that benefited shoppers, as opposed to farmers or biotechnology companies.

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11 http://www.soilassociation.org/aboutus/whatwedo

When sources urged the public to take action, they continually addressed the public that shops. NGOs often spoke as if the 'British public' and 'consumers' were synonymous by urging the public to help halt GM though their purchasing choices. British democracy was presented as, at best, ineffectual and, at worst, defunct. NGOs, therefore, did not attempt to mobilise people as citizens, instead they urged British consumers to make the right purchasing choices. Sources and the press constructed a nation unified in taking consumer action against GMOs; this meant people were encouraged to link national and consumer identities. Within the GM debate people were predominantly identified as 'British consumers'.

8.3.3 Other countries:

Countries apart from Britain were discussed less among interviewees than they were in the press sample and most interviewees had to be prompted before discussing anywhere else; it was Britain that was focused upon. When interviewees did speak about other countries they echoed the press coverage closely linking Europe and Britain. Those who were against GM technology presented Europe as both GM free and anti-GM, just as they did Britain. The phrases 'European consumers' and 'British consumers' were used almost interchangeably (although British was used more often). Europe and Britain were merged in a way that is rare in public discourse. Britain is normally presented as separate from mainland Europe, not just because it is physically separated by water, but also in terms of cultural characteristics and regulatory attitudes. Europe's shared, albeit constructed, 'GM free' status, frames the continent as a united whole and the differences which are often premised in public discourse are overlooked in this particular debate.

Just as anti-GM campaigners presented the British political system as undemocratic, so they also described the EU as failing to represent the views of its people. The European Commission was depicted as cowering in the face of US might as exercised through the World Trade Organisation "they're [the European Commission] still pretty pro-GM and they're pretty shit scared of the Americans" (Julian Rosser, FOE Cymru). Despite criticising the European Commission, anti-GM campaigners still claimed Europe was a useful barrier, protecting Britain from GM flows:

> "the European Commission may be very annoying, a lot of it may be very annoying but if we weren't in the European Union then I would say there is no way that Blair would have stood up to the Yanks. Um, we would be knee-deep in GM crops by now if it wasn't for the fact that we're part of that whole Union. "

(Julian Rosser, Friends of the Earth Cymru)

As in the press coverage, the issue of GM is depicted as a continental battle between Europeans and Americans. Britain is presented as both part of Europe, but also protected by Europe, whose trade regulations act as a first line of defence – proving effective where our own Government would have failed. This does not fit with the usual framing of Europe's trade regulations which the media commonly describe as hurting British interests (see Brookes, 1999). Despite being framed as undemocratic, the European Union is still shown to be effective in ways that the British Government is not.

Those who were promoting GM also discussed the relationship between Europe and America: they equated Europe's anti-GM stance with an Anti-American sentiment, "anti-Americanism which is fairly ripe not too far below the surface over much of Europe" (Vivianne Moses, cropGEN). They connected this with an anti-corporate attitude which they also claimed was present in Britain:

> "There's this whole sector of society, particularly in Europe...that has a negative connotation when it comes to the word 'multinational'...the very word profit, in America is taken as a cause to celebrate, but is taken in the UK as somehow sinister"
>
> (Colin Merrit, Monsanto).

Merrit also presents the UK as an integral part of Europe and discusses cultural differences between Europe and America. He presents these cultural differences, however, as something to be overcome, rather than respected, and in this he departs both from the frame offered by anti-GM sources and the press.

The majority of sources contrasted Britain with America. This contrast was particularly highlighted in discussions of American and British landscapes:

> "It's a risk to the environment and to societies' relationship with the environment reasonably acute here in the UK where there is a relationship with the land which simply doesn't exist in America."
>
> (Doug Parr, Chief Scientist for Greenpeace)

Parr argues that in the UK (a relatively small sized nation in comparison to its population) the relationship between humans and the environment must be carefully managed as the demands on the land are already substantial. Sites of human habitation and human agriculture co-exist in close proximity in the UK. This was contrasted with the vast plains of America where space is not at such a premium. Parr uses the contrast between American and British landscapes to reinforce his point that

any new agricultural technique should be carefully introduced in the UK because of the acute relationship between humans and the land.

Regardless of whether sources were pro or anti GM, they depicted British farming as unique: Professor Pollock is a GM advocate who argues that the British environment has to be carefully managed due to the pressures land demand puts upon it:

> "we have been manipulating the British countryside since the Iron Age. Every square inch of what you look at is managed. So what we consider to be the natural environment isn't, and this balance here is extremely important for the UK."
>
> (Chris Pollock, Chair of the Advisory Committee on Releases into the Environment)

It is the heavily managed aspect of the British landscape, particularly when compared to the farmlands of North America, that mark it out. Pollock argues that the precarious balance of an already manipulated landscape would benefit from GM, as it would enable greater crop efficiency and therefore relieve some of the pressure. Pollock and Parr use the contrast between the British and American landscape to support different arguments, however, they both, accept the popular cultural image of America's open rolling plains and Britain's heavily managed patchwork landscape. One set of interviewees contested the difference between American and British landscapes. Representatives for the biotechnology industry denied there was anything unique about the British landscape:

> Well I don't buy that at all. I very often hear it's because America is a big open space, whereas here we are all mixed up together . . . but no, there is a lot of very mixed farming in America . . . so I don't think that's different.
>
> (Colin Merritt, Monsanto)

By stating that there is no difference between British and American landscapes, Monsanto is able to counter claims that a careful approach has to be taken when introducing GM crops in Britain because of the distinct nature of the British countryside. If the landscapes are similar then there is no need for caution; the technology can be introduced in Britain in exactly the same way as it has been in America. Colin Merrit's line of argument goes against the culturally accepted representation of America as a land of open plains and vast wheat fields – an idea that is promoted by Monsanto themselves in Image 6.1. The pictures in Monsanto's promotional material discursively work against the arguments their representatives are trying to make. This is another demonstration of the importance of considering cultural appropriateness in communication strategies.

When GM foods were first introduced to Britain the biotechnology industry used images of the American landscape to promote the technology because GM crops were

already being grown in the US. As biotechnology companies predominately employed staff from the United Sates, when GM company representatives appeared on British television, they spoke with American accents. All of the pro-GM sources voluntarily raised this point and criticised the campaigns for not being culturally sensitive. Merrit, from Monsanto, talked at length about how inappropriate some of the early promotional materials were for a British audience:

> “we had a video, with a lot of these kinds of typical American settings...these wonderful, riding up to the sunset images, and modern pop sitting around the breakfast table eating golden corn with some lovely voices, and it's a different emotional reaction in the US than it is here”
>
> (Colin Merrit, Monsanto)

The images Merrit describes are strikingly similar to the ones Monsanto promoted in Image 6.1. When accompanied by the scenes of families sharing breakfast and the sentimental voice over, it is clear that the advert would appear saccharine according to British cultural norms. Moses from cropGEN was also critical of these promotional videos:

> “something about the glorious sunset and the golden fields of grain, this sort of thing, the glories of what they were doing, it didn't wash”
>
> (Vivianne Moses, cropGEN)

Monsanto adverts not only used images of the American landscape but Moses and Merrit argue that, even more importantly, they were based on an American cultural sentiment. They did not connect with British viewers as they appeared corny or trite.

Several interviewees remembered that, at the start of the GM debate, the only people defending the technology had American accents; sources again argued this was part of the reason people in Britain were suspicious of GM technology: “they defended themselves, so it seemed to the British, by squeaky American voices on the telly, it didn't go down very well” (Vivianne Moses, CropGEN), “they wheeled out all these guys to explain how great GM crops were and they all had Mid-Atlantic accents which was a bit grating, and they were sort-of thrusting males in their mid-30s” (Dennis Murphy, University of Glamorgan). One interviewee even claimed Monsanto's press releases were written with an 'American voice' “the companies press releases were clumsy and very mid-Western US in style” (Derek Burke, CropGEN). Sources who were in favour of GM all argued that part of the reason the technology failed was because Monsanto promoted an image of American GM food and crops.

Merrit describes the difficulties he had working for an American company in England– especially when that company does not understand the importance of cultural difference:

> "Culture is a very specific thing. I've often said one of the problems about being English, working for an American company, is they always chose us first to come and try out their things, because they speak the same language. And it sounds like the same language, the cultural bit is very different."
>
> (Colin Merrit, Monsanto)

There is a common understanding amongst the UK biotechnology industry that GM was so unpopular because they did not appeal to local sensitivities and identities. It is a mistake they are keen to rectify, as evidenced by the UK specific Monsanto landing page. In addition, Monsanto now attempt to align themselves with other nationalities, in particular African ones. The US and biotechnology companies have been portrayed as "dumping GM food on developing countries". In 2002 the Zambian Government (whose country were in the midst of a food crisis with thousands of people starving) refused US food aid because they feared it contained a type of maize called 'Starlink', which was not approved for human consumption by the US Environmental Protection Agency. Despite citing health concerns many commentators speculated that Zambia turned down the food aid because they feared losing access to European markets if it was perceived that the food they produced contained GM[12]. The story led to bitter accusations from both sides, as each tried to blame the other for the shots of starving people that filled TV reports.

Since this story, Monsanto have been keen to show that GM technology is welcome in the Global South and, as a consequence, the nationality of their representatives has changed. This can be seen in many of Monsanto's recent promotional videos[13] which feature American, Indian and African farmers. In the recent Channel 4 programme '*What the Environmental Movement got wrong*' Monsanto chose former employee Dr Florence Wambugu as their representative; not only was she female but she was also Kenyan – a stark contrast to the 'white thrusting males with mid-atlantic accents' that previously represented the company. Monsanto's home page [14] features a circle of dark skinned hands holding corn, accompanied by pictures of

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12 http://news.bbc.co.uk/1/hi/world/africa/2371675.stm

13 http://www.youtube.com/user/MonsantoCo?feature=watch

14 www.monsanto.com

people in traditional African dress. Monsanto has realised that to get access to international markets it needs a PR strategy that is sensitive to international cultures.

8.4 Discussion

This chapter has shown that national identity is a key concept in the discussion of GM crops. Where actors were not sensitive to cultural differences they found their PR interventions unsuccessful. Monsanto used mostly American representatives to defend the technology; they discovered that this alienated some British viewers and that talking to people using local voices and recognising cultural sensitivities was important in ensuring their message was well received. Companies may be global but national cultures have not been erased; they still play an important part in how people understand both themselves and the world around them. GM was understood as an American technology and this influenced how the UK media spoke about it. Chekar and Kitzinger (2007) talk about how nationalism is implicated in discussions of cutting edge scientific enterprises. They discuss how national affiliation is sometimes performed by scientists or journalists as a strategic move on a national and international playing field. This was also true in the GM debate; the GM industry now try to affiliate themselves not only with the country they are talking in but also with countries of the Global South. This means their representatives have become far more diverse: Monsanto's words are no longer purely spoken by white American men, but also by female African scientists and Indian subsistence farmers.

Public opinion was automatically defined as homogeneous and British. When the national media use collective pronouns like 'we' or 'our' they imply a national community: “This is bad for our farmers, bad for our organic food industry and bad for our countryside” (Independent, 14 January 2004). Given that these are UK newspapers it can be inferred that the 'our' being referenced is the UK's; the limit of circulation constructs an imagined UK readership. (although it is often British as opposed to UK citizens that were addressed in the media). This automatic premising of nation excludes the discussion of regional variation when talking about risks and current flows of GM material in and out of Britain are overlooked as a symbolic regime is often structured around the nation (Brookes, 1999). GM was constructed primarily as a threat to Britain's health.

Beck’s theory of individualisation suggests that people today must constantly undergo the process of inventive self-definition to create their own categories of meaning: “Individualisation means the disintegration of the certainties of industrial society as well as the compulsion to find and invent new certainties for oneself and others without them” (Beck, 1997: 96). Yet this creative reinvention of certainty is not

borne out in the case of GM; instead old categories are reinvented and clung to. Bauman comments that "attacking insecurity at its source is a daunting task, calling for nothing less than rethinking and renegotiating some of the most fundamental assumptions of the type of society currently in existence" (Baumann, 1999: 6).

In the case of GM such renegotiation of categories is not attempted and instead the old divisions of 'boundary' and 'nation' retain their prominent role as discursive cues. These categories evoke a sense of security and order: as Clare Oxborrow from FOE put it, "a feeling of control" Of course not all sources referred to national boundaries when talking about GM crops. In general there appeared to be a continuum from those who were very pro-GM (in particular biotechnology companies) who did not refer to boundaries, to those who were very anti-GM (in particular NGOs) who placed a large amount of importance on boundaries.

A possible reason for this difference is that the invocation of boundaries is used in response to a threat; to discursively reconstruct security. Therefore if biotechnology companies were going to reference boundaries they would have to acknowledge that a threat existed. For campaigners, however, boundaries provide a way of creating agency. Even if British citizens are unable to stop other countries growing GM, at least Britain can be kept 'GM-free'. Politically the evocation of nation within GM debates has been profoundly challenging to political leaderships promoting globalisation agendas. While coverage of the GM debate evokes a symbolic boundary that, it could be argued, gives a false sense of security, the accompanying sense of agency continues to hinder what John Vidal dubbed "America's masterplan to force GM food on the world" (Guardian, 13 February 2006: 32).

Yet the defence of Britain's or even Europe's GM boundary is ultimately futile if the rest of the world continues to cultivate GM crops. In a global system of 'free trade' nations stand little chance of determining their own policy on GM or any other internationally traded product. If activists really wish to stem the flow of GM crops, engagement is needed with the many layers of governance GM crops are subject to, and action should be mobilised, not just around national boundaries, but around all the boundaries across which GM products can flow.

It can be seen from this discussion that within the GM debate the realms of the discursive and the material overlap in complex ways. Some elements such as regulatory regimes, the circulation of national newspapers or the lexical choices of NGOs reassert a discourse of nation. While others such as world trading systems, the rhetoric of multinationals and the threat of global environmental bads construct a discourse of 'globalisation'. Globalisation, like nationality, is structured through a combination of material and discursive elements and it is not 'inevitable' that the world

is understood as a globalised one. Gross (2009) found that, within the public discussion of immigration, there is a discursive struggle between re-nationalisation and cosmopolitanism. I would argue that in the discussion of GM a similar struggle between globalisation and re-nationalisation is evident. The discourse of globalisation is one of uncertainty; the discursive response to that is to reassert the traditional category of nation.

In addition to looking at how Britain and its borders are discussed, I also analysed the representation of other nationalities. I discovered that whole continents were characterised according to their GM status; Africa was presented as the exploited victim, America the contaminated aggressor and Europe the pure protector of Britain. It was interesting to observe that Britain was merged with Europe in an atypical way. Britain is normally framed as separate from continental Europe both in regulatory and cultural terms (Brookes, 1999). In the GM debate both media and sources presented Britain as an integral part of Europe, due to their shared status as 'GM free'. Madianou (2005) writes that identity is a relative quality; she shows how different identities are deployed for political rather than cultural reasons. My research also indicates that identity is relative. It is for political reasons that British and European identities are closely aligned in the GM debate; the UK and the EU are depicted as sharing the same battle against America's promotion of GM.

Another characteristic of the GM debate is that people were not predominantly addressed as British citizens but instead as British consumers. Despite the debate being predicated on the importance of nation, people are not asked to lobby their national Government. Instead the nation is urged to make different purchasing choices and to lobby their supermarkets. In order to keep Britain GM free the nation was urged to shop.

Researchers have argued that instead of a global citizenry, globalisation offers us a different identity: that of the consumer. Shurbsole discovered that since the 1970s the use of the word consumer in books and in broadsheet and tabloid newspapers has inexorably increased, and that its usage continues to rise.15 Notions of national citizenship are being challenged as people are pushed towards individualistic models of consumer choice and market logic. Citizenship is defined by rights and responsibilities. Consumers have a different obligation put upon them – to pay for the services they receive; in return they are offered choice. In order to access this choice,

15 http://www.opendemocracy.net/ourkingdom/guy-shrubsole/consumers-outstrip-citizens-in-british-media

however, it is necessary to have sufficient financial resources. Just like citizenship, consumer identity is exclusionary.

Lewis et al. chart how voting has declined and consumerism burgeoned (2005: 131). The purchase of commodities is often presented as the solution to all problems, we must buy our way to a better society; as Lewis et al. write “It is fully in keeping with the logic of this cultural environment that the ultimate solution for social ills offered by most political parties is economic growth.” (2005: 132). Fenton describes how the notion of democracy itself has become marketised (2008:55). Exercising democracy becomes no more than exercising choice, and the range of options we have to choose from is restricted by market principles. In such a context, national citizenry is fully usurped by the nation of consumers. This is likely to have significant consequences for how people engage in the 'public sphere' (Habermas, 1991). If consumers are relatively apolitical and disengaged from decision making, they respond to possibilities rather than setting the agenda.

Demonstrations, according to Lewis et al, are “the epitome of an active citizenship and the hallmark of democratic society” (2005:8). Within the GM debate, however, the protestor is an identity which is offered to an exclusive few; NGOs did not encourage most of their supporters to get involved in the crop thrashing actions. Destruction of GM plants was not presented as a mass action (in contrast to the direct actions offered by grassroots groups like UK Uncut and the Camp for Climate Action whose aim is to create mass participatory events); instead supporters were urged to show solidarity with the crop thrashers by taking action in their supermarkets.

Cook observes that our individual shopping choices may have more effect on the future than the way we vote in elections “making developments in Walmart, Tesco or Leclerc more significant than those in the White House, Westminister, or the Élysée Palace” (2010: 172). Envrionmental NGOs compel consumers to take action because the choices they make are important for the future of the planet. By doing so however NGOs reinforce a logic which prohibits the discussion of the one choice which undoubtedly could create a more sustainable future – to consume less. The hegemony of consumption is created through discursive and material means; such as technological advances, trade deregulation, the discourse of advertising and the promotion of neoliberal ideology etc. It is the mutually reinforcing processes of the discursive and material realms which have meant consumer power has increased in structurally observable ways. While Cook (2010) observes such an increase, he does not consider why this process occurred and, therefore, presents NGOs as simply harnessing consumer power for their campaigns. By addressing people as consumers,

NGOs do more than just harness this identity, they reinforce it, increasing the consumer's hegemonic dominance within society.

This thesis is concerned with how the concepts of nature and nation are used to frame the GM debate. Such concepts are of course not used discretely; they overlap and interact. One consequence of this interaction is that the press framed the GM debate in similar terms to debates about immigration. The GM debate is predicated on concerns about purity and impurity; while NGOs reference purity and contamination to discuss nature they don't discuss nations in this way. However, their evocation of purity, coupled with their focus on national borders, promotes a frame which is about fear of others and suspicion of mixing. This well established frame is used not just in the GM debate but also in discussions of immigration; it is therefore not surprising that the press utilise similar lexical choices to discuss both. The two share a common stock of ideas: national boundaries, purity and the dangers of mixing.

NGOs galvanized people to take action against GM field trials by talking about the threat of 'genetic pollution' and the threat to the nation's borders. But these concepts have had 'other lives': they mobilise a discourse which is used to discriminate against people as well as seeds (Myerson, 2000). Ideas of genetic purity and contamination are key in discourses that support discriminatory arguments based on race, sexuality, gender and ability. These associations are evoked regardless of the intentions of people using such words. As Haraway comments, "It is a mistake in this context to forget that anxiety over the pollution of lineages is at the origin of racist discourse in European cultures" (1996: 48). Phrases such as 'genetic pollution' carry a heavy weight of previous usage and cannot suddenly be divorced from the arguments they formerly supported; they risk appealing to the same reactions, especially when coupled with concepts of national borders. Despite the benign intentions of those who use such phrases these concepts still collocate with racist arguments. Haraway instructs anti-GM campaigners to stop using some of their most persuasive arguments, namely, ones that are based on 'doctrines of types and intrinsic purposes', in other words those arguments that are based on the integrity of nature, of nations and of races.

As a current NGO employee, I can see that my research poses some important questions for organisations concerned with both environmental and social justice. In particular the radical aims of many NGOs may be negated in the presentation of their arguments. Researchers like Hannigan and Kebdede (2005) found that many national environmental groups are most interested in perfecting existing hegemony and often focus on regulation or containment of environmental bads, as opposed to calling for a social reconstruction that would benefit the communities most affected by such bads. By contrast, grassroots organisations tend to mobilise around a discourse of

environmental justice and are, therefore, more likely to ask questions about core socioeconomic arrangements.

Yet even grassroots groups can find the radical intent of their message diffused. Pateson showed how the media de-activated the social critique present in a campaign against a road-building scheme in Devon in 1997. This had the effect of making opposition to the road-building programme seem acceptably idealistic and legitimate (in contrast to coverage of previous road protest actions in the UK that were depicted as violent and extreme) but it also erased “the connections between road building and broader social and political questions and thus deep opposition of the road protesters to modern forms of organization and power” (2000: 158). The newspapers used the representations of nation to normalise the protesters “the construction was that of patriotic heroes saving the British (sometimes explicitly, English) countryside” (Pateson 2000: 155). The protesters were framed as 'defending the countryside', as opposed to criticising current societal arrangements. In a similar way, framing the GM debate as about the defence of *Britain*'s borders or the *British* countryside obscures questions about inequity of power and resource within global supply chains

Direct action offers a radical challenge to prevailing forms of social organisation, this does not always fit with news values; journalists tend to reproduce existing forms of social power, not disrupt them. Within the press coverage of GM, just taking part in iconic direct actions was not enough to ensure your point of view was put forward in the media. Image 6.1 is a picture of the crop thrashing protest and was often used in the media coverage. It was produced by the Anti-Genetix network – a grassroots group with an explicitly anti-capitalist analysis of why GM technology should not be supported. Despite having their picture used many times they were not quoted in the media coverage – images like this were often used to provoke horror at what was happening to the landscape but it was presented as a symbolic act only, stripping away the political intent behind the action, which was to demonstrate that when governments refuse to listen, citizens have recourse to other forms of direct power. Instead, readers were instructed to join groups like Friends of the Earth and take action in supermarkets. The Anti-Genetix network argue that appealing to another source of monopolised power (like supermarkets) is a limited solution; by taking direct action these activists were trying to highlight the power ordinary people had to determine not only where GM was grown, but who controlled and profited from the food[16]. This analysis was not included in the media coverage.

16 These observations are based on conversations with former members of the Anti-Genetix Network.

Discussions of how society should be organised are rarely featured in the media. Fenton (2008: 47) observes that the freedom to establish alternative voices is severely restricted within capitalist society. Eliasoph (1998) describes this as the 'evaporation of politics in the public sphere' and demonstrates that activists with strong political opinions do not express these when interviewed by journalists, knowing they are unlikely to be covered by the mass media. This lack of alternative, critical voices stifles conversations about how society should and could be organised. Current social arrangements are presented as the only option; serious considerations of alternatives to consumer capitalism are hardly ever discussed. This means, when such debate is attempted, it can easily be dismissed as an impractical, idealistic impossibility. If alternative social arrangements are never discussed then the society they structure will never consider whether things could be different. Part of the reason that such arguments are excluded is the premising of consumer identities. NGOs who predominately address their supporters as consumers are, inadvertently, reinforcing the constrictions on what messages they can get the media to cover. While the logic of consumerism dominates, those radical, alternative perspectives will continue to be excluded from the debate.

Campaigns that create better regulations or improve working conditions achieve important societal success and often have a civilizing influence on the market or state, but they do not create "a genuinely free space where political agency might be articulated and lead to a political project" (Fenton 2008b: 241). NGO representatives recognised this was problematic. Ian Willmore, from FOE's media team, was proud of how effective the GM campaign was; he rightly identifies FOE's campaign as a key factor in stopping GM from being commercially planted in Britain. But despite this, he also recognises that the campaign did not allow FOE to put forward their preferred message:

> "but if you wanted to make a criticism you could say it diverted them from lots of other things which in the long run might prove to be more important but are much harder to campaign and communicate about"
>
> (Ian Willmore, FOE Media Co-ordinator)

These 'other things' were issues of social justice, corporate control of the food chain, whether GM was an appropriate tool in the hands of civil society, how Southern countries should feed their growing populations, how to deal with the impact climate change will have on food production etc. These were questions that the frames of nature and nation excluded from the discussion – focusing instead on defensive concerns about impurities and health risks.

Massey (1994) argues that geography is far more than distance; it also encompasses the diversity of the world. She states the world cannot become smaller while inequalities divide us; globalisation has maintained those inequalities rather than challenging them. In response to the flows of globalisation NGOs promoted arguments based on defending the nation state. Such reactive responses may prove popular in the media and in effective campaign strategies but they fail to challenge popular imagination to find new ways of conceptualising a global world. An argument that acknowledges the inequalities that structure our world seems a good place for any organisation concerned with social justice to start.

Chapter 9: A Modified Nation: Nationality and Citizenship in the GM Debate - Audience

9.1 Introduction

In the previous chapter, I showed how national boundaries were premised in the discussion of the cultivation and consumption of GM crops and argued that this is an example of symbolic politics. The evocation of nation as the unit with which to discuss threats not only denies difference within the nation but also ignores global flows from outside, which render the boundary of nation compromised. Within this chapter I shall further add to the insights of researchers like Brookes by analysing how audiences (re)produce national boundaries in their discussions of a particular risk debate. I shall consider whether they present Britain as GM-free or if they acknowledge that the country's boundary may be porous.

I shall explore how audiences utilise ideas of national boundaries and identity in their discussion of risks. In particular, I shall consider whether the national media engender national identities and what kind of national identities people articulate.

I shall also explore where participants locate agency within national subjectivity. In the previous chapter I showed how the media and campaigners predominantly addressed audiences as a nation of consumers rather than citizens. The work of other media researchers has shown that discussions of GM are the norm in this respect, and that people are increasingly appealed to as private consumers rather than collective citizens. Lewis et al. claim that the continual addressing of people as consumers affects conceptions of the self and that "the way citizens are portrayed on the news media helps to shape what it means to be a citizen in a democracy" (2005: 8). They do not, however, offer any audience studies to test this assertion. I shall develop Lewis et al's insights by analysing how people draw on the identities offered by the media when articulating their own identity. I shall explore how participants frame their role in the GM debate and what actions they consider available to themselves.

Beck has shown how globalisation has brought with it another phase of uncertainty caused by shifting arrangements. This chapter will consider how audiences respond to uncertainty, and whether they reproduce old categories of certainty or consider the possibilities that new ambiguities produce.

9.1.1 Participants' Nationality

The majority of focus group participants were born and brought up in Britain and called themselves British. Some, however, defined themselves differently, either because their nationality was different or they had a particular experience that meant they felt an affinity with a different country. A list of these participants is given in Table 9.1.

Group	Participant	Nationality
Urban 1	Isobel	British – born in India
	Sunil	British – born in India
	Steve	British -born in India
Bioscience Students	Keefer	Danish
	Barbara	Danish
	Udele	American
Over 60s	Sybil	British - Born in Caribbean
	Oprah	British - Born in Caribbean
Urban 3	Ted	British – wife was American

Table 9.1 – Focus Group participants who identified with Other Countries

9.2 The Homogenous Nation and its Symbolic Border

All the focus group discussions were focused on Britain's GM status, as opposed to Europe's or Wales'. Participants debated the amount of GM material in Britain compared to that in other countries (or sometimes other continents – e.g. Africa or continental Europe). This comment from Terry in the 'Rural' group comparing the UK with America's was typical "I think we've still got a grip on the border in the UK". Given the importance of the unit of nation, as a cultural, political and regulatory entity, it is hardly surprising that participants framed discussions around it.

Focus group discussions ignored the economic and geographical differences that determine GM exposure, just as the press discussions did. I found that no groups discussed regional agricultural variability (for example the large amount of wheat and barley grown in East Anglia and the concentration of Crop Trials in that area), nor did

they consider how social or economic factors might affect who in Britain consumes GM food. None of the participants, including those with specialist knowledge, like the Welsh conservationists or the group in East Anglia who lived near a trial site, used these distinctions to question the frame of a homogenous nation. In Group 9, participants lived in close proximity to both GM trial sites and the pesticides associated with intensive maize farming. This meant they had personally experienced increased exposure to the hazards of agriculture. In the following extract Mac talks about living by a GM trial site that was being regularly sprayed with pesticides.

> Mac: “One day when they mix this stuff in the back of their big trucks they all wear masks and everything and you think, well, it’s alright for you lot but what about us lot?”
>
> Elaine: “You live right across from it?”
>
> Mac: “Yes, absolutely, you can taste it and it’s quite concentrated as well.”
>
> Emma: “Really?”
>
> Mac: “Yes. They spray for slugs; they spray for promoting growth they put pellets down for that...So if I’m up the field with my dog we get bombarded with pellets.”
>
> (Crop Trial Area)

Clearly Mac's exposure to risk is starkly different from many other people's, yet the group remained silent on the issue of arable variation within Britain, talking about the decision as one that will affect the whole country equally. This is Mac again, “I’ve done some reading about it and of course listened to the radio, television, the media and the paper and it appears that there was a decision about growing crops in this country”. At no stage did the conversation move on to discuss how the decision, if it had been approved, would have affected them much more than it would have affected people who lived in different regions, "Well the name of the American Monsanto immediately leaps to mind, it does seem, wanting to fill Britain with GM” (Quincy, Crop Trial Area). Despite participants remembering where the trial sites were, “You know along that Brockford Road, near that Brockford Garage, I can remember seeing some along there” (Elaine, Crop Trial Area), when it came to discussing the implications of commercially growing GM in Britain, the group did not mention the different impact that the decision would have on them in comparison to the rest of Britain.

Audience researchers have observed how even personal experiences can be interpreted and understood through a dominant media frame. Kitzinger (1998: 209) argues that “individual experience provides only shaky and preliminary ground for challenging prevalent cultural definitions”. Thus, although Group 9 had personally experienced what it means to live by a GM trial site, and at some points in the

discussion clearly articulated their own distinctive experience, they did not use this knowledge to question the assumption that growing GM commercially in Britain will affect everyone equally. The group from the crop trial area, in part, open up the construct of a homogenous nation by describing how GM uniquely affects their community. The group draw attention to information omitted by the frame of a homogenous nation (that the majority of the country's maize is grown in East Anglia and therefore if GM maize is planted in Britain this is where most GM pollen will be found). Yet, despite their implicit critique of this dominant frame, they do not use their own experience to question the concept of a homogeneous nation and ultimately it remains unchallenged.

Brookes describes how the symbolic power of nation lies in its identification as the natural political and cultural unit. “Dominant representations of nationhood...require the denial of difference within the nation, the subordination of other possible identifications with communities based on locality, ethnicity, region, dispora etc” (1999: 261). The media reinforce this denial in two interlinked ways; firstly, as Anderson demonstrated, through the existence of a national media and secondly through continual references to a national community of readers in media content (Billig, 1995). The media's premising of nation is also reinforced by a regulatory and political culture which predominantly functions, and is discussed, in terms of a national context. So continual, implicit and constant is the reproduction of nation as the natural unit within the GM (and other) debates that participants did not question it, even when their own experience highlights the geographical diversity of Britain.

Within the press coverage, Britain is represented as a ‘genetic modification free zone'. In Chapter 8, I argue that this representation is inaccurate given the presence of GM food products, animal feedstock and the possibility of contamination from GM fields. Despite this, both the press and NGOs continue to present Britain as GM free; for journalists such a frame allows them to present the risk from GM as novel (see Kitzinger and Reilly, 1997 for a discussion of how the press focus on 'new' risks) and it allows campaigners to mobilise people with a call to 'hold the line'.

In contrast to the press coverage, all groups questioned Britain's GM free status, acknowledging that Britain's borders had already been breached, or were likely to be in the future. Like many other participants Sunil from Urban 1 claimed global trade flows meant GM foods were likely to be in the country, “it might already be in the system because there are GM crops which are available in other countries where we import from, so it might already be.” The group of conservationists had detailed knowledge of how GM pollen and seeds could have been carried to Britain, not just by economic flows but also by biological ones, “I suppose there’s an outside chance...sitting on the

western side of Europe, we might not have received anything from continental Europe. But in reality a lot of insects come this way, let alone birds." (Oliver, Conservationists). Scott, from Group 8, claimed that at the moment there was not any GM material in the UK, "I don't think we have any GM in the UK." but later acknowledged that he felt this was a temporary state of affairs and that soon GM food would be on sale in Britain, "I feel that the inevitability is, whether I like it or not, the inevitability is that we will all in next years' time be eating something that's GM."

Given the dominance of the 'Keep Britain GM free' frame (which was present not only in the media coverage but also in the campaigns run by the most prominent environmental NGOs), the finding that all ten groups claimed Britain was not GM free represents a clear example of audiences failing to reproduce the 'preferred meaning'. In addition to questioning Britain's status as a GM free country, the groups also expressed a large amount of confusion and concern about how much GM material had actually entered Britain. Many participants explained that although they could not quantify the amount that had entered or even name the sources of that GM material, they still felt they were probably coming into day to day contact with GM. The undetectability of genetic modification just added to their concerns:

> Facilitator: "What's the first thing you think of when I say the words genetically modified to you?"
>
> Julie: "Confused. I'm confused about it. I think sometimes we don't know, I think do you know the truth. Sometimes when they say they're not going to use these certain things, I mean are we eating GM in this country or not?"
>
> (Rural)

Participants expressed distrust in the Government and argued this was part of the reason that they did not know whether they were eating GM food. They characterised the Government as both deceitful and money motivated and, as such, could not to trust the Government to either halt the flow of GM or to tell them if GM food was entering the country:

> Talos: Because I don't trust anything I mean I reckon it's all about money and if it's cheaper to do it that way and if it's going to last longer they'll [the Government will] do it regardless. They'll bring anything into this country to save a bit.
>
> Denise: Yes.
>
> Talos: I mean we've got bird flu now going, haven't we? That was all because of cheap, imported poultry.
>
> Denise: Money.

Talos: Yes, so you don't know what's going on.

(Urban 3)

In the above extract, Talos argues the Government are unable, or unwilling, to control what enters the country – be it bird flu or GM. It is notable that when talking about his distrust in the Government, Talos focuses on their inability to control what enters the county. Within their discussions, participants continually spoke about how they did not trust the Government to control what crossed Britain's border (rather than to regulate GM once it was being grown in Britain). As in the media's discussion of GM, it is the Government's ability to regulate the nation's borders that participants focus on.

The focus groups' characterisation of the Government as both untrustworthy and ineffectual was used to support their argument that GM crops had already entered the country. The symbolic boundary discursively constructed around Britain generated confusion and distrust amongst research participants. They recognised that Britain could not simply be defined as GM-free, despite media assertions otherwise. Their own experience of seeing ingredients marked as GM on food items, "vegetarian cheese is often GM" (Ulrika, Young Professionals), their knowledge (provided by the media) of the Government's GM trials, "well obviously I read about the trials so its not as if GM crops haven't been grown here" (Nelson, over 60s), or stories they had heard of GM material mysteriously turning up in botanical gardens, "well in the national botanic gardens of Wales, or Eden or Kew...one of them. But GM tomatoes turned up by mistake, they suddenly found they were growing GM tomatoes, but you can't tell" (Terry, Conservationists), alerted participants to the symbolic nature of Britain's border.

These findings fit both with Beck's claim that the new conditions created by global risks (including the invisibility and undetectability of many risks) are corrosive of trust relations and Bluhdorn's theory that symbolic politics undermine faith in democratic institutions. In addition to considering the loss of trust, it is also useful to note who participants claimed they were distrustful of – namely the Government, rather than environmental NGOs, who, after all, were urging people to take action to 'Keep Britain GM Free'. These focus group discussions suggest that it was erosion of trust relations, coupled with participants' own experiences of encountering GM material, which meant the preferred media message was predominantly rejected. Participants did not accept that Britain's border was keeping the country 'GM-free', and this symbolic boundary served only to increase confusion and mistrust.

9.3 The Unique Nation

The media coverage of genetic modification defines Britain as important, unique and pure. Within the focus groups, Britain was not specifically referred to as pure (although the language of purity was still central to participants' talk about GM, as shown in Chapter 7). Given that participants did not believe Britain was GM free, it is not surprising that participants did not explicitly refer to it as pure. They did, however, characterise British food as distinct, something which they argued globalisation was threatening. In particular, they highlighted the diversity and local variety of British food. Ted from Urban 3 commented that, “There's only one type of strawberry. That's the English strawberry” and Nancy from the Over 60s group spoke about local varieties of apple, “But when they’re in season you go and buy a local Cox’s orange pippin from up the road and the taste is completely different.” Others argued that British food seasons no longer existed and this had affected the taste of food “You can eat everything all through the year. There is no seasons left any more” (Ibrahim, Urban 3). Participants switched between presenting British food as diverse or homogenous, depending on whether they were praising British food or bemoaning it.

In addition to presenting British food as unique, participants also characterised Britain or British people as possessing unique, or special, traits. Participants claimed that these characteristics affected how the nation acted within the international arena.

Several groups claimed that British people 'abided by the rules', and this meant that they were disadvantaged in comparison to other countries:

Kerry: “And Britain are sticklers for the law”

(Urban 2)

Faith: “I remember Cecil Parkinson saying that a few years ago about Britain, ‘they always abide by the rules”

Norma: “Yes.”

Faith: “But go anywhere else on the continent and they don’t.”

Norma: “No.”

Faith: “It seems that – as if the EU rules are only made for Britain.”

(Over 60s)

Participants' spoke about Britain's subservience in relation to one topic in particular: the European Union. When discussing this topic, participants claimed Britain was penalised for its law abiding behaviour,

Julie: “That's the Common Market for you. Yes. All cucumbers must be a certain size.”

Daisy: “That's why you couldn't get English apples because they weren't up to the size. They couldn't sell the English apples in the supermarkets because they weren't big enough.”

Julie: “Isn't it just. Only we all just accept it and sit here and”

Daisy: “Yeah, exactly.”

(Urban 1)

Participants claimed that, instead of defending its farmers against ludicrous EU policies, the British Government accepted them. Discussants argued that Government subservience harmed British farmers who weren't able to sell their produce.

The submissiveness of modern day Britain was contrasted with past eras when, participants claimed, the nation fought and defended its values. This is the group of over 60 year olds again:

Nancy: “You see I think that throughout history we have stood up for what we believed, we've been a large nation in the world.”

Faith: “Yeah.”

Nancy: “And – and suddenly we are not standing up.”

Norma: “No.”

Nancy: “We are taking what Brussels or what Mr Bush or somebody else is telling us. And I think it’s time that we –“

Faith: “Mandelson!”

Nancy: “got back bone back into Britain. I mean we were doing it through all the Elizabethan period. We were standing up for what we believed.”

(Over 60s)

Participants referred to past periods and events like the Second World War or, as referenced by the group above, the Elizabethan era. In so doing, participants introduced a historical association - Britain's empire history. Britain is characterised as a nation of historical heroic success. This history gets reinvented through subsequent events like the Second World War and more recently the 7/7 London bombings (see Kelsey, 2011). The characterisation of Britain as subservient, especially when compared to the colonial era, was not mentioned in the press coverage of GM. Within the coverage of another topic however, the European Union, it provides the dominant frame (Brooke, 1999, Pfetsch, 2008). Participants were, therefore, introducing a new

association into their discussion of GM. Many participants linked the discussion of planting GM crops in Britain to the wider issue of Britain's sovereignty. This explains why they drew on the media's discussion of 'subservience to Brussels'.

9.4 Europe as threat and salvation

Within the press coverage, Europe was predominantly presented as a barrier protecting Britain, a line of defence against US multinationals that wish to force British farmers to grow GM crops. As outlined above, the groups often characterised the EU differently, presenting continental Europe as a threat to Britain's sovereignty. On other occasions, however, they shared the media's characterisation of Europe defending Britain. It was notable that the same participants switched between describing Europe as a threat or a barrier. This is Julie (Urban 1), who had previously complained about the effect that EU policies had on British agriculture, "while Europe remains opposed to it, I think we've got a good chance, certainly remaining GM free for a while." Participants depicted Europe in two opposing ways but both of these characterisations were also present in media coverage: one is derived from the coverage of GM crops and depicted Europe as a bastion of tradition, of purity and of wholesomeness, as Kerry (Urban 2), comments, "(GM) would just go completely against (the European) way of life". The other frame is derived from coverage of the European Union and presents Europe as a threat to Britain's agriculture. The same participants deployed these opposing ways of framing Europe without acknowledging the contradiction between the two. Pan and Kosicki write about frames claiming they are "cognitive windows through which stories are understood" (1993: 59). That participants did not notice how they switched their views on Europe suggests they did not look beyond the cognitive window they were referencing within a particular moment.

When describing Europe as a barrier to GM foods, participants discussed food from European countries as 'natural' and 'good' and therefore, by definition, not genetically modified. As in the media coverage, participants created stereotypes of Europe to highlight their opposition to GM:

> "In the Mediterranean it tends to be more homemade, doesn't it. So – oil based and things like that and it's much healthier for you. You see the ads for the spread, it's all olive grove, oil but good oil, you see the whole family eating it, eating together. Good food, good lifestyles you know."
>
> (Keith, Rural)

Keith presents a clichéd version of Mediterranean life. He is not basing this knowledge on a visit to the Mediterranean or a documentary he has watched but on

margarine adverts. Keith's claims about Mediterranean culture are not challenged by the participants, despite his public acknowledgement that he is making these assertions based on an advert. It is probable that people in the focus group, including perhaps Keith himself, would accept that this is a very simplistic image of the Mediterranean. Yet participants granted these stereotypes rhetorical credence within the discussions, hardly ever questioning whether people of particular nations really acted in the clichéd ways described. This suggests that nation-based stereotypes are accepted in general conversation as a way of understanding the world. I am sure many participants would have been capable of questioning these very essentialist ideas but, for the most part, they did not. Baumann (1997) and Werbner (1997) show how people sometimes offer stereotypes of national identities but at other moments question their own essentialism. They acknowledge that stereotypes can serve political purposes, but argue that this does not preclude more open and fluid understandings of identity. The national clichés deployed in my focus groups were used to advance particular arguments about the global cultivation of GM crops. If participants had been discussing these countries in different contexts, they might have offered more nuanced and less clichéd versions.

9.5 America: The GM Nation

The country, other than Britain, that was referenced (and stereotyped) most often in the focus group discussions was America. At least one participant from each of the groups said 'America' when asked the first thing they thought of in response to the word 'GM'. What participants usually referenced was one particular American company, although the nationality of that company was a defining characteristic: “Monsanto is the biggest animal feed company, isn’t it, for GM foods, they're that big American company” (Isobel, Urban 1), “They will try and breed crops that you can then spray with their worst herbicide and it won’t affect the crops, it’ll just kill everything else, for which a splendid American company called Monsanto comes into mind” (Oliver, Conservationists), **“**I think it was in America when that company started to grow GM maize.” (Julie, Urban 1).

All the groups viewed GM as an American product, a technology which was going to produce massive profits for a large American company: Monsanto:

> Quincy: Well the name of the American Monsanto immediately leaps to mind, it does seem. I can't help feeling that what's ultimately behind it is that somebody is going to get very, very rich regardless of the consequences. That worries me a lot.
>
> (Crop Trial Area)

Participants often linked America to a culture of large corporations that place profits before all other considerations; in these British focus groups, America represents global capitalism's profiteers: large, homogeneous corporations, as embodied by the behemoth Monsanto. Participants contrasted American food with European, characterising the later as natural and wholesome. As in the media coverage, American food was described as 'unnatural'. This was not just because American food was GM, participants also referred to a wider fast food culture “In America it’s all square tomatoes and plastic cheese” (Nigel, Conservationists), “gulp down ten burgers in ten minutes, what crap have they fed the cows? American food is, it’s not natural, it’s not real food” (Talos, Urban 3).

Just as participants characterised Europe and Britain in certain ways, so they also did America. One of the key characteristics ascribed to the US was power. Participants suggested nothing could halt the will of America and that meant people could not stop GM, “You know you get the impression that America wants us to have GM foods so we are going to have it.” (Tori, 25-35 yr olds). The interests of America and Monsanto were closely aligned by participants; both were portrayed as greedy, wanting things they had no right to:

> Nelson: “What Seymour was saying there earlier on was about Monsanto, I think they – they were trying to say that Basmati rice was theirs. That they’d got – they’d done a special strain which worked and it had cut out something.”
>
> Nelson: “It’s terrible.”
>
> Nell: “Happens a lot in America doesn’t it? You know, where they think the world belongs to them.”
>
> Nelson: “I’m not a great American lover in the last twenty years.”
>
> (Over 60s)

Here the group switch from talking about Monsanto to talking about America; both are portrayed as having a gargantuan sense of entitlement and believing they own 'the whole world'. Similar comments were made in other groups about both America and Monsanto, “American's think they own everything” (Daisy, Rural). “She was announcing that they're going to give Monsanto the Commonwealth” (Oliver, Conservationists - when commenting on the Picture G, Appendix E, in the newsgame). Participants depicted America embodying a culture of corporate greed and domination.

Other characterisations of Americans included as liars “Well, the ones I have met have lied straight to my face!” *(*Seymour, Group 5) and as undemocratic:

> Isobel: All governments have a hidden agenda that we know nothing about.

Sunil: Could be worse: could be in America.

(Urban 1)

Given how intrinsic the doctrine of liberal democracy is to the identity of the United States, the perception of the nation as particularly undemocratic is striking. It is the close ties to corporate interests that leads participants to view America as undemocratic and its government as more interested in the voices of big business than in those of their own citizens:

> Beth: I was just thinking that actually compared to somewhere like America and the media there, Fox news just run by the corporates, and the cronies in Bush's Government, Exxon's former boss, which is totally outrageous; I think our system of reporting and governance is actually quite neutral.

(Conservationists)

Another characteristic ascribed to America is idiotic. This trait was normally discussed as a joke and on several occasions it was light-heartedly cited as a reason why British people should not eat GM foods:

Emily: “In America they have been eating it for years.”

Quentin: “And look at them.”

Olivia: “Yeah we rest our case.”

Quentin: “They are all lunatics.”

Emily: “It just removes your brain, GM food.”

Quentin: “Nightmare”

(Urban 2)

The jokes masked a more serious point; participants claimed that American culture was 'dumbed down'. America was framed as a nation that not only consumed large amounts of 'junk' food but also large amounts of 'junk' culture and, as a result, its people were viewed as both unhealthy and stupid. Participants feared that this 'junk culture' was starting to influence Britain and several participants referred to the 'Americanisation' of Britain:

> Nigel: “We are Americanised. I mean, the fast food regime came from America at the end of the day. Your MacDonald's, your Burger King, your MTV, your Godzilla and all the rest of it. They're not British, they're Americanised and they're global...because we as a country have tended to look at everything that America

does as being the great God of the world if you like and free market society and all the rest of it, we tend to embellish it and take it in."

(Conservationists)

Julie: "It's a cultural thing though isn't it. Well, we haven't got any culture left, let's be honest about it. But you go to the Continent and they don't follow America like we do and..."

(Rural)

In the discussions by focus group participants, America was often equated with the rise of a homogeneous, commercial culture. One of the central concerns of the anti-globalisation movement has been the effect of international brands and global media corporations on local cultures. The fear is that the homogenising logic of international consumer culture will destroy the distinction of locality (Klein, 2000). This was present in some of the press coverage of GM (although it wasn't a dominant theme – see Chapter 8). It seems clear that participants are drawing not just on the media's discussion of GM, but on a wider discourse about the cultural poverty of the United States. It is a discourse which arose from the anti-globalisation movements but is now used more widely to express concerns about globalisation (Morley, 2000). The fear of a loss of culture plays an important role in creating the political economy of uncertainty (Bauman, 2000). Local cultures are key in providing people with a sense of identity; if local cultures are threatened then so is people's sense of self.

Bell and Valentine (1997) write about the importance of food as a symbol of culture, "For most inhabitants of (post)modern Western societies, food has long ceased to be merely about sustenance and nutrition. It is packed with social, cultural and symbolic meanings". GM food's close association with American consumer capitalism means it represents a threat which is beyond simply a threat to health or the environment; it is clear that GM food has cultural significance. It represents the destruction not just of a food system, but of culture in the wake of globalisation.

Not all participants characterised America in such a negative manner, yet it is notable that America's junk food culture is such a strong association that even Udele, the American participant from the group of Bioscience students said, "America is a junk food nation, it's true".

Occasionally, other participants would counter their own fairly clichéd views of America by describing Americans they knew who did not fit their stereotype. Nelson, for example, corrects himself after criticising America's influence on the world over the last twenty years. "I've known people from America and they're, I mean they're my friends, they are decent people. But America as a whole, no, they're, I'm not a fan" (Nelson,

over 60s). Nelson is keen to distinguish between America as a nation and Americans as individuals. He makes it clear that the American people he knows do not fit his description of an arrogant and power-hungry nation but he is still critical of America's role in the world. Madianou (2005) observes how 'us and them frames' are often determined by politics, rather than culture, and how essentialisms and counter-essentialisms are traded for political reasons. Nelson is constructing a political argument about America's relationship with other countries. He does not, however, describe all Americans in such a crude way, recognising that not all American people are the same, and in the process opens up his own stereotype.

Participants also discussed the American landscape. They differed from industry representatives and described America's arable make-up as different to Britain's. Participants argued that the American landscape is vast, “You think about their (America's) grain belt across the mid-west. Their fields and their farms are so vast back there” (Sacha, Conservationists).

The press, in contrast to campaigners, did not generally discuss the differences between American and British farming, so participants are not necessarily (re)producing a media discourse. Instead their comments suggest they are drawing on a cultural image of America as a vast land of open plains and unconquered frontiers. Some participants cited cultural representations to support their claims about the American landscape “I think, just think of Woody Guthrie, “the wheat fields waving and the dust clouds rolling” (Ulrika, 25-35 yr olds), “of course 'Last of the Mohicans' and all that – it's frontier land. I mean it's big!” (Theo, Crop Trial Area).

Participants used these cultural images to support different arguments. Some (re)produced the claims that the vast scale of the American landscape means contamination is less likely to occur in the US than Britain. “It’s not likely to happen [in America], because the next neighbour is another vast farm” (Scott, Urban 2). This argument refutes the claims of the biotechnology industry who argued that the US does not have a problem with contamination and therefore British farmers should not be concerned.

Other participants offered a different reading of the American landscape. Rather than using the scale of the landscape to discuss rolling plains, they connected the scale of American farming with mass production, “[GM is] another tool to increase the intensity of agriculture. I think of those enormous great cornfields, big American cornfields and huge, great combine harvesters going through them” (Uwe, Conservationists), “It's the scale, those huge wheat fields, it’s just so industrialised” (Izzy, Urban 2) “those vast plains, just row upon row of monoculture” (Denise, Urban 3). In so doing participants (re)appropriate cultural images of the American landscape (a

powerful signifier) and fit them within a frame that depicts America as a place of mass production and homogenised culture. Once again it seems evident that participants are not just drawing on the media's discussion of GM, but on a wide range of cultural representations.

9.6 Famished Africa

The final group of countries that participants regularly referenced were interchangeably discussed as the developing world, Africa or the Third World. Participants distinguished between these countries and Northern ones like Britain and the European continent. While GM was not seen as a suitable technology for Northern countries, most participants claimed it was appropriate for poorer countries. Barbara (Bioscientists) says, “I always thought of it as also an advantage when you think of the improvement we do with genetically modified crops like for the kind of under developed countries” and Isobel (Urban 1) argues “I think initially their idea was good. It was really for the underdeveloped countries that are struggling to grow crops with all the drought and things like that, so they’re really developing it for them to grow the food.”

Both Isobel and Barbara are strongly anti-GM at other stages in the discussion but in relation to countries they view as less developed their ideas switch. When considering poorer areas, participants often argued that the risk of harm from GM is outweighed by the potentially significant benefits that could stem from the technology, in particular increasing food security:

> Nelson: “This was invented for the areas where people are starving and how to – if – in Africa or in India where there was a possibility of plenty of land and it could be used and it could just boost crops and make crops work – and make crops work in areas where the normal crop doesn’t work. You know, they were trying to do something for the good.”
>
> (Over 60s)

Other researchers have shown how facts can support stereotypes of different nationalities (Miller et al.,1998). Reporting of GM's potential benefits also fitted with a popular existing set of essentialist images of Southern countries, in particular Africa. In the mid-1980s food shortages in the horn of Africa dominated Western headlines as hundreds of thousands died due to a series of famines. Media researchers have demonstrated how the media coverage 'naturalised' the food shortages by ignoring the more complicated political aspects of mass starvation and attributing the famine only to drought. Murray (1986: 3) discovered that 92% of articles he analysed framed the famine as a natural disaster and Kaplan concluded that the political, social and cultural

factors “which contribute to the devastating famine were given scant media attention and for the most part were systematically omitted” (1988: 18). Famine's naturalisation ignored conditions of poverty, repression and conflict which allow drought to lead to famine.

By ignoring the political context in which mass starvation emerges, the media attributed agricultural collapse to a type of African essence (Sorensen, 1991) rather than the structural conditions inherited by post-colonial states, the specific circumstances of Africa's integration into a world-market system or, for example, the policies of the Ethiopian Government. The naturalisation of famine began as a news template but it soon became a cultural one with the advent of 'Live-Aid': an international TV fundraiser for victims of famine in the horn of Africa. The campaign culminated in a live concert held simultaneously in the UK and the US. The event was one of the largest TV broadcasts ever with 1.9 billion people across 150 countries watching the concerts. It not only raised an estimated £150 billion but also cemented the cultural myth of Africa as a place “where nothing ever grows, nor rain nor river flow” (lyrics from 'Do they know it's Christmas Time?' the fundraiser single released by the Live Aid project). Live Aid depicted African landscapes as inhospitable, unsustainable places where inhabitants struggled to survive in a constant state of both famine and drought.

In addition, assumptions were made about the primitive character of Africans. Sorensen (1991) shows how news reports assumed that African peasant farmers were unable to feed themselves because they were ignorant of basic agricultural methods. In reality the situation is far more complicated. Increasingly, international organisations like the UN's Food and Agriculture Organisation have recognised the value of indigenous agricultural knowledge. For example, in 2010 a report submitted by the UN's Special Rapporteur on the Right to Food, Oliver De Schuter, criticised the structural adjustment programmes of the 1990s for attaching unreasonable conditions to the loans and aid given to African countries. These allowed cheap food imports from rich countries to be dumped on African markets which undermined local agricultural production, destroyed farmers' livelihoods and left people vulnerable to a volatile global food market. One of the solutions proposed by the report was the production of a variety of staple foods for local consumption; the type of agriculture abandoned when the IMF and World Bank required developing countries to grow monoculture cash crops for export. The UN report concludes that local knowledge is crucial in achieving food security. In other words Africans’ own knowledge is crucial in feeding themselves.

The image of Africa as a barren and unproductive land persisted in the discussions of GM crops. The West's technology is presented as the solution to Africa's infertility. In the quotes above, participants use the words 'our' and 'we' to refer to GM

technology, in comparison to 'their' and 'those' to refer to African agriculture. In other words GM technology belongs to Northern countries, not to African ones. At other moments participants describe GM as an American project, yet when discussing developing countries participants claimed GM technology as their own. It is the rich countries of the West that can give Africans the agricultural skills needed to fertilise their barren land. The sharp division made by participants is inaccurate, for, although the majority of biotechnology companies are Northern, it is often African scientists who research the genetic engineering of crops suited to an African climate.[17]

Later in the discussions some participants challenged the usefulness of GM in poorer regions. They continued, however, to claim the technology was Western:

> Emily: So going back to the, you know could they grow in the desert, that could be advantageous to nations that are in famine, but then you think well if its not good enough for us why are we saying its good enough for another nation?
>
> Waman: They could be the guinea pigs.
>
> Quentin: Yeah, we already experiment on the third world aren't we?
>
> (Urban 2)

As a continent that is 'othered', Africa is denied agency – the West either saves or, in the above quote, exploits passive Africa. About half the world's food is actually produced by smallscale farmers in Southern countries but much of this food is for export rather than the local population (ActionAid, 2010). This was not acknowledged in the focus group discussions even when participants were aware that there are political, as well as natural reasons, why people do not have enough to eat

Participants understood that globally there is enough food for everyone and that a more even distribution, rather than just growing more, was key to tackling hunger:

> Steve: But what it is, Europe's got a lot of food mountains anyway, so I don't know what they're doing this for because they can –
>
> Isobel: In Europe, but they really mean it for Africa and the developing countries that can't grow food because of the drought and things they have.
>
> Facilitator: So do you think GM crops would be needed for that then?
>
> Steve: I don't think so, no. I think there's enough food in the world anyway to feed everyone but they won't give it over because it's a certain price level.
>
> (Urban 1)

17 http://abneta.org/

This group's focus on the West's refusal to feed Africa is typical of the discussions. Many participants claimed that the West would not feed people in developing countries because the poor could not afford to pay the price rich countries wanted for their produce. Participants did look at political reasons for hunger, however, they still viewed the West as the world's main food producer. In particular the image of rotting European food mountains was referenced many times:

> "So, you know, we've got butter mountains, wine mountains, every mountain you can think of somewhere"
>
> (Keith, Rural)
>
> "Now the EU might step in and say you're growing too much. Like we had the butter farm, butter mountain, didn't we? And they threw it away. Instead of giving it to the African countries."
>
> (Ted, Urban 3)
>
> "You read every day in the paper that Europe makes acres of fields of stuff that nobody particularly wants and yet there we are promoting a product via the GM that's going to increase the yields. For what reason when we've already got enough as it is? It's just the distribution that's the priority."
>
> (Mac, Crop Trial Area)

The press also discussed food mountains, in particular Europe's 'butter mountains', which reached their height in the mid-1980s, at a similar time as the famine in the horn of Africa. The 'butter mountains' were a result of the interventionist policies of the Common Agricultural Policy, where the European Commission bought large amounts of dairy products - often milk powder – to keep the price of those products high. They also heavily subsidised dairy farmers, often providing them with export payments which allowed European dairy farmers to flood foreign markets with cheap foods (Ackrill, 2000). This undermined the ability of foreign dairy farmers to support themselves and their families. The European butter mountains certainly contributed to world hunger but not just because the price being charged for dairy products was too high, sometimes the opposite was true, the price was too cheap. This is rarely spoken about in the media, and participants echoed this silence by not talking about Africa as a producer of food. The idea of butter mountains contrasts sharply with famine, and this opposing image framed most participants' understanding of the solutions to hunger – the West produces a glut of food and should share a greater proportion of that food with the hungry people of Africa.

A few participants questioned the idea that food just never grows in Africa. Nell from Group 6 responds to Nancy who is talking about the lack of African food production by observing that.

Nell: “A lot of food comes into the country from Kenya now doesn’t it and, I buy Kenyan runner beans.”

Faith: “Yes.”

Nell: “So they must have some.”

(Over 60s)

Nell uses her experience of buying food to counter the idea that Africa is barren. Food labels show Nell that some of the food she eats comes from Kenya. Nell was the only participant who used her experiences of food shopping to counter the idea of Africa's non-productivity. Other participants spoke at length about checking labels for GM ingredients or Soil Association certification (see Chapter 7), and used this experience to counter the idea that Britain is GM free, however no one else used this experience to talk about African food production. This suggests that the naturalisation of African famine is a dominant frame and therefore difficult to challenge. This meant participants did not question this frame, even if they ate food that comes from African countries.

The other group who questioned the image of Africa as a barren country were the under 19 year olds. They argued that GM is needed in Britain because the nation has poor seasons for growing food; they contrast this with heat and fertility of Africa.

Davina: “I think there’s quite a bit of GM here because our seasons aren’t the best. It’s just trying to help it along isn’t it?”

Dennis: “Well I think we pretty much import most of our food anyway, from Africa, hot countries that grow the variety of foods.”

(16-18 yr olds)

This group characterise Africa as a fertile land, with an environment better suited to growing food; the exact opposite of the other groups. This group would not have been alive when the mid-1980s famine was receiving large amounts of media attention. Their opposing view makes it clear that they are not drawing on the same template as the other groups, who all viewed Africa as a fundamentally barren place in which it was very difficult to grow food. Such a view of Africa meant participants were reluctant to criticise the use of GM technology in the African continent. Despite their previous reservations about GM, participants felt that if crops can be grown in such an infertile place then the technology could not be completely dismissed. This was highlighted

vividly in the news game where a picture of red and 'disease-ridden' corn elicited two responses; either that it was GM corn or secondly that it was grown in Africa. For many Western people Africa is defined by famine; it is understood as a continent which cannot produce enough food to feed its own population. This image of Africa garnered support for GM even amongst some participants who had previously expressed strong fears about the technology. In a land where 'nothing ever grows' any food production is miraculous, even if it is a genetically modified miracle.

9.7 Migration and GM

In Chapter 8 I outlined how the UK press discussion of GM crops echoes words and phrases from the discussion of human immigration. This was also the case in focus group discussions, in particular, participants' concerns about the undetectability of GM echoed fears about the invisibility of migrants. Chapter 8 showed that the press described GM food in similar terms to migrants, as 'sneaky' and 'creeping in' while British backs are turned. Participants also framed the entry of GM foods in this way. GM seeds were described as moving 'under cover': 'Well, it's under cover and things, isn't it?' (Isobel, Urban 1), as 'creeping in' "I just think it will creep in". (Beth, Conservationists), as unseen, "Yeah, an unseen menace" (Harry, Rural), or sneaking in "Sneaking in through the back door" (Kerry, Urban 2). GM food was described as insidiously entering Britain and this is why the precise amount of GM food in the country was unknown, "that's the insidiousness" (Nelson, over 60s). People felt unable to control or even monitor the entry of GM material into Britain. It was the inability to know the risk from GM that concerned and frustrated many participants; it was also this element that added to participants' distrust of the Government.

One reason why the two debates share a similar language is because they are both concerned with reasserting certainty. The linking of environmental risk and race, through the evocation of asylum issues within the GM debate, amplifies the sense of uncertainty already present, as the threats to the nation's boundary multiply. Bluhdorn describes how:

> "the transition from modernity to late modernity can be seen as a movement from an inclusive to an exclusive society, that is from a society whose accent was on assimilation and incorporation to one that separates and excludes."
>
> (Bluhdorn, 2002: 42)

As with the press coverage, most participants did not talk directly about immigration when discussing GM crops, two groups, however, did. In both cases the groups referenced the asylum debate to articulate powerlessness in the face of global

flows and their lack of faith in the Government to protect them from unwanted imports, “We can't do anything about it. The Government don't even control immigration (inaudible) and they lie to us about it” (Daisy, Rural). For Daisy, immigration is an exemplar of the Government's inability to control what enters Britain. Her quote implies that if border authorities cannot even control which people enter the country, then there is no possibility of regulating which grains cross Britain's borders:

> Nancy: At the moment our Government if they’re fair to us have control. If we went further into Europe and became part of the Euro set up and everything else, which could happen, come on – and we – we’re fighting it at the moment – but it could happen.
>
> Seymour: I think we already are with GM.
>
> Nancy: Yes and we get the migrants.
>
> Faith: But the continental countries send them through.
>
> Seymour: They’ll just do it, we'll keep fighting.
>
> (Over 60s)

Group 5 discuss migrants in relation to a loss of British sovereignty as the nation's identity is subsumed by the European project. Bauman claims “the deepest meaning conveyed by the idea of globalisation is that of the indeterminate, unruly and self-propelled character of world affairs: the absence of a centre, of a controlling desk, of a board of directors, a managerial office” (2001: 299). It is this absence of a centre that concerns the participants of Group 5 – immigration is used as yet another example of how power has shifted away from nations to indeterminate and unaccountable new bases of international governance.

It was not just human migrants that were referenced in relation to unwanted flows – the entry of other species also concerned participants. In Group 2, Julie recalls a story about crayfish to support her argument that the Government cannot control unwanted cross-border flows:

> Julie: like those horrible crayfish that have come in, they're eating all our crayfish. Did you see that?
>
> Keith: No, I didn’t.
>
> Julie: Crayfish that were in America. And they're sort of invading our streams and – because we've got a very small population they are taking over.
>
> (Rural)

Barker (2008) describes how borders are discursively mobilised in discussions of non-indigenous species. She tracks how in actuality borders are more flexible than rhetorically acknowledged. As with the immigration and the GM debates, the response to invasive species is to claim total control by positing unyielding, highly regulated borders.

Participants did not reference asylum debates as directly or in as many different ways as the press but, nevertheless, the focus on unwanted flows prompted some participants to talk about migrants. Others drew on images that first came to prominence in the asylum debates (unwanted, illegal entities breaching Britain's borders in the dead of night) to frame their fears about GM. Such discussions suggest people wanted strong borders and, as Bauman writes, an exclusive rather than inclusive society. Describing GM as one amongst a raft of unwanted, unstoppable and invisible flows heightened participants' sense of threat.

Not all groups used images that echoed immigration debates. One group explicitly rejected the press presentation of both these issues. In Chapter 2 I described how critical Olive and Esther (the two psychologists from the group of 25-35 year olds) were of the media's presentation of GM crops. When they created their 'news game' bulletin they used the picture of the boat to deliberately spoof the UK media's representation of immigration:

Kane: “It's now being transported to our shores in giant boats.”

Ulrika: “Killer boats, are they killer boats?”

Esther: “Transferred to our shores sounds very sort of world war. (inaudible) Johnny foreigner is importing GM.”

Olive: “By foreign nationals.”

Esther: “Illegal immigrants.”

Olive: “Suspected Taliban. Oh, yes, goodness it will be by the Taliban. Could the Taliban be trying to – okay, right. The Taliban have switched the novel GM for terrible GM in an attempt to kill us all.”

Esther: “They put the terror gene into the seed!”

(25-35 yr olds)

Esther and Olive's spoof of the news coverage is funny because they identify the similarity in how some parts of the press talk about GM seeds and immigration. Esther and Olive take it in turns to offer different descriptors for the kinds of people the press would describe as a threat to British interests: 'johnny foreigner', 'illegal immigrants' and finally the 'Taliban'. Esther and Olive clearly recognise the preferred message, that

certain people or foods are a threat to the nation's borders, but they use humour to reject this message; arguing that it is a crude and laughable idea.

Participants spoke about both the asylum and the GM debate in relation to controlling unwanted flows. The majority of participants echoed the asylum debate by focusing on the 'sneaky'. 'uncontrollable' and 'threatening' manner in which GM entered Britain. A few explicitly rejected people's fears both about the uncontrolled entry of food and of people.

9.8 A Nation of Citizens or Consumers

A predominant theme in the groups was the lack of faith people had both in the Government and politicians in general. All the groups spontaneously discussed a lack of trust in the Government, with half the groups having long discussions about how corrupt they believed politicians were:

Keith: "I think because we get told so many lies. We get fed so much rubbish."

Facilitator: "Who do you see those lies coming from?"

Harry: "Tony Blair."

Keith: "I don't want to get into politics, but, you know, all politicians are the same."

(Rural)

Comments about Governments lying were likely to be greeted with enthusiastic statements of confirmation:

Steve: That's how sneaky I think the Government are.

Tamsin: Oh they are.

(Urban 1)

Even groups whose discussions were often at variance with dominant frames, like the16-18 yr olds, described politicians as corrupt liars, "Well they'll have twisted it then; the Government keep things back, they won't tell you everything." (Davina, Group 6, 16-18 yr olds). The Government's duplicity was one of the few points of agreement across all the groups (of course it is not possible to know if all the participants agreed with this assessment of politicians but no one actively expressed disagreement within the groups). That the Government are untrustworthy was not only the dominant viewpoint, but there was an expectation that others in the group would share this view:

Helen: “I wouldn't believe the Government.”

Julie: “I don't think anyone does.”

(Rural)

There were a number of historical analogies that participants referenced to support their depiction of the Government as deceitful: for example, foot and mouth disease,

“Look at what happened with foot and mouth; you know they said the wrong thing didn't they. It's not true, no panic, nobody worry about it.”

(Julie, Rural)

the MMR vaccine and autism debate:

“It was the same with, like you were saying, with MMR. They’re saying it’s safe and yes, everyone should have it, but then you have the likes of Tony Blair who wouldn’t admit to whether or not his little one had had it or not.”

(Kat, Urban 1)

and the Iraq War:

“Twenty five years ago we probably trusted what the Government told us. And if they told us this had been tested it was ok or we needed to go to war for whatever reason we believed it immediately, now we don’t because we are all a bit more knowledgeable than we were before and we know they lied about war so they can lie about anything.”

(Scott, Urban 2)

Since the mid-1980s, and the Salmonella and BSE health crises, the untruthfulness of politicians has become the default frame for risk debates. This was evident in the MMR health scare. Boyce (2005) analysed the coverage of the MMR debate in the UK and concluded that the media regularly referred to the Government as deceitful and inept, linking the story to past health scares like BSE. She also found that parents blamed their confusion and uncertainty about the safety of the MMR on the Government, whom they did not trust. Like Boyce, I found that distrust of politicians was a prominent theme in the focus groups. The reason, participants claimed over and over again, that they did not know whether Britain was really GM free was because politicians would not tell them the truth.

Governments have always told lies but the 'transformation of visibility' (Thompson, 2005) and the 'personalisation of politics' (Langer, 2010) has led to a culture of governance in Britain (and other Western countries) in which politicians routinely cover up mistakes or information they fear the public 'won't like'. In addition,

as Boyce's exploration of the MMR debate shows, the media continually report politician's claims with scepticism, especially in relation to risk debates. As a consequence, the public are less likely to believe the claims that governments make, and in the discussion of risk issues governments have become de-facto scapegoats. Beck's observation that global risks are corrosive of trust relations appears, in the UK context, as something of an understatement, they have proven caustic.

The media's continual discussion of the Government's untrustworthiness has profound impacts on how people feel they, as national subjects, have agency. In a country where politicians are 'all liars', citizen actions, such as engaging with democratic structures and expressing views at the ballot boxes or through other means like lobbying, protests etc., become nonsensical.

This was demonstrated in the focus groups when I asked participants with strong views on GM whether they had taken part in the Government's consultation exercise, written to their MP or been on a protest. None of them had. People were dismissive of the idea that the Government would listen to their views, "What consultation? No, us minions don't get to know about it, they won't listen to us" (Isobel, Urban 1), "I wouldn't give them the satisfaction, they'd only twist what I say. The public are never asked to decide, are they? It's decisions made for you, unfortunately" (Nancy, Over 60s). "Talk to my MP, Ha! Like she'd care" (Mac, Crop Trial Area), "No I don't do protests, I mean really what's the point?" (Emily, Urban 2). In each group participants dismissed citizen action, even the GM Nation debate, the consultation process which the Government themselves set up. There were high levels of political cynicism in every group and this meant people were unwilling to engage in any form of political action.

Within the focus groups, participants demonstrated that they did not feel they could take effective action on GM, dismissing their ability to influence the Government. Participants, however, did not deny all forms of agency, and there was a different arena where they felt they had the power to influence the outcome of the GM debate. Participants generally claimed that, although democratically they had little power, economically they were much stronger, in particular they felt that, even if they had no influence as citizens, as consumers their voice would be listened to. A nation of consumers had the power to decide if they ate GM foods, a nation of citizens did not.

Often, in response to the question 'what can we do if the Government decide to allow GM to be grown commercially or to open Britain's markets to GM', the answer that participants provided was 'do not buy it'. Purchasing choices were portrayed as the most powerful way to halt the flow of GM.

Ursula: “Well, there’s not a lot you can do, is there, if they push it through?”

Isobel: “You can avoid buying it.”

Ursula: “Well, yeah, you’ve got that choice.”

(Urban 1)

Some groups compared Britain to other places, claiming consumer power set us apart and meant we were more fortunate than other countries:

Derek: “I'd say there's probably less GM in this country because of consumer power. If people, which I think is the general conception of people, don't want it, they're not going to buy it, so people won't grow it.”

(25-35 yr olds)

Suneil: “I think in the UK, we’re pretty lucky in that people have got a much bigger say in things. I mean we’ve seen Sainsbury’s and Tesco being put under pressure. In the end it’s developing nations that are the one’s who are really going to be affected by it...”

(Urban 1)

Fran: “It’s down to choice. We can go to a shop and choose whatever we want organic or whatever, and they have to supply it then. But in those countries they haven’t got the choice.”

(Conservationists)

All groups cited consumer power several times as a way of stopping GM's introduction into Britain. Participants expressed a considerable amount of trust in the actions of supermarkets, certainly a lot more than they expressed in governments. For example Daisy (Rural) claims that “It was almost as if the supermarkets were on our side. Because then they were putting little tabs on the products that no it's not GM”. Participants argued they could influence supermarkets and that supermarkets would tell consumers whether their food contained GM ingredients or not; no one claimed the Government would tell them whether their country did.

Audiences were continually told, by the media and campaign groups, that if they wanted to have a say in the GM debate they had to express their opinions through consumer choices. Most discussants chose to end their script with the picture of a shopper reading the label on a food item (Picture I, Appendix E). They accompanied this picture with sentences like: “To buy or not to buy, it’s your choice” (Newsgame Script, Urban 1), “it will be the consumer who will decide the fate of GM foods in the UK” (Newsgame Script, Conservationists) and “consumers are becoming more and more aware and able to make their own decisions on whether to buy GM food or not”

(Newsgame Script,16-19 yr olds). Only two groups diverged from ending their newscasts with a sentence about consumer power. This repeated ending in so many groups shows that people recognised 'the consumer will decide' as a popular media frame. The accompanying discussions showed that people did not just know this media frame, but agreed that the consumer could decide whether to eat GM. Fran comments on her own group's script, saying “At the end of the day it's up to you what you buy isn't it?” The group of conservationists explained why they placed the picture of the shopper at the end of their script:

> Steve: “That's the Government led to the farmers, to the food producers, to the packers, so that's a whole chain of them that'll be after it.”
>
> Isobel: “Oh it's a whole chain until the consumers.”
>
> Steve: “And then we're the consumers and we'll say 'No we don't want it’. Where's your tests?”
>
> (Urban 1)

By placing the consumer at the end of their script, Group 1 claim they are not just reproducing a typical news report but also commenting on where the power to stop GM lies: with the shopper.

My focus groups suggest that continually addressing people as consumers affects how, and where, participants believe they can take meaningful action. My findings reflect those of Lewis et al. (2005), who highlight the prevalence of consumer identities within the media's discussion of political events. They argue that continually addressing people as consumers has a significant impact on people's sense of self, but do not offer any audience studies to examine this assertion. My study suggests that audiences do use media discourse, and other cultural representations, to shape their own identities and that the prevalence of consumerism affects the kinds of actions people are willing to take. All the focus groups characterised economic actions as effective and citizen actions as ineffective. The actions they described themselves taking involved checking labels, buying certain products or switching supermarkets. Not one participant said they had taken part in government consultations, gone on a protest, or lobbied an MP.

By addressing audiences as consumers the media are automatically excluding some people who would be included in notions of national citizenry; namely those who do not have the economic power to choose between differently priced options. Beck describes how the new conditions of risk that we are living under have led to a “loss of social thinking” (1991: 25). The media and campaigners discussed the choice that shoppers make between organic tomatoes and value range ones as if it had nothing to do with economic circumstance. There is no acknowledgement that poorer people will

eat, and probably already do eat, larger quantities of GM material than consumers who can choose to buy more expensive foods. This loss of social thinking is also noticeable in some of the focus groups, with participants making comments such as:

Steve: “Yeah, choice has got to be the most important thing.”

Kat: “I don't think cost will have a lot to do with it as to whether or not people will buy it or don't buy it.”

(Urban 1)

Here (as in several groups) participants do not acknowledge that for some people a cost differential would undermine their ability to avoid genetically modified foods, as they would be forced to buy the cheapest option. Urban 3 have a different view. They were the poorest group I spoke to, with the majority of participants not in employment. While most other participants demonstrated a belief in their own economic agency, participants in Urban 3 felt differently, like other groups, they distrusted the Government but, in addition to this, they also distrusted supermarkets:

Madeline: “You see, personally, I don't believe any of that. If they say it's GM free, like you mentioned Icelands. I don't believe they're selling GM free products. I reckon they're lying.”

Denis: “I was going to say that how would anyone know?”

Talos: “Did you hear about the restaurant though? He was supposed to be selling GM free French food and it was a really expensive posh restaurant and they got caught out. But how many other restaurants are doing that, putting on their menu it's GM free when it's really not?”

(Urban 3)

Given the lack of economic agency this group express it is hardly surprising that they trust neither the claims of 'posh' restaurants nor supermarkets, both are organisations that they feel unable to influence. Unlike other participants, Urban 3 felt they could not get their voices heard through consumer choice, as they will always be forced to buy the cheapest product. Despite expressing unease about GM at the start of the group and a preference for eating conventional produce, by the end of the group participants had switched to an uneasy acceptance; firstly, by re-evaluating their assumption that 'natural' foods were necessarily the most desirable (see Chapter 7) and secondly, by arguing that the most sensible course of action was to accept their own lack of power rather than worrying about the inevitable:

Clara: “But it’s like – whatever will be will be.”

Talos: “Yes.”

Clara: “You know, you – you’re not going to stop it, are you? And if you constantly worry: oh God if I get a chest infection the antibiotics they’re not going to work in ten years time. You’re going to worry yourself to death, aren’t you?”

(Urban 3)

Sue: “There's absolutely nothing I can do about it. I have to eat what's there, my kids have to eat what's there. I’m not going to waste time worrying whether my carrot's got funny genes in it.”

Talos: “It is what it is, we can’t change it”.

(Urban 3)

After discussing their inability to buy GM free food Urban 3 renegotiated their previous concerns to articulate a far more apathetic position. In the face of a perceived lack of choice, participants argued the best course of action was to stop thinking about it.

The modes of action people considered appropriate and the way people understood their interaction with national structures of governance was informed by the media's promotion of consumerism. This is a powerful frame because it is reinforced at a myriad of other sites: billboards, supermarkets, TV ads etc. People saw consumerism as a key way to realise agency. Participants who felt prohibited from acting as consumers, due to lack of economic resource, were unable to envisage other ways of acting and instead renegotiated their original preferences.

9.9 Discussion

This thesis shows that nation is the automatic unit of discussion for many people. Despite globalisation, most participants automatically spoke about Britain and often used collective pronouns like 'we' and 'our' to refer to the people who live in Britain and 'they' and 'their' to refer to other nations or continents. The media are not alone in constructing the national community – identification with a particular nationality is also promoted in political and regulatory arenas through national governments, laws, public services and taxes etc. Despite the development of globalisation (in ways that are both material and discursive), nationality is still the dominant unit of meaning and is reinforced by a myriad of material and semiological elements.

One of the key questions this chapter explored is whether a national media engenders a national identity. The media clearly create a discourse that enables people to think and talk about nation - although they, of course, are not alone in creating that discourse. The media's continual use of nation as the automatic unit with which to

discuss issues like GM, is part of the process of reinforcing national identity through strategies of exclusion and inclusion in the face of perceived threats (Schlesinger 1999, 299-300). The national media are an important part of how nationality is constantly reconstituted.

Britain was predominantly framed as a 'homogenous nation'. Factors like arable differences and economic or social conditions were ignored by participants when talking about GM, even when participants had personal knowledge of such factors. Groups talked about how Britain was going to be filled with GM or how British people were being forced to eat GM. Nation was the a priori category. Part of the reason that differences within Britain were not discussed is that GM was perceived as a foreign risk. Participants argued American companies wanted to grow GM crops in Britain (despite the fact that the company that developed Chardon LL was founded in Germany). The perceived foreign origin of the threat meant participants automatically concentrated on the unit of nation.

During the discussions participants deployed a wide variety of stereotypes about many national identities including French, American, Mediterranean, African and British. Arguments were made, and won, by trading stereotypes. Even when the dubious foundation for such clichéd views were acknowledged (for example a margarine advert) participants often accepted the stereotyped image on offer. On some occasions people demonstrated they were able to challenge such stereotypes, some participants even questioned ones they themselves had offered, but they did not often choose to do so. Participants' ability to question the essentialist views offered, suggests that, despite the GM debate being predicated on fixed, unitary notions of nation, in a different discursive context, people might have challenged these stereotypes. Theorists like Madianou, Bauman and Werbner have all demonstrated how people move between offering 'essentialisms and counter-essentialisms' in their discussions of national identity. This is because people often deploy stereotypes for political reasons. In the GM debate part of the reason people deployed stereotypes was to make sense of uncertainty. Participants had some knowledge of which countries grew GM plants and how much they grew, but they all expressed doubt about the reliability of this knowledge. They argued GM was undetectable and that they did not trust policy makers to tell them what foods or grains were genetically modified. In the face of this uncertainty, participants deployed stereotypes as a means of framing and understanding the world.

My focus groups' discussions demonstrate the wide variety of cultural resources audiences draw upon to construct arguments about GM. I noted that participants, in part, (re)produced the dominant media framing of GM – but linked this particular frame

to several other popular frames including Britain's empire history, the cultural poverty of America, representations of frontier America and the image of Africa as a barren continent. In so doing, discussions did not just reproduce media discourse but adapted and expanded the frame to create new chains of equivalence and introduce new associations. Participants deployed a range of discursive cues that were not just drawn from the media coverage of GM but from coverage of other issues and popular cultural representations.

Participants framed Africa as a continent that faced permanent food shortages and struggled to produce any food. In so doing most participants ignored the origin of many foods they are likely to have seen in shops, and quite possibly eaten – foods like green beans, coffee, tea, sweet potatoes etc. My study, like Kitzinger 's (2004), found that even personal experiences do not, by themselves, provide sufficient resource with which to challenge dominant frames. This shows the power of particular frames to occlude certain kinds of knowledge. Frames are 'cognitive windows', they make sense of information by providing it with an organising structure but they are also, necessarily, limited. They exclude certain kinds of knowledge, even if this is knowledge has been acquired from lived experience.

There was, however, one frame that participants used their own experience to question. The press and campaigners continually claimed that, if Chardon LL was granted a commercial licence, Britain would have surrendered its 'GM free' status. Participants rejected this frame, drawing on their own experience of seeing GM ingredients in food, to argue that GM material was already in the country. Focus groups' discussions show that participants were aware of the symbolic nature of the boundary campaign groups attempted to place around Britain. Despite this, participants still expressed concern about *more* genetic material entering British shops, or being grown in British fields. This suggests that NGOs do not need to always provide definite 'lines to be held' to mobilise people. Bluhdorn argues that symbolic politics increases distrust in institutions. This study supports Bluhdorn's supposition, showing how symbolic politics fostered political disengagement. Such disengagement (partly created through the frames offered by NGOs) also meant it was difficult for campaign groups to offer people a citizen based model of action, so instead they predominantly encouraged people to take action as consumers.

An aim of this chapter was to test the assertion of Lewis et al. that "the way citizens are portrayed on the news media helps to shape what it means to be a citizen in a democracy" (2005: 8). I found that participants identified themselves as consumers, not citizens. Where a group (Urban 3) did not have the economic resources to exert agency as a consumer, they renegotiated their original preferences

rather than suggesting another means of action. Lewis et al.'s assertion was borne out in my study; the dominant cultural identity offered to people in the media (and elsewhere) profoundly impacts on people's understanding of themselves and the modes of action they feel able to take.

I observed participants questioning some elements of the dominant frame, however these challenges were only partial and many key claims remained unchallenged. Participants in Urban 3, for example, stated that they could not afford to choose what types of food they ate. They also discussed how no one on benefits could afford to choose the foods they wanted. This, however, did not lead the group to criticise the amount of benefit money they received, discuss unfair economic arrangements or what governments or other actors could do to change this. Instead they renegotiated their original preference for non-GM food. The group did question whether nature is desirable - but did not question another hegemonic idea – that current societal arrangements gives people choice and economic agency. Such a challenge would have been aided had the group articulated an identity based on economic circumstance: a class identity.

This finding adds to the observations of Kitzinger (2004) and Fenton et al. (1998) who distinguish between the moment of decoding (where critical responses of particular pieces of information are sometimes elicited from participants) and interpretation (where the same participants often ignore the discrepancies between their own criticisms and dominant ideas or assumptions). They conclude that criticisms levelled at the moment of decoding do not always carry over into wider interpretations. My findings further Gramsci's observation that hegemony can accommodate counter-hegemonic viewpoints in such a way that core dominant assumptions are not challenged.

Other researchers have observed that, in focus group discussions, British-born working class groups are ambivalent or defensive about locating their own class position, often reading class categories as some form of moral judgement (Savage, 2001, Skeggs, 2008). The reasons for this are complicated. Many researchers have argued that it is not because there is no longer an economic basis for class identity, but rather that people are reticent to articulate a class unity. The decline of the manufacturing industry, the increase in short term 'white collar' employment, the privatisation of previously state owned industries, the weakening of the trade union/labour movement and the rebranding of Labour from a 'party of the working class' to a 'party of the centre ground' are all factors used to explain this perceived lack of 'class consciousness'. Crompton, in particular, argues that it is the growth of neo-liberal ideology which has meant “the idea of 'class' has lost its importance as a central

discourse, or political organising principle, in contemporary societies" (2008, 3). Class based politics is no longer presented as a credible identity in the media. The working class are often portrayed as a site of immoral culture and characteristics (Skeggs, 2004). In Britain people receiving benefits or living in council housing have been stereotyped as lazy, deceitful and worthy of ridicule (Owen, 2011) and this has led to stigmatisation of the working class in popular culture. It is not surprising, therefore, that class identity, in particular a working class identity, was either not readily available to participants or they did not feel comfortable articulating it. As Crompton concludes, "class matters but is generally not articulated" (2008, 64).

Political groups do not automatically form but must be produced within discourse and signification (Laclau and Mouffe, 2001). For the reasons noted by the class theorists above, the articulation of a British class based identity has diminished in recent decades. Without this discursive resource it is impossible for people to articulate class based politics, despite the expansion of economic inequality in Britain (Wilkinson and Pickett, 2010). Instead people are offered consumer based politics, an individual, as opposed to collective, form of action which can only be realised with sufficient financial resource. Consumer based identities have increased, as class and citizen identity has decreased.

Researchers have noted that the commodification of public life has led to an evaporation of politics from the public sphere. Citizen identities have been marginalised and in so doing publics are no longer allowed to determine what is worth discussing (1998: 17). By addressing people as consumers in the GM debate certain questions were excluded. These included: who would eat GM food? how can citizens influence debates about GM? and what should be prioritised when considering systems of food procurement and distribution? These complicated questions were ignored and instead people were offered one solution, but GM-free food, as Lewis et al. write, "the ultimate solution for social ills...is economic growth" (2005:132).

Beck argues that, under the new conditions of uncertainty, society must take on the challenge of "creatively re-imagining the self as a meaningful actor in the new conditions of globalised risk". For that, society needs the discursive resource to re-think and reframe. Yet, this study suggests that progressive institutions like NGOs, rather than providing such resource, predominantly offer people the limited identity of a consumer. The new conditions of global uncertainty have been produced within global consumerism; the undermining of nation states by multinational companies, the loss of jobs as companies move abroad in search of cheaper labour, environmental concerns as we rapidly burn more carbon and create more pollution are all exacerbated by a system that is predicated on continued economic growth (Boyce and Lewis, 2005). In

response to these threats people are encouraged to support the very logic that has created these problems by acting as a consumer. Such actions do not address the root causes of these problems and instead supports the system and logic that is the cause of this uncertainty. This is the paradox that Bauman's theory of simulative politics sets out. Consumerism is not a suitable identity for reimagining the self as a 'meaningful actor'.

Chapter 10: Conclusion

This chapter outlines the theoretical, methodological and practical considerations raised by this thesis. I begin by summarising my empirical findings. I then consider how my work contributes to the three areas of literature outlined at the start: media studies, literature on the construction of nature and literature on national identity. I shall discuss the implications of my work for environmental NGOs and offer some practical recommendations based on the findings. I shall finish by outlining areas for future research.

10.1 A summary of each empirical chapter

Chapter 6 A Modified Nature. The Natural in the GM Debate. Press Coverage and Source Interviews

In Chapter 6 I analysed how the press and sources discuss nature in the British GM debate. In the press coverage 20% of articles described GM crops as unnatural. GM was immediately established as a bad thing because it went against nature. Conventional foods were discussed as natural (even if they were intensively farmed) demonstrating that 'natural' is a label that is ascribed in a relative manner. 43% of articles spoke about GM crops polluting or contaminating conventional varieties. There was also wide use of monstrous imagery in the depiction of GM. This was noticeable in articles that were not about GM but mentioned the technology in passing – using GM as a cultural symbol of the monstrous.

Sources did not use the words nature/natural or unnatural very often. Other words, in particular the environment, proved far more popular. The three interviewees associated with organic farming referred to nature the most and replicated the way the press spoke about nature – claiming GM was wrong because it went against nature. GM advocates dismissed arguments about nature as meaningless, but at other points aligned GM with the natural and presented nature as a positive quality. NGO employees referred to nature/natural/unnatural the least of any of the sources, preferring to use alternative words, in particular 'environment'. I concluded that they avoided the word nature because they were wary about being labelled anti-science. NGOs did, however, often use words and images associated with nature: contamination, purity and monstrousness.

I concluded that anti-GM NGOs dominated the coverage. They were the most quoted source and their frames were the most successful. Both pro- and anti-sources attempted to align themselves with, and distance themselves from, 'nature' at certain

points. This is because nature has historically been referenced in a variety of different ways depending on the context of its deployment. Sometimes nature is spoken about to signify 'what is right' or 'the way things should be'. At other times nature is depicted as a force of emotional irrationality; it is the opposite of civilisation. While sources were keen to evoke one association, they were equally keen to avoid the other.

NGOs dominated the coverage because they appealed to news values and situated their arguments within hegemonic frames. This meant, however, that there was a limit to the critique they were able to offer. By framing GM as unnatural, they promoted a focus on physiological risks, as they mostly spoke about how the body and the environment were threatened by contamination. This meant that other risks, such as the democratic deficit present in the current agricultural system, were overlooked. I concluded that frames that fit the hegemonic view are more likely to overlook issues of environmental justice.

Chapter 7: A Modified Nature. The Natural in the GM Debate. Audience Discussions

Chapter 7 discussed how audience groups spoke about nature. The words nature/ natural/unnatural were frequently used – on average almost 20 times in each group. Alternative words such as the environment or biodiversity were referenced far less often. GM was defined at the start of all the groups as unnatural. Groups also spoke about contamination, purity, monstrousness and Frankenstein. Contamination and cross-pollination were used interchangeably – sometimes participants even spoke about 'cross-contamination'. For many participants their first memory of GM was people walking through fields in white suits. The group of 16-19 year olds did not reference Frankenstein or people in white suits – this is because they did not remember the media coverage from that time. They did, however, describe GM as unnatural. This suggests 'GM as unnatural' was a wider cultural narrative, whereas the media were responsible for promoting particular associations and images – like the white suits. The 16-19 year olds understood the Frankenstein metaphor and white suits image when I introduced these to the group. This suggests these elements were successful discursive cues because they readily evoked a particular frame.

Discussions of nature prompted participants to recall childhood memories or trips to their country of origin. This indicates the cultural importance of nature in expressions of self. Nature was continually described as a positive force and an indicator of what was right. Some participants linked nature to religious convictions but they recognised that nature was more likely to prove a winning argument than views which referenced God. Some participants spoke about nature in their discussion of people or behaviours of

which they disapproved. The framing of GM as an unnatural technology also encouraged audiences to focus on health and environmental risks, as opposed to social ones, because they spoke about physiological elements that were under threat from contamination.

Some participants went against the grain of discussion and spoke about GM in ways that varied from other people. One group used words like environment and biodiversity instead of nature. They were the group of conservationists who possessed specialist knowledge and vocabulary. The group of bioscientists shared this technical language but still referenced nature more than other words. I partly attributed this difference to the setting of the focus group: the conservationists met at work with all their work colleagues, whereas the bioscientists did not meet in their workplace. The poorest group (Urban 3) questioned just how essential nature was as a quality in food. After talking about how they could not afford more expensive foods, they renegotiated the preference they originally expressed for 'the natural'. Others who presented themselves as scientists questioned whether GM was unnatural or whether nature was a positive quality. This was dependent on whether they identified themselves as scientists rather than the amount of scientific knowledge they possessed.

Chapter 8: A Modified Nation. Nationality and Citizenship in the GM Debate. Press Coverage and Source Interviews

This chapter considered press and source discussions of nation in the GM debate. In the press, nation was the automatic unit of reference. Britain was regularly referred to as a place that is GM free but this is actually misleading: GM food and products are sold in Britain, animal feedstock is imported and GM crops have been grown in British soil. In order to reinforce the unit of nation, the press ignored sub-national differences. The Government is presented as undemocratic and so consumerism is presented as the only effective mode of action. The press continually address people as consumers and the British public is presented as a buying public.

Britain is described in the press as important and unique. Other countries and continents are homogeneously characterised according to their GM status: the USA is presented as corrupt and culturally deficient, Europe is described as pure and a guardian of Britain and all of the countries of the Global South are framed as passive rather than agents. The focus on national boundaries, coupled with the language of purity and contamination, meant that articles about GM echoed the language of the asylum debate.

Anti-GM campaigners also claimed Britain was GM free and used the nation's boundary as a clear line around which they could encourage people to mobilise. Sources who advocated the use of GM technology acknowledged there was GM material in the UK and used this to further their argument that Britain should commercially grow GM crops. By coupling the focus on boundaries with words like contamination and purity, NGOs evoked a frame about Britain's contamination, even if they did not directly talk about this.

NGOs addressed people as consumers in their campaigns, and suggested economic power was the key way Britain could stay GM free. Sources advocating GM spoke about consumers less but, when they imagined a British public supportive of GM, they described them as consumers. Therefore, when sources envisaged people taking action, it was as consumers. When the biotechnology industry first introduced GM in the UK they used images of America, had public representatives who spoke with American accents and appealed to American cultural values. In the interviews they recognised this was a PR mistake and are now more culturally sensitive when communicating in different countries.

I concluded that, despite forces of globalisation, the media, and other influencers like campaign groups, still reinforce nationality by presenting fixed homogenous versions of nationhood.

Chapter 9: A Modified Nation. Nationality and Citizenship in the GM Debate. Audience Discussions

This chapter looked at how audiences discussed GM. Participants focused on Britain's GM status; they ignored sub-national differences even when they had personal experiences which meant that they were more exposed to risk from GM than other people in Britain. Groups did not reproduce the dominant media frame and questioned whether Britain was really 'GM-free'. They argued that genetically modified foods and crops were already grown and sold in Britain. They contrasted media claims that Britain was 'GM free' with their own experiences of seeing GM foods in the supermarkets. They recognised that Britain was not 'GM free' and expressed anxiety and confusion in relation to this symbolic claim. Participants were concerned that they did not know how much GM material was in Britain. This mistrust was targeted at the Government and used to support claims that politicians continually lied.

Europe was sometimes framed as a barrier protecting Britain and at other points as a threat to Britain's interests. When participants portrayed it as a threat they also drew on media reporting of another topic: Britain's relationship with the European Union. GM

was viewed as an American technology. Participants described America as culturally deficient but also a powerful nation and therefore a threat to Britain's interests.

The Developing World, Africa and the Third World were referenced interchangeably. In these countries, participants argued GM might be an appropriate technology because they believed there were permanent food shortages in such countries. This suggests media memories of the 1980s Ethiopian famine were informing participants' claims that Africa was a continent of permanent food insecurity. A few participants presented Africa differently. One participant used her experience of buying food from Kenya to question participants' claims that no food came from Africa; the group of 16-19 year olds argued that Africa produced more food than Western countries because the continent had a better climate.

The majority of groups discussed GM as a threat that was moving unseen across Britain's borders. This frame meant the language groups used reflected the language of the asylum debate. Group discussions about GM prompted two groups to talk about migration, and several groups to talk about other issues where Britain's borders are perceived as being under threat – e.g. invasive species.

Participants argued they could not take effective action as citizens. Activities such as writing to your MP or talking part in government consultations were dismissed as ineffective. People felt the only way they could exert their preference was as a consumer and many described checking labels or switching supermarkets to avoid GM. People expressed a lack of trust in the Government and accepted that their main way of exercising agency was through purchasing power. The group who received benefit payments discussed how they could not afford more expensive food. Rather than expressing an alternative identity based on their different economic circumstances, they expressed disempowerment and apathy. This suggests they did not have the discursive resource available to create an alternative identity.

I concluded that groups reproduced the dominant frame of a homogenous, important Britain but did not reproduce the idea that Britain was 'GM free'. A wide number of stereotypes were deployed and they mostly won arguments. At other points however participants demonstrated they were able to question those same stereotypes.

10.2 Answers to my Research Questions:

I this section I am going to consider each of my research questions in term, summarising my main findings in respect of each of them.

1. **How does the concept of nature function as a frame of the British discussion of GM?**

Nature was a key category in the discussion of GMOs. Like other researchers, I found that both the media coverage and the group discussions focused on GM's ability to breach nature's boundaries. Press and audiences alike framed GM as an aberration of the natural world and, as a consequence, rejected the technology. All groups discussed GM as unnatural – even the group of 16-19 year olds who did not remember the media coverage. It was a culturally ubiquitous frame.

Framing GM as unnatural promoted the discussion of particular risks – in particular risks to the environment and human health. The discussion of other risks, such as the democratic deficit in current agricultural systems, received little attention. Framing risk debates around nature meant physiological, as opposed to social risks, were more likely to be premised. Given the popularity of nature in risk debates this is a significant finding.

This thesis also discovered the importance of considering how nature is used in conjunction with other concepts – in particular the concept of nation. Although many studies have separately considered the role of nature and nation in risk debates, I add to both literatures by analysing the implications of their interaction. An important observation is that the concepts often collocate. Images of nature are important in cultural representations of a nation; in the GM debate the new technology represented a threat to the British countryside. The media discussed how GM could harm hedgerows, field mice and ladybirds. GM was a cause of concern not just because it threatened nature but because it threatened Britain's nature. My thesis shows that the cultural importance of both these concepts cannot be determined by considering them in isolation.

Nature is a traditional category of certainty; it has been used within the Western world to structure how people understand themselves and the world around them, nation is also a category of certainty and has been used in a similar way. The new conditions of globalisation and technoscientific advances, however, have challenged such categories. It is this challenge that produces the discourse of fear and uncertainty found in the GM debate. Theorists like Bluhdorn have shown how often the discursive response to uncertainty is to reassert old categories of security. There are, therefore, two opposed discourses at work – one of insecurity which calls what counts as nature (or nation) into question and one of security which reasserts nature's (or the nation's) boundaries. I found discourses of security and insecurity present in both the press and the focus groups, as participants and journalists discussed nature and nation as

coherent categories, while at the same time expressing concern about GM's ability to breach Britain's borders or nature's integrity.

The GM debate's focus on both nature and nation meant it was centred around ideas of security and fear. This led to the discussion of GM being framed in similar terms to the debate on migration. Arguments about the purity and impurity of nature, coupled with the focus on national borders, created a frame which Haraway argues is filled with “the unintended tones of fear of the alien and suspicion of the mixed”. The asylum and GM debates share a common stock of ideas: national boundaries, purity and the dangers of mixing. The shared concerns mean the two topics are easily linked together and it is worth noting that some participants switched from talking about restricting the movement of plants to restricting the movement of humans. The matching set of tropes in the asylum and GM debates was only revealed by analysing both nature and nation. My study suggests there is value in paying attention to how nature and nation (and other categories of security) interrelate in other risk debates.

2. How does the concept of nation function as a frame of the British discussion of GM?

Nation was the automatic unit of reference within the UK's discussion of GM. Journalists, sources and participants focused on Britain's GM status and ignored sub-national differences.

A wide variety of national stereotypes were deployed within the focus groups. I observed participants trading stereotypes and accepting them as an easy way of understanding the world. Even when participants acknowledged the dubious foundations of clichéd national images, such arguments were still accepted as legitimate. Some participants did challenge stereotypes and qualified their own statements, demonstrating that they recognised the simplistic nature of the national differences they described. I found some evidence of people questioning essentialist notions of national identity and it seems likely that participants may have been able to challenge them further, had I prompted them. But I also discovered nationality is a key way in which people make sense of the world and the people in that world.

My findings fit with a growing body of literature that argues nationality has continued conceptual importance, even under the new conditions of globalisation. Trade, companies and media may be global but national cultures have not been erased. In my study both the media and participants automatically referred to Britain and used collective pronouns like 'we and 'our' to talk about people who live in Britain, and 'they' and their' to refer to other nations or continents. The media are not alone in constructing the national community – identification with a particular nationality is also promoted in political and regulatory arenas through national governments, laws, public

services and taxes etc. I concluded that despite the prevalence of a globalisation discourse, nationality is still the dominant unit of meaning and is reinforced by a myriad of material and semiological elements.

Nationality plays a particularly important role in risk debates. The media's continual use of nation as the automatic unit with which to discuss risk issues, like GM, is part of the process of reinforcing national identity. Brookes observes how, in the face of transnational risk, the media overlook social variation within the nation by framing Britain as predominantly 'homogenous'. I also found that the media framed Britain as a nation of uniformity through ignoring factors like arable differences and economic or social conditions. Brookes study only looks at media content; my audience research, therefore, adds new insight to his original findings. I discovered participants also framed Britain as homogenous - even when they had personal experience of social or regional variation. Nation was the a priori category. Part of the reason that differences within Britain were not discussed is that GM was perceived as an American technology. The perceived foreign origin of the threat meant participants automatically concentrated on the unit of nation. I concluded that the national media's reporting of risk events is an important part of how nationality is constantly reconstituted.

The media also promotes particular types of national identity; in the discussion of GM that was as a nation of consumers. Participants reproduced this frame, predominantly describing sites of consumption as key for effective action. This was not the only identity articulated: some people also identified as scientists, gardeners or members of a particular religion but almost everyone presented themselves as a consumer at least once during the discussion. The prevalence of a consumer identity affected the arguments participants presented, whom they claimed to trust and the modes of action in which they chose to engage. This finding adds to the work of Lewis et al. (2005) whose text based study explores the way citizens and public opinion are represented in the news media. As the authors acknowledge, their analysis is premised on the assumption that media representations have the power to affect how people understand not just the external world but their own sense of self. My study reveals that audiences generally accept the identity offered to them in the media thus shaping which actions they consider to be appropriate, who they trust and how they understand social difference.

Morley (2000) critiques the idea of a 'public sphere' by claiming that any notion of the public excludes as well as includes. By continually addressing people as consumers those who cannot afford to pay more for GM-free food were excluded. This was demonstrated in the discussions with people who felt they could not afford to buy GM. Rather than considering other modes of action, poorer participants expressed a lack of

agency. Alternative articulations of identity were apparently unavailable to these participants (for example a class identity) and this impacted upon their own understanding of self and their perceived ability to act. My study revealed that the media do not automatically engender identity but do provide crucial discursive resource for the construction of identity. In addition, people are only able to question that identity if alternative identities are available to them.

My thesis adds to the insights of researchers who have argued that the identities the media offer have a significant effect on how people understand themselves. I discovered the media continually reinforce national identity.

3. **Did audience participants reproduce the media discourse, and what other factors influenced audience discussions of GM crops?**

This thesis demonstrates the complicated ways that media effects are realised. Many elements of the media coverage were reproduced in the audience discussions, but they were not straightforwardly replicated. Participants utilised many different sources of information and experiences in their discussions. They drew on a wide range of cultural influences to develop media discourse. Participants referred to food labels, childhood memories, gardening knowledge, foreign holidays and media coverage of apparently unrelated issues – for example EU food mountains. The list of influences was far wider than is sometimes acknowledged in the discussion of media effects. Part of the reason groups discussed such a wide range of ideas is because the discussion did not focus on one particular media text. I asked participants to talk about GM as a topic and then prompted participants with questions about where they got specific pieces of information from. This encouraged participants to not just relate information they got from the media, but instead to concentrate on talking about the issue at hand – drawing on information that best supported their argument as they might do in an everyday context.

My study demonstrated the complexity involved in analysing media effects. Communication is a circuit (Miller, et al., 1998); the continual and iterative interaction between the media and other social spheres ensures discourse is not exclusively located 'in the media'. Journalists opinions, like anyone else's, are structured by their own discursive experiences and resources – it is, therefore, not possible to precisely locate where media effects end and other social effects begin. Nevertheless, there was clear evidence that audiences were drawing on the media. This was made particularly apparent by the group of 16-19 year olds who did not remember the coverage of the Farm Scale Evaluations, which had taken place when they were still children. While they were able to reproduce the frame that 'GM was unnatural', suggesting this was a wider cultural frame, they did not discuss contamination, people in white suits or

Frankenstein foods. This suggested that other participants knew these concepts from memories of the media coverage. Although it is impossible to 'prove' media effects in this type of study, it is possible to locate particular pieces of information which the media had a significant role in promoting. This also points to the value in ensuring focus groups are chosen to reflect a diverse array of experiences and knowledge about the particular topic under discussion – rather than designing groups to be representative of the general population (Kitzinger and Barbour, 1999). Talking to a group of people who had not seen the media coverage of GM provided me with a useful point of comparison in order to consider media effects.

Although there was no question that participants were active, I would not describe this activity as 'resistance', in most cases people were actively (re)producing the dominant media frame but introducing new information and associations to support it. There were clear examples of divergence from media frames (for example participants failed to reproduce the dominant media representation of Britain as GM free) but I think it is inaccurate to describe these divergences as 'resistance'. Participants would often question one media frame because it did not fit with another, for example groups argued Britain was not GM free by referencing another popular frame 'the Government can't be trusted'. This frame was, at least in part, also taken from media coverage. It is therefore inaccurate to describe it as a display of resistance to media effects. Where groups had no discursive resource to draw upon they did not challenge hegemonic views. I did not find the concept of resistance useful when analysing divergent responses – discursive resource was a far more useful concept.

I found that groups who raised points based on their own experience (be it geographical location or economic disadvantage) often negated the oppositional critique raised by these points of difference. Sometimes this meant renegotiating part of the hegemonic view while maintaining other parts (for example the group who felt they could not afford GM renegotiated the idea that 'nature was good' but did not critique the idea that consumerism offers people choice). I argue that groups whose own experiences could be used to challenge the hegemonic view (be it living by GM crop trials, buying Kenyan runner beans or not being able to afford organic food) did not have the necessary discursive resource to challenge the dominant frame – i.e. because articulations of subnational variation appear so infrequently in the GM debate, people did not readily use their experiences to make a broader point about social differences within Britain.

This demonstrates the power of particular frames to occlude certain kinds of knowledge. Frames are 'cognitive windows' - they make sense of information by providing it with an organising structure but they also necessarily limit the amount of

information that is considered. They exclude certain kinds of knowledge, even if this is knowledge that has been acquired from lived experience (Kitzinger, 1998). People therefore require other frames that make sense of this knowledge if they are going to challenge the dominant frame. Thus, if the media regularly acknowledged that some people in Britain face greater risks from industrial farming than others, it would have been more likely that the group living near the crop trial site used their own experiences to question the idea that GM poses a risk to the whole of Britain.

I concluded that identity is a crucial factor in the words people use and the types of argument they promote. The way people introduced themselves was crucial in the arguments they deployed and the language they used. Some people chose to mobilise a part of their identity in support of the consensus view, others to counter it. It was presentation of identity, rather than social position, which often proved the decisive factor in people's response to the dominant view – for example some of the scientists I spoke to made different lexical choices and put forward different arguments from most participants; other scientists did not do this. The difference was in part explained by whether participants had introduced themselves as scientists at the start of the group. Those who said they were scientists used more technical language and put forward pro-technology arguments, those who began by introducing other aspects of themselves (like their interest in gardening, photography, ecology etc.) were less likely to do this.

Laclau and Mouffe's concept of articulation is useful in understanding why participants with similar personal backgrounds presented themselves differently – and made discursive choices related to that identity. Laclau and Mouffe (2001), like Hall (1992), argue that identities are not fixed points of social difference but the result of 'political construction and struggle'. Identities must be created through their articulation. This means that identities are multifarious; people choose to articulate different identities in different situations and mobilise words and concepts that support that articulation. It also reveals that identities are often mobilised for political reasons, rather than being essential points of difference. This concept does not refute that structural differences exist but it recognises that structural differences do not always inform the construction of a particular identity. The group on benefits demonstrated this when they did not draw on their own economic circumstances to articulate a class identity. These circumstances were at variance with the relative affluence of other participants, who felt they could chose to avoid buying, and therefore eating, GM food. If a credible articulation of working class identity existed in the media, or other social spheres, participants may have been more likely to articulate this identity.

10.3 The study's contribution to scholarship

Within this thesis I explored some of the frames and cultural assumptions that shaped the British GM debate. Traditionally, media analysis of environmental issues has explored questions like accuracy, balance, themes covered etc (Hansen, 2010). Such a focus has informed much of the media analysis of the GM debate. My study departs from this by integrating a wide range of methodological and theoretical approaches to explore how two key cultural concepts (nature and nation) framed the GM debate. I analysed not only how nature and nation were spoken about but also the ideological implications of these frames, and their complex discursive deployment. I considered the intermeshing of progressive and reactionary elements within these discourses and their argumentative implications.

Such a focus enabled me to contribute to understandings of the public debate around GM. The study offers one of the only media studies of GM that looks across the circuit of communication. I was able to unpack how identity and agency influence the discussion of GM, elements which have not previously received very little attention, I show that there is considerable value in analysing how cultural identity informs discussions of scientific and environmental issues.

The thesis also contributes to media studies. It offers a detailed excavation of the complex and multiple processes involved in the reproduction of hegemonic viewpoints and analyses. I attend to moments where counter-hegemonic views are both opened up and where they are closed down again, The complex and multifarious processes involved in reproducing established societal norms are little understood, while my study is certainly not the only to attend to this question (for example Mckinley, 1997, explores such questions in relation to audiences of Beverley Hills 90210) such detailed audience studies are not commonplace, particularly in relation to scientific or environmental issues. This thesis therefore offers a distinct contribution to current knowledge.

10.4 Reflections for Social Activists

Having considered the answers to my key questions and this study's contribution to scholarship I am now going to discuss some of the implications for social activists. This thesis considered the communication strategies of many actors involved in the GM debate (scientists, the Government, biotechnology industry etc.) but my own experience of working for and campaigning with NGOs meant the implications of their strategies was a key focus of my analysis (along with more theoretical considerations). This section will therefore consider implications for campaigners.

My study confirmed the findings of Anderson (1997) and Cottle (2003) that large, well-funded NGOs like Friends of the Earth and Greenpeace are now legitimate voices that are regularly quoted in the media. My quantitative analysis revealed that anti-GM NGOs dominated the media coverage. They were the most quoted source – providing 28% of direct quotes. Biotechnology companies by comparison provided only 8% of direct quotes. Yet I also observed, as Cottle did, that the situation is not one of 'open and equal access' for all – it is the voices of larger environmental NGOs, most typically FOE and Greenpeace, that are heard in the media. Three anti-GM lobby groups (FOE, Greenpeace and the Soil Association) provided almost all the direct quotes that came from anti-GM campaigners. Smaller, grassroots groups who were campaigning exclusively on GM and organised the majority of the crop thrashing protests (Anti Genetix network and GM Freeze being the most notable) were not quoted in the sample period.

Larger NGOs achieved this success not just because they were well funded but also because they were willing to adjust their message to fit with dominant news values. In particular, they sacrificed parts of their message that asked question about current social arrangements, focusing instead on health and environmental risks. In addition they framed the debate around concepts of nature, purity and the nation's borders. These elements were extremely successful in winning the debate. It was these arguments that mobilised a mass of media and public concern, which ultimately meant GM crops were not commercially planted in Britain

A socially conservative version of nature was mobilised in some of the focus groups, where people as well as plants were attacked. Nature has historically been used to justify discrimination against many kinds of people - it is a concept that can easily be appropriated within discourses that are used to oppress, discriminate and subordinate. The arguments against women who take the contraceptive pill and against gay and lesbian people were isolated occurrences but nevertheless show how nature can be used to justify discriminatory attitudes.

It is clear that participants' mobilisation of nature as an arbiter of right and wrong was informed by NGOs successful deployment of this frame in the media. When coupled with ideas of genetic impurity, that were also promoted by NGOs, nature was linked to a frame that has also been used to justify racist arguments. NGOs were cautious in their use of nature, sometimes aligning themselves with the natural, sometimes wishing to create distance. Despite their caution, my analysis reveals the stock of images and metaphors promoted by NGOs continually worked to create a frame based on the ideas of 'nature as right' and 'nature as pure'. Campaigners deliberately promoted a socially conservative version of nature in public discussions of GMOs. My research

suggests NGOs did not consider the wider social implications of these arguments. Campaigners matched the conservative framing of nature with a focus on national borders. Yet there can be little doubt that such arguments are often used to legitimise the censure of people as well as plants (as suggested by the close linguistic links between the GM and asylum debates).

Haraway (1996) asks campaigners to resist some of their most influential arguments against genetically modified crops – in particular the focus on purity and impurity. I conclude that arguments predicated on purity and nature may mobilise people to action, and win popular support in the media, but they ultimately undermine claims based on social justice. Such arguments will frame discussions of social problems in innately problematic ways; encouraging people to focus on controlling borders, to fear the foreign and to believe nature prescribes what is right. In so doing these arguments also eclipse social explanations of difference that can be used to ask important questions about societal arrangements.

Bluhdorn (2002) argues that 'simulative politics' undermines trust in institutions – my thesis adds empirical evidence to support this claim. Not only did audiences disbelieve the specific symbolic claims being made (that Britain is GM free) but they could recite numerous examples of other 'symbolic' claims 'eating beef won't make you ill', 'Iraq possesses WMD' etc. Participants continually argued they could not trust expert claims about risk and cited these symbolic claims to express distrust in the Government and political apathy.

While the symbolic claim that Britain is GM free furthered distrust in Government, it originated from campaigners. NGOs promoted a claim they knew was an oversimplification to appeal to news values and to mobilise people to action – some campaigners, like Julian Rosser from FOE Cymru, attempted to challenge this simplification but found the media unresponsive to attempts to be 'a bit more truthful'. In addition to making symbolic claims NGOs promoted the idea that the Government were untrustworthy. Campaigners were often quoted in the media coverage arguing that the Government were liars with a predetermined agenda. They claimed the Government would push through the commercial planting of GM crops despite the groundswell of public opposition.

The predominance of symbolic claims within the GM debate, coupled with the depiction of the Government as untrustworthy, led participants to express confusion and distrust; it fostered apathy as participants argued the Government would not listen to their voice. Such disengagement (partly created through the frames promoted by NGOs) meant it was difficult for campaign groups to offer people a citizen based model of action. NGOs would do well to consider the political disempowerment propagated by their anti-GM

campaign. If political action is not framed as credible then fewer and fewer people will be mobilised to take political action – in such a situation NGOs would lose their, already fragile, claim to a democratic base (Fenton, 2009). NGOs are currently one of the most trusted sources of information, as opposed to the Government who are one of the least.18 Should NGOs continue, however, to promote symbolic proposals it seems unlikely that they will carry on being so trusted. Campaigners should attempt to reflect people's experience of material conditions in the claims they construct.

The political apathy engendered by framing the Government as untrustworthy meant it was difficult for campaigners to mobilise people as citizens; instead they had to engage them as consumers. This is not just true for the GM debate; consumerism is now the main model of action that many NGOs offer their supporters. A report on Make Poverty History (the biggest ever UK anti-poverty campaign) argued that it promoted a transactional frame as opposed to a transformative frame – i.e. people were asked to donate money, rather than demand that decision makers commit to significant social change. The authors state “all the things that made the campaign ‘mass’ reinforced the consumerist values that make the transaction frame so dominant”.19

This thesis has analysed some of the implications of continually addressing people as consumers. While citizens are encouraged to take an active role in the shaping of society, consumers, as Lewis et al. observe, simply 'choose between the products on display'. The main ask NGOs made of their supporters was to change their shopping habits, to express a preference through buying something. When supporters were encouraged to take 'lobbying' actions (e.g. signing a postcard or writing a letter) these were almost invariably aimed at supermarkets as opposed to governments. Cook (2004) points out that the decisions made by supermarkets fundamentally shapes global society and uses this observation to argue that citizens should be concerned with engaging supermarkets. Yet there are democratic implications if supermarkets, as opposed to governments, are continually engaged with; while governments are mandated to represent the views of all enfranchised citizens – supermarkets only represent the desires of those with 'spending power'. While representative democracies offer a range of possible solutions to a problem, consumerism offers one solution: to buy more.

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18 http://www.eurostep.org/wcm/archive-eurostep-weekly/1003-ngos-are-the-institutions-most-trusted-by-the-public.html

19 http://www.findingframes.org/Finding%20Frames%20Bond%20Report%202011%20Executive%20Summary%20DRAFT.pdf

NGOs should consider the implications of the modes of action they offer supporters. A key environmental concern is climate change. While consumer capitalism may not be entirely incompatible with reducing global carbon emissions, it is clear that at the moment it represents a significant obstacle inhibiting effective action. This is not just due to the amount of natural resources being consumed but also the dominant logic promoted by this system, which urges people 'buy now, think later' (Boyce and Lewis, 2009: 5). By continually promoting consumer identities and 'transaction' frames, NGOs undermine modes of action that have the capacity to challenge current societal structures of power; structures that have led to the routine exploitation of the environment and refuse to address the impacts of overconsumption.

Beck states that society needs ways of "creatively re-imagining the self as a meaningful actor in the new conditions of globalised risk" (1997: 67). In order to achieve such a re-imagining, audiences need to have access to frames that promote different explanations of change. My thesis shows that rather than contributing to a societal re-imagining, many NGOs are attempting to reproduce normative conceptions to gain media attention and popular support. There is a significant risk that the challenge posed by green politics is undermined if environmental NGOs continually produce discursive interventions that chime with the hegemonic accord.

Campaigns that create better regulations or improve working conditions often have a civilizing influence on the market or state but they do not create "a genuinely free space where political agency might be articulated and lead to a political project" (Fenton, 2009: 241). Current social arrangements are often presented as the only option, serious consideration of alternatives are hardly ever discussed. This means when such debate is attempted it can easily be dismissed as an impractical, idealistic impossibility. NGOs should be contributing to a 'political project' which envisages new ways of organising society, instead they often find themselves exclusively concerned with making 'pragmatic' demands that promote the logic of consumerism, while excluding radical, alternative perspectives. 'Pragmatism', like 'commonsense', is created in the specific social historical conditions in which it is formed. As long as NGOs promote arguments that fit normative values, pragmatic actions will never include ideas that challenge current arrangements.

NGOs themselves are beginning to engage with these debates – see for example Common Cause.[20] In my own work with the organisation Platform I engage larger NGOs in the task of considering the social implications of the frames they use. These debates, however, are not common in NGOs. While a few staff champion such

20 http://valuesandframes.org/

approaches, the majority still consider them an aside, rather than a key concern. Part of the reason for the lack of success is that most of the work on the framing of NGO campaigns has emerged from a psychological perspective: in particular Schwartz's work on values (Borah, 2011). This discipline argues that there are universal human values, a claim that is rejected by some NGO staff who work internationally and who are keenly aware that sets of values are not cross-culturally universal, and at the very least vary greatly from case to case[21]. I would argue that more contextually contingent theories of framing (such as that offered by media studies) would engage a larger number of NGO staff and I would advocate the involvement of a wider range of academic approaches in analysing the discourse promoted by NGOs.

Below I offer a series of practical recommendations for NGOs. The key point, however, is that social justice organisations should not just be concerned with policy change but should also think about their discursive impact. If NGOs are to contribute to long term social change such considerations are crucial.

10.4.1 Practical recommendations for NGOs

1 Recognise that communications are not 'neutral'. Every email action, newsletter or press release will frame the world in particular ways. These frames promote different values, identities, problem causes and solutions. The impact of these frames should be carefully considered and analysed.

2 Frames are not universal – different words and images will evoke different arguments in different contexts. It is crucial to analyse how arguments work in a particular context.

3 Ensure the majority of communications reflect your organisation's vision for social change. There may be occasions when it is appropriate to promote frames which do not fit your organisation's core values (for example in some lobbying situations). 'Pragmatic' concerns should not be entirely abandoned, but organisations should analyse the implications of those frames and ensure most communications reflect their organisation's values.

4 Avoid making empty symbolic claims. These increase distrust and political apathy.

5 Mobilise supporters as citizens as well as consumers. Offer people meaningful ways of engaging with the political system – and where that system is failing,

21 This observation is based on a series of interviews I conducted with NGO staff evaluating the impact of NGO work on 'frames and values'.

encourage people to find other ways of influencing decisions without relying solely on consumer power.

6 Address supporters in several different ways in order to minimise exclusion. People can be addressed as activists, as citizens, as gardeners, as parents, as immigrants etc. Use a variety of modes of address across the organisation's communications to encourage a diverse range of people to identify with your campaigns.

7 Be a resource for social change. NGOs should not only be concerned with finding effective solutions to current problems, but should also aim to be a resource for people seeking to re-imagine how society is organised. That means not just creating better regulation but also offering people arguments and viewpoints that challenge the current view, that economic growth is the only way to deliver better lives for people.

10.5 Directions for future research

On a sunny afternoon in May 2012, around 300 people gathered in a field in Hertfordshire. Calling themselves 'Take the Flour Back' the group's purpose was to 'decontaminate' a field at the Rothamsted Institute where an outdoor trial of GM wheat was taking place. It had been several years since the last crop thrashing protests took place in the UK but the language and images were strikingly reminiscent of previous protests with contamination, nature and pollution all being discussed in the protestors statements and accompanying press coverage. There were, however, differences from the previous protests; who controlled the technology was a central point of discussion, with scientists at the Rothamsted Institute pointing out that they were conducting a publicly funded research project, the results of which would not be patented. Activists responded by arguing that the new chief executive of the Rothamsted Institute, Professor Maurice Maloney, who previously ran his own biotechnology company, was using Rothamsted research to support a 'biotech, patent and high technological product driven vision'.[22] Events like the Rothamsted Protests and the screening of the controversial Channel 4 programme 'What the Environmental Movement Got Wrong', show that, given the right context, GM foods could, once again, become a focus of the British public debate.

22 http://www.guardian.co.uk/environment/2012/jun/01/letter-take-flour-back-rothamsted?newsfeed=true

Such an event would offer NGOs an opportunity to rethink how they frame GM. It would also offer researchers another opportunity to analyse the discourse surrounding GM in Britain. There are several areas of the GM debate which this study has not been able to explore. I shall end by discussing a few of these – both as a pointer for future research on the discourse surrounding GMOs and, more generally, on discursive interventions made by NGOs.

This thesis has said nothing about new media and internet activism. Should GM become a focus of the British public debate, this area will prove even more important to analyse. In 2012 the number of internet users worldwide reached 2.27 billion – exactly twice what it was in 2007.[23] Theorists like Castells (2000) emphasise the importance of the 'network society' created through new forms of social media. These have been much discussed in relation to recent protests like the global Occupy movement and the Arab revolutions (Castells, 2012). In response to such optimistic assessments of technology's potential, activists have contended that in places like Egypt, for example, “the stone was as useful a tool as Twitter”[24]. Nevertheless, new media forms are a crucial part of how social movements both organise and promote their message. Their importance is clearly important to analyse, even if it is possible to contest over grandiose claims about the technology’s political potential.

My study focused on NGOs but a comparative study between the frames offered by professional NGOs and grassroots activists could provide a useful analysis of how the discourse offered by different sections of the social justice movement varies. It would also be useful to look at the arguments proposed by movements in the Global South. NGOs do not just campaign on one issue at a time and considering how NGOs talk about nature or identity in relation to a number of topics could allow the researcher to make more generalisable claims about the frames offered by professional campaigners – rather than just focusing on how they communicated about one particular issue.

An important finding from my thesis was that people did not use economic disadvantage to articulate a class identity. Another future direction for audience research is to further analyse how identities offered by the media impact on people's understanding of self. In particular, to look further at the premising of consumerism and the undermining of class based identities. These are just two concepts of identity – there will be many others offered, and ignored, by the media. These could be both elicited and explored through audience research.

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23 http://royal.pingdom.com/2012/04/19/world-internet-population-has-doubled-in-the-last-5-years/

24 This quote is taken from an interview I conducted with an Egyptian activist

Appendices

Appendix A: List of interviewees:

Interviewee	Description of their Role	Approx. Length of Interview	Confidentiality Status
Representatives of Campaign Groups			
Neil Verlander	Press Officer Friends of the Earth	Interview A: 60 minutes Interview B: 30 minutes	Seen transcript / some off the record
Ian Willmore	Media Co-ordinator Friends of the Earth	75 minutes	No restrictions
Claire Oxborrow	Campaigner Friends of the Earth	75 minutes	No restrictions
Julian Rosser	Director Friends of the Earth Cymru	90 minutes	No Restrictions
Ben Ayliffe	Campaigner Greenpeace	Interview A: 75 minutes Interview B: 45 minutes	No restrictions
Doug Parr	Chief Scientist Greenpeace	60 minutes	Some off the record
Michael Green	Press Officer Soil Association	Interview A: 45 minutes Interview B: 20 minutes	No restrictions
Gerald Miles	Organic Farmer / GM free Cymru member	75 minutes	No Restrictions
Welsh Assembly Politicians			
Mick Bates	Liberal Democrat Assembly Member / Organic Farmer	60 minutes	No Restrictions
Helen-Mary Jones	Plaid Cymru Assembly Member	60 minutes	No Restrictions
Jocelyn Davies	Plaid Cymru Assembly Member	20 minutes	No Restrictions
Government Representatives			
Linda Smith DEFRA	Gm Policy director DEFRA	Interview A: 75 minutes Interview B: 30 minutes	Seen transcript
Chris Pollock	Chairman ACRE	60 minutes	No restrictions
Anna Ashelford	Press Officer FSA	30 minutes	No restrictions
Industry Representatives			
Vivianne Moses	Chairman Cropgen	75 minutes	Seen transcript
Colin Merrit	Biotechnology development Manager Monsanto UK	Interview A: 90 minutes Interview B: 20 minutes	Seen transcript
Derek Burke	CropGen / Chairperson of the Advisory Committee on Novel foods and Processes	Interview A: 60 minutes Interview B: 30 minutes	No restrictions
Independent Scientists			
Dennis Murphy	Professor School of Applied Sciences Glamorgan university	90 minutes	Seen transcript

Appendix B: Overview of focus group participants

Total number of participants: 64

Category	Category Group	Number of Participants
Sex:	Female	34
	Male	30
Age:	16-19	8
	20-25	8
	26-35	15
	36-50	18
	51-65	8
	66+	7
Ethnicity:	'White'	51
	'Black'/ African/ Black Caribbean/ North African	6
	Asian / Indian/ Bangladeshi	7

Appendix C: Example of focus group schedule

[Two and a half hour session]

Welcome and introduction

Thank-you for attending [help yourself to sandwiches – it's a long session so I'll give you a break in the middle]

Distribute name stickers [explain - makes it easier for me to remember everyone's names as well and for you to address each other]

Check approval for taping, read out and explain ethics sheet.

Explain modes of discussion e.g. You do not have to know lots to take part, no right or wrongs, I'm just interested in what you have to say. What I really want is for us to have a conversation and to explore the issue and what you think individually and as a group. ry to hear from everyone in the group, talk to each other – not just to me

Go round circle asking people to introduce themselves

Discussion

Has anyone heard of genetically modified crops? – you don't have to know much about them but I want to check that at least the phrase is familiar to you. What do you think it is?

What's the first thing that comes to mind when I say 'GM' – what do you immediately associate with those words? [Prompt afterwards: any visual images?]

Can you remember how you first learnt about GM – one particular event?

Extra Questions if needed:

What do you think are the benefits of GM?

What do you think are the risks?

Who would you trust to give you information on GM?

What might make you eat GM?

Where do you think you have got most of your info on GM from? If you wanted to find out more about GM where would you go for that info?

Picture Exercise [Invite them to use set of photographs to construct a 'typical' television news bulletin about GM. Followed by questions such as: Do you think your bulletins were typical of a news bulletin? Does this bulletin reflect your own views on stem cell research? What would you do differently if you were constructing a news bulletin? What did you think of each other's bulletins?]

Do you have an opinion about how the media has covered GM?

Can you think of any fictional representations of GM?

Any other comments on GM?

Ask extra questions (above) and thesis questions (below) if they haven't already come up.

Do you think GM crops are natural or unnatural?

Would you always prefer to eat foods that are natural? How do you decide what foods are natural?

Do you buy organic food?

Is there anything that would make you eat an unnatural food?

Are GM crops currently grown in Britain?

Which country do you think consumes the most GM food?

Do you think Britain will stay GM Free?

Appendix D: Consent Form for Focus Groups

Focus Group on GM Crops
– Consent Form-

Thank you for coming along today. This focus group is conducted by Emma Hughes of Cardiff University. It will be tape-recorded and the recording will be transcribed and the transcript put on record for use for research purposes.

Portions of the discussion may be included in articles / books and other publications. However, your name will not be used, comments will be anonymised.

Your participation in this focus group is voluntary and you may withdraw your participation at any time.

Of course, we have no control over the confidentiality between participants in the focus group, so you should be aware of this in your discussions and not reveal anything you would rather other people in the group did not know or discuss.

If you understand, and are happy with, the above information please write you name, and add your signature below. This indicates that you consent to participate in this research.

Name:
_____

Signature:
_____

Thank you

Appendix E: Photographs used in the Newsgame

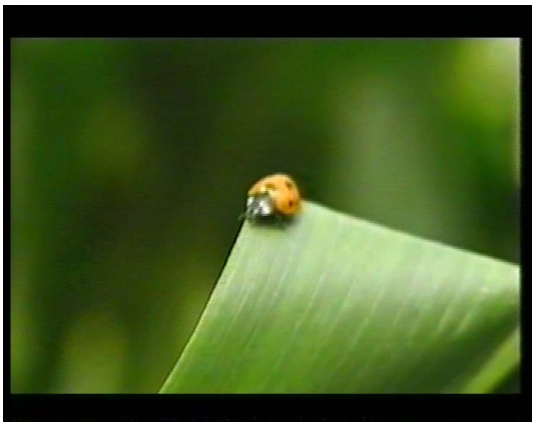
A brief description is provided beside each photo, these were not, however, included in the actual Newsgame. After participants had constructed their scripts what was actually happening in the photos was revealed.

Picture A: A boat containing GM grain GM grain

Picture B: Cows being fed

Picture C: Non-GM Corn

Picture D: A UK dairy farmer



Picture E: Ladybird on farm scale trial site America

Picture F: Monsanto

Picture G: Margaret Beckett announcing conducting Farm
the results of the Farm Scale Evaluations

Picture H: Scientists

Scale Evaluations

Picture I: Shopper in Marks & Spencer non-GM

Picture J: Tractor spraying crops

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