

1 ROYAL COMMISSION OF INQUIRY  
2 ON GENETIC MODIFICATION  
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9 The Rt Rev Richard Randerson  
10 Dr Jean S Fleming  
11 Dr Jacqueline S Te M Allan  
12

13  
14 Mr John Upton QC, Counsel  
15 Assisting the Commission  
16

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18 Ms Therese McLeod (Clerk)  
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1 PRESENTATION BY THE ANGLICAN CHURCH IN AOTEAROA  
2 NEW ZEALAND AND POLYNESIA

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4

5 CHAIR: Yes, good morning Reverend Greenaway.

6

7 REVERAND GREENAWAY: Good morning.

8

9 CHAIR: Ms McIntyre welcome, we're looking forward to hearing from  
10 you.

11

12 MS McINTYRE: Thank you.

13

14 CHAIR: You have the floor.

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17

18 REVEREND GREENAWAY: Members of the Commission, thank you very much  
19 for this opportunity to present to you, and firstly we thought we  
20 should introduce ourselves and the party on which we've - on whose  
21 behalf we make this submission.

22

23 Stephanie McIntyre and I are the social justice Commissioners of  
24 what is called the "Tikanga Pakeha" or the seven diocese of the  
25 Pakeha part of the Anglican Church in Aotearoa/New Zealand and  
26 Polynesia, we are responsible to the seven diocese and requested by  
27 Tikanga Maori and Tikanga Pasifica to provide information, advice,  
28 and resources to the churches' bishops and its spokespeople on  
29 issues of public interest.

30

31 It is our task also to produce theological position papers on  
32 critical social economic issues to be a prophetic voice in the  
33 opportunity to be in line with the biblical and church pursuits of  
34 justice, and to offer training to clergy and deity in their mission  
35 to transform unjust structures.

36

37 The Anglican Church has three customary groupings, Maori, Pacific  
38 representing the diocese of Polynesia, and the Pakeha. All of these  
39 groups express a deep commitment to the integrity of creation, to  
40 the material and spiritual sanctity of its organisms. The Anglican  
41 Church has a long tradition of inquiry based on three things; it's  
42 commitment to a broad range of critical biblical teaching, its  
43 considerable body of accumulated knowledge and understanding of  
44 community events, and World history, its commitment to reason,  
45 exploring the range of human insight and wisdom and holding it up to  
46 the light of God.

47

48 The Anglican Church is a member of the World Council of Churches,  
49 the Anglican Consultative Council and, through Te Tangata  
50 Whenua-o-Aotearoa, the Worldwide Indigenous People's Network. The

1 Anglican Church through its partner agencies - and we would quote  
2 the Christian World Service being an agency of best practice in  
3 New Zealand - has worldwide links with countries in the economic  
4 south where the issues of world development and poverty are  
5 reflected in the debate on the validity of genetic modification and  
6 its contribution to poverty reduction, and I will speak to that  
7 later.

8  
9 As a summary of our submission, and I will speak first here, then  
10 Stephanie McIntyre will speak to her witness brief and I will  
11 conclude.

12  
13 We affirm the goodness of creation. We also confirm the reality of  
14 disease, its power of deformation and degeneration. Disease has the  
15 power to impact destructively on human life in society. Whilst it's  
16 a natural factor in selection and population control, humans have  
17 the knowledge and expertise to act out the role of co-creators  
18 through intervention and creative intervention and its therapeutic  
19 applications, and now through genetic modification. The same  
20 interventions have the seeds of corruption and destruction as well  
21 as well-being. Therefore, human processes, despite best intentions,  
22 have the ability in certain circumstances to be destructive to human  
23 life, other organisms and the building blocks of the biosphere.

24  
25 Our submission promotes the concept of two critical points of  
26 oversight and moderation for the genetic modification scientific  
27 industrial complex. And we see at one end scientific development  
28 and exploration and at the other, the application, sale and  
29 worldwide distribution of the products of that exploration.

30  
31 Our first point is that we believe that there should be the  
32 establishment of ethical guidelines and processes to provide  
33 scientists and their organisations and communities with a framework  
34 for exploration, experimentation and trialling of genetic modified  
35 organisms. This ethical framework to go beyond the normal concept  
36 of the common good and to consider the spiritual, environmental,  
37 social and power relationships inherent in scientific - in the  
38 scientific and political reality of a complex set of relationships,  
39 which include transnational, industrial and investment companies.

40  
41 Secondly, we believe there should be the development of a  
42 contractual relationship, preferably voluntary, between the agents  
43 of the public, including minorities, and companies and consortiums,  
44 which seek to promote and market genetically modified organisms,  
45 dead or alive. This contract would be governed by a set of  
46 principles and procedures which work toward a right set of  
47 relationships. Right relationships describe what is just. They  
48 ensure the protection of the most vulnerable, be they people or  
49 organisms. They will ensure that the release of modified organisms  
50 will not counter or trample on the spiritual and social norms,

1 beliefs and well-being of the people, they will ensure remedy for  
2 human error, misleading information, improper release or application  
3 or flagrant abuse of trust and/or peoples. And we would point to the  
4 covenant relationships enshrined in our own Treaty of Waitangi.

5  
6 We have given, in our submission, the example of the North Atlantic  
7 Benchmark Project. The frameworks for ethical and contractual  
8 frameworks are designed to ensure public control over the processes  
9 of development and the exploitation of scientific discovery in the  
10 field of genetic modification. We have indicated in our submission  
11 that public intuition should be taken seriously, and at this time  
12 that intuition suggests a high level of scepticism about the ability  
13 of corporate and scientific institutions to deliver a just and  
14 publically acceptable framework without public engagement and  
15 approval.

16  
17 We ask the Commission to note the survey of 450 members of the  
18 Anglican Association of Women, which is included in our submission.  
19 That is the summary of our submission. Thank you.

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23  
24 [9.40am]

25 MS McINTYRE: This oral submission strongly supports the establishment  
26 of an independent Genetic Modification Ethics Council. The  
27 complexity of issues related to genetic modification requires that  
28 such a body must undertake a multi-disciplinary response, and  
29 therefore include the input of not only scientific, health, public  
30 policy, economic, political and social factors, but also moral and  
31 spiritual. To do otherwise we risk making macro-phase changes to  
32 the life systems of the planet with micro-phase wisdom, and I quote  
33 scientist Brian Swimming from the book, very recent publication,  
34 Christianity and Ecology with those words, Making macro-phase  
35 changes to the life systems of the planet with micro-phased wisdom".

36  
37 In terms of the composition of an Ethics Council, the Anglican  
38 Church believes that it's vital that Maori are appropriately and  
39 adequately represented, and we believe an Ethics Council such as  
40 this should include representation from the single largest religious  
41 grouping in Aotearoa New Zealand, the Christian Church. In  
42 promoting the churches' participation in the development of ethical  
43 guidelines, I think it's important to acknowledge the mixed legacy  
44 of the Judea Christian religions with a predominantly human faced  
45 morality.

46  
47 The church has in the past encouraged the tendency to set humanity  
48 over against nature in what at times has been a manipulative  
49 polluting way of life based on world views that are largely  
50 anthropocentric that gave nature only secondary importance.

1 Unfortunately at times Christian theology has played a key role in  
2 ecological and cultural malformation by giving impetus to modern  
3 rational scientific conquests of nature. The growth of early modern  
4 science was empowered by the idea that it was the supreme human  
5 vocation to establish itself over the rest of nature.

6  
7 Having started on that negative note, it's equally important to  
8 acknowledge that there have always been resources within the  
9 biblical tradition for alternative for life and nature affirming  
10 viewpoints, and likewise indigenous religions, and even traditions  
11 hold cosmologies that speak of the cannot - that even traditions  
12 hold cosmologies that speak of the continuity of creation and  
13 encourage an appreciation of the profound interconnection of matter  
14 and spirit.

15  
16 My point is that, what people do about it and do to their world  
17 depends on what they think about themselves in relation to the  
18 things around them; all of us hold world views that affect our  
19 behaviour individually and collectively. And sadly, our collective  
20 track record of behaviour to our planet is grim. Both science and  
21 religion have contributed to the dominant world view of contemporary  
22 industrialised society that regards nature primarily as a commodity  
23 to be utilised.

24  
25 We could summarise our current global relationship as estrangement  
26 from the earth. So, against this bleak backdrop, the issues of  
27 genetic modification have plunged us all into considering  
28 fundamental questions about our world and our relationship to it.  
29 Religious and scientific world views both provide basic interpretive  
30 stories of who we are and where we are going, how we should treat  
31 other humans and how we should relate to nature. Because, exploring  
32 genetic modification is a journey of risk, it is appropriate that  
33 many voices provide an interpretation of an appropriate path to  
34 travel.

35  
36 So, to return specifically to the Churches' contribution regarding  
37 the development of ethical guidelines. Within Christian theology  
38 worldwide I am pleased to say that attitudes are rapidly changing  
39 and there is a renewed effort to find the world again as a living  
40 community worthy of value. The old paradigm of mastery over the  
41 earth is being replaced by the new model of healthy human heart  
42 interrelationship. So, we suggest that the first guiding principle  
43 in the development of ethical guidelines for genetic modification is  
44 an understanding of ourselves as creatures of nature embedded in  
45 life cycles, and dependent on ecosystems, and that our present  
46 struggle collectively is to secure the well-being of the earth  
47 community.

48  
49 We consider that the pivotal human obligation is, and I quote here,  
50 "In every place and pursuit to express respect and show care for

1 earth as life's home, while seeking justice for biodiverse other  
2 kind as well as human kind", and I quote again then from the recent  
3 publication of Christianity and Ecology.

4  
5 The ravaging of people and the ravaging of land have frequently gone  
6 hand in hand, as it is the poor and powerless who most directly bear  
7 the burden of our current environmental carelessness. Within the  
8 Anglican community we consider it profoundly naive to give credence  
9 to claims that genetic modification applications will be primarily  
10 targeted at improving social outcomes for the world's poor.

11  
12 A second guiding principle emerges from the leading edge of the  
13 church's ethical and theological thinking; that is, the development  
14 of ecojustice theology, where the plight of the earth and of people,  
15 particularly those most abused, are seen together. In other words,  
16 environmental health and social equity must always go together, and  
17 this includes socially just participation in decisions about how to  
18 manage community life for the common good.

19  
20 It's tempting to seek technical fixes for social and environmental  
21 problems to avoid making basic changes in social institutions. We  
22 live in a society that is confident that all problems can be solved  
23 by technological ingenuity and that there are no limits to our power  
24 over nature. There have been many examples when technical solutions  
25 to one problem have actually created new ones. Technological  
26 improvements cannot be a substitute for a more humane social order  
27 and a more just world.

28  
29 So, I want to conclude by highlighting a number of key insights the  
30 churches would bring to the development of ethical standards for  
31 genetic modification. A realistic view of human nature. A vision  
32 of life that is more equitable than is the current pattern in  
33 industrial and developing societies, and a generational solidarity  
34 in the sense of respecting the future of those not yet born.

35  
36 Furthermore, it would encourage the need to critique our myths of  
37 progress and humanity's role in the evolutionary process.

38  
39 Perhaps I would like to close by quoting the Hei Mataara; "be  
40 alert", I think the church's contribution will be to continue that  
41 alertness for ourselves and for future generations.

42  
43 CHAIR: Thank you.

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47  
48 [9.47am]

49 REVEREND GREENAWAY: Just to continue the focus on development and  
50 drawing on best practice theory and the place of genetic

1 modification in relation to the feeding of the world's poor, as its  
2 described in our newspapers.

3

4 The Anglican Church is involved with development partners in project  
5 work and monitoring within many countries of the south, in India,  
6 Africa, the Pacific, and in South America. Submissions made by  
7 witnesses to the Commission, that the poor of the south will be fed  
8 by the wisdom and the product development of the north is not  
9 accepted by the church and its agencies.

10

11 This is a very good example of where scientific discovery and its  
12 development into product has been done in isolation from the  
13 understanding of the farmers of the south. These farmers with  
14 centuries of observation, production and wisdom behind them, be they  
15 in Mexico, central Africa or the rice growing areas of India, for  
16 example, have become the objects of industrialisation in the hands  
17 of multi-national aid agencies with multi-national industrial  
18 partners, who now control the seed that is planted and the gene  
19 stock.

20

21 The objectives used to promote poverty reduction programmes through  
22 genetic modification and other biotechnological processes, has been  
23 to promote a sustainable agriculture and cash cropping. The  
24 downside has been the elimination of traditional seeds and crops,  
25 high cost imports, crop failure accompanied by a breakdown in  
26 society, a move to urban living and more poverty.

27

28 These accounts are well recorded and well known to us. It is our  
29 submission that most often local people know best, where their  
30 relationships with the environment and with the organisms of that  
31 environment have been developed over hundreds, perhaps thousands of  
32 years, trading and purchasing arrangements forged through  
33 traditional channels, and spiritual relationships honoured. People  
34 have a secure base from which to contribute to change. Imposed  
35 change leads to anti-development, a breakdown in local control and  
36 imposed expectations which lead either to depression or revolt.

37

38 It is not possible to isolate the process and the funding of  
39 experimental work in genetic modification from engagement in the end  
40 process. There are some good examples of consultative and just  
41 engagement, and here where need to give these consideration.

42

43 I offer you one which will have been reported also. The example of  
44 the processes engaged by the scientific and medical community when  
45 working with a Bay of Plenty family with an inherited disposition to  
46 stomach cancer, the use of genetic modification enabled discovery of  
47 ameliorating behaviour which would assist early diagnosis and  
48 control. The family were part of the process from the beginning.  
49 Their spiritual and family protocols were observed and respected.  
50 In the end, the family benefitted from the ongoing development of

1 the process.

2

3 This is a microview of what we believe needs to be the practice at  
4 the macro level. Genetic modification is both a process and an  
5 outcome. How the process and its mod cases are applied, and their  
6 affect on the other organisms is both an ethical and a political  
7 issue. Be it in the case of the development of, say, new GM crops  
8 for the poor of the south, or a process leading to the early  
9 detection of cancer, consideration must be given to the politics of  
10 power and control. Christians claim right relationships stem from  
11 God, however they are translated through people in people to people  
12 relationships. Those relationships function - for those  
13 relationships to function justly they must be built on mutual  
14 exploration and dialogue where the expertise of the parties is  
15 shared and focused on the benefit of the host people, without  
16 detracting from the gifts of the other. Where the amelioration of  
17 suffering in one human grouping does not bring physical, social, or  
18 spiritual harm to another. We submit that genetic modification is  
19 no less a process in which relationships between people and between  
20 organisms needs dialogue, respect and just transactions.

21

22 The imposition of the profit motive is a given in a capital world  
23 where the discovery is often - where discovery is often funded by  
24 corporations, or in New Zealand by SOEs, where shareholders, be they  
25 private or Government or corporate require a return on their funds,  
26 and where science is obligated to find or create saleable product.

27

28 Nevertheless, the focus must be on the least powerful people and  
29 organisms, whose lives have been historically sacrificed and whose  
30 environment is often the object of experimentation, product release,  
31 discharge or dumping, to the detriment of their lives and ours.

32

33 In summary, while acknowledging the presence of GM organisms in our  
34 food chain and environment, it is our submission that frameworks  
35 must be put in place which return power to communities and  
36 individuals. We, as a three Tikanga church, believe in a process of  
37 consultation and consensus which honours creation, and those whose  
38 spiritual beliefs and kawa requires justice to be done, and the  
39 amelioration of hurt and disruption to be conscientiously observed  
40 by those who exercise scientific and financial power. We thank you  
41 for this opportunity.

42

43 CHAIR: Thank you. Now I expect there will be some questions.  
44 Mr Hodson, you've given notice? You have the floor Mr Hodson.

45

46

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1 [9.56am]

2 MR HODSON QC: Before I start, sir, yesterday there was reference by  
3 Professor Macer to a paper in the Science magazine of 15 December  
4 2000, the "Ecological Risks and Benefits of GE Plants". I'm aware  
5 of the amount of paper you have, but this one at least seems to have  
6 the benefit of being more or less neutral, concise and clear, and if  
7 it's helpful I'm happy to table that.

8

9 CHAIR: Yes, thank you, we'd appreciate receiving that.

10

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13 MR HODSON QC: My name is Hodson and I'm instructed by the Life  
14 Science Network, and there's just two or three questions I would  
15 like to ask your panel, and please elect for yourselves who would  
16 answer them, relating to that part of your written presentation  
17 which is three or four pages in. It has the heading, "Closed  
18 Boards, selective moratoria and open boarders", Section A1. Are you  
19 with me?

20

21 REVEREND GREENAWAY: Yes.

22

23 MR HODSON QC: I'd just like to be clear about your rejection of the  
24 open boarder policy. Are you suggesting that any form of trade  
25 barrier on importation of genetically modified organisms be set up  
26 in this country as a trade barrier?

27

28 REVEREND GREENAWAY: Well, I think the first thing to say is that this  
29 was an option which is not favoured. Um, we were not seeking a  
30 trade barrier; however, we were looking at how to protect the  
31 intellectual property and the spirituality of the people of  
32 New Zealand, and part of what TRIPS and my - and the World Trade  
33 Organisation policy is, to have access to every part of the  
34 New Zealand economy, and in fact its biosphere.

35

36 It seems that that is trampling on the lives, the spirituality, the  
37 creativity of a New Zealand community. So, some process to protect  
38 the interests of New Zealand citizens, and their spirituality, and  
39 their creativity needs to be put in place. How we do that is  
40 yet - needs debate.

41

42 MR HODSON QC: I make the point only that trade barriers have a habit  
43 of rebounding on small nations.

44

45 REVEREND GREENAWAY: They may have a case of rebounding on small  
46 nations, but I think the important thing to realise here is that  
47 New Zealand, at a people-to-people level, is not isolated from other  
48 countries. That the same issues that we're dealing with here are  
49 being dealt with by groups of people in the United States, Canada  
50 and many other parts of the world, particularly amongst indigenous

1 people, where the protection of indigenous rights, indigenous  
2 spirituality, indigenous access to intellectual property, which they  
3 would claim are the plants and organisms of this country, is being  
4 debated and worked on. I think what happens is that governments  
5 make decisions and enter into arrangements without consultation with  
6 their peoples, and I think we've got to find a better way of doing  
7 that, otherwise I think New Zealand just becomes an add-on, if you  
8 like, to the trans-national domain.

9  
10 MR HODSON QC: I make the point, you may wish to comment on it, that  
11 almost without exception every overseas witness who has come here  
12 has congratulated New Zealand for establishing this Commission as a  
13 way of investigating not only the scientific issues, but also the  
14 cultural and ethical issues, and that we are way ahead in that  
15 regard. Would you accept that?

16  
17 MS McINTYRE: Well --

18  
19 REVEREND GREENAWAY: Well, I don't think we'd have the detail on what  
20 is happening in every other country in the world, but I think it is  
21 a very positive move, and the fact that we are developing dialogue  
22 between a whole range of people, I think, is helpful. And I think  
23 from a church position, when we say we're speaking out of a church  
24 situation, we're actually also talking with our own scientific  
25 community where there is a broad range of opinion. But, where  
26 individual - where the rights of New Zealanders are acknowledged as  
27 being of high importance. Because, if we don't protect the rights  
28 of our own people, then we'll easily trample on the rights of others  
29 elsewhere in the world, and allow our relationships with WTO,  
30 etcetera to do that for us.

31  
32 MS McINTYRE: Can I just add too, I'm not really sure what the  
33 significance of your comment is. I mean naturally we're - our  
34 participation in this process is an endorsement that we think this  
35 is a valuable and significant process to be undertaken. However, I  
36 think that anyone who travels overseas, and I have recently had the  
37 good fortune to have a few months in the States, will acknowledge  
38 that there are some - I mean, there are lots of contributions; I  
39 mean, some of the material I've drawn on in terms of ecojustice  
40 theology, the development of that and the resourcing of that in some  
41 other places is colossal. So, I'm not really sure - yes, it's  
42 great, we applaud this process, but what's sort of behind the  
43 comment?

44  
45 MR HODSON QC: Well, the point being that, although the debate is  
46 going on, as you say without any doubt in other countries, we seem  
47 to be the first to give the fact of the debate official recognition  
48 and set up any kind of normal body such as this to enquire into it.

49  
50 MS McINTYRE: Yes, well, we're in agreement, that's great.

1

2 MR HODSON QC: Now, the second heading, "The selective moratoria", and  
3 you feel that a moratorium for the purpose of establishing  
4 principles for corporate behaviour and establishing processes for  
5 meeting the spiritual needs etcetera is essential.

6

7 Now, you're aware, of course, that the present arrangement is that  
8 applications in respect of GMOs go to the appropriate regulatory  
9 body, and that both those bodies, ANZFA and ERMA, are required to  
10 give some consideration to ethical values - are you with me so far?

11

12 MS McINTYRE: Some.

13

14 REVEREND GREENAWAY: Yes.

15

16 MR HODSON QC: And you may also be aware that there has been an almost  
17 universal theme to this Commission, that that process, particularly  
18 as regards the ethical and cultural input, needs review, refinement  
19 and improvement.

20

21 Now, given that - if that is the recommendation of the Commission,  
22 need there in fact be any moratorium? Because, there is not going  
23 to be approval until these various issues have been worked through  
24 in each case.

25

26 MS McINTYRE: Well, I - some of these are issues of timing aren't  
27 they? Just because a body is put in place doesn't mean that  
28 those - the kinds of ethical guidelines that perhaps we've described  
29 in our submission will immediately come into play, and I think that  
30 that is - the principles that we are supporting in our submission  
31 are that there are - this is a process of high risk; there are some  
32 fragility issues that we have to address, and we need to be "alert"  
33 and be cautious and those are the kinds of principles that we would  
34 put ahead of a forging-on kind of mentality. And so, a selective  
35 moratoria will be for the safety and protection of our ecosystems  
36 and ourselves.

37

38 MR HODSON QC: Well, of course some of the possible projects are much  
39 higher risks than others, aren't they?

40

41 MS McINTYRE: Yes.

42

43 REVEREND GREENAWAY: Can I just say, I think that there has been a lot  
44 of comment, as we've seen in the paper, on the issue of  
45 participation in - in broadening the boundaries of ERMA and others.  
46 That debate, in an area like the Eastern Bay of Plenty where I come  
47 from, where 55% of the population are Maori, to have one person on a  
48 board who is Maori is unacceptable, and not only unacceptable, but  
49 it illustrates the point of trampling on the Mana and the  
50 spirituality of 55% of the population in our area. And --

1

2 MR HODSON QC: Sorry, I hear what you say, but be aware, please, that  
3 I'm not going to engage in debate with you on that topic for the  
4 reason that there are a number of Maori presentations to come.

5

6 REVEREND GREENAWAY: That's fine, you asked the question. I don't  
7 know who the Life Sciences people are; you asked for an explanation,  
8 I'm giving you an explanation. Thank you very much.

9

10 MR HODSON QC: Sure. Again, in that same paragraph, you speak of  
11 establishing processes for meeting the spiritual needs. Now, I'm  
12 not quite sure how far you think officialdom ought to go in that  
13 regard? Is that not the province of the churches or of those  
14 actually administering to spiritual needs?

15

16 REVEREND GREENAWAY: Well, the Government of New Zealand and the  
17 relationship that we have here under the Treaty of Waitangi  
18 specifically points to the treasures which are the spiritual needs,  
19 and the spiritual treasures of both those who have come here and of  
20 the tangata whenua. So, that it's impossible I think that at a  
21 political level, or at a Governmental level, an official level, not  
22 to engage at that level. And I think that when many people come and  
23 present to Government bodies, they are presenting out of a holistic  
24 view of life. And that is both a Pakeha concept as well as a Maori  
25 concept.

26

27 So, it's a matter of not dividing up into the scientific, the  
28 political, the financial, whatever, the material side of life, the  
29 whole thing, as for many people, is holistic. Therefore, don't just  
30 ask the church system to write - to be engaged at a spiritual level;  
31 yes, okay, we do have a ministry in that area, but our view of  
32 spirituality is that it is the whole of life, and I think that that  
33 is picked up by most indigenous people and by many other  
34 New Zealanders.

35

36 MR HODSON QC: Thank you for making that clear, I have no more  
37 questions.

38

39 CHAIR: Mr Upton?

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43

44 [10.10am]

45

46 MR UPTON: Yes, thank you, my name is John Upton and I'm Counsel  
47 Assisting the Royal Commission, and I just want to pick up please  
48 some of the points that we've been talking about this morning. I  
49 think it was Reverend Greenaway who mentioned - who talked about a  
50 vision, and you were talking about justice, and you were talking  
about giving power to communities and people.

1

2

In the present context, how do we transfer that vision into reality?

3

4

REVEREND GREENAWAY: Well, I think we've, as I've said, we've looked at the two ends of the spectrum, if you like. At one end we've got the scientific development area, and where - and at the other end we've got corporate responsibility, if you like. My example of - the Bay of Plenty example, a medical or a GM-assisted solution, or amelioration of a condition, I think, was a very good example of how the scientific community and the medical community were able to engage with a group of people at a very personal level and come up with an ameliorating solution which didn't trample on the rights of those people, and yet was honest to its scientific roots.

14

15

I think it's a matter of taking that out into the wider context, and part of the advantage of this Commission, I think, is that it offers that debate, or that discussion between people who represent parts of that holistic view of life. And I think what we have done is that we have isolated our scientists to their professional grouping, if you like. But we've talked - we've seen other interested parties in their sectors, so our vision is to find a methodology whereby those groups, the interested parties, can come together to make key decisions. And, I'm not sure that a group like ERMA is the best way of doing that, it's got to be a more community-centred type approach.

26

27

MR UPTON: Well, if we go back to your example in the Bay of Plenty, that was a process that worked inside existing frameworks?

28

29

REVEREND GREENAWAY: Yes.

30

31

MR UPTON: Are you aware of the existing ethical structures that are in place for animal research, for research involving human health, that sort of thing?

32

33

MS McINTYRE: Yes.

34

35

REVEREND GREENAWAY: You'll see that those are, as we've said in our submission, that the Interchurch Commission, that we've been part of, will be speaking to those tomorrow. So, yes, we are aware of those frameworks.

42

43

MS McINTYRE: The church called together people who are representatives of the church, who are working in that capacity to form the Interchurch Commission on genetic modification. So, yes --

44

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REVEREND GREENAWAY: It's just that - we raised the point about community intuition, and I think one of the things that came back through that survey of 450 women nationwide was some very deep concerns, many of which they acknowledge were ill-informed, they

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50

1 needed more information. So, it's how - when decisions are being  
2 made in certain areas, how that information comes into the public  
3 domain, and the public interest is taken note of.

4

5 MR UPTON: Can I pick up the issue that you raised with Mr Hodson  
6 about the Bay of Plenty/East Coast area, and you were talking about  
7 the example of one Maori on a board in a situation where 55% of the  
8 population is Maori.

9

10 REVEREND GREENAWAY: Mmm.

11

12 MR UPTON: How far do you go to deal with that issue? Do you, for  
13 example, say there should be one Maori representing each iwi, or do  
14 you say there should be one from each hapu? How do you solve that  
15 particular problem? What is the answer?

16

17 REVEREND GREENAWAY: Quite simply the answer is consult with the hapu  
18 about what the answer is to that. We have a way of working in the  
19 Anglican Church which is one model.

20

21 MR UPTON: Mmm.

22

23 REVEREND GREENAWAY: Which is that, although the Maori population of  
24 our church is less than the Pakeha population of the church, it is a  
25 national church, it is our treaty partner.

26

27 MS McINTYRE: An equal partner.

28

29 REVEREND GREENAWAY: An equal partner, that all decisions are made on  
30 a consensus basis; we don't vote any more. That process has worked  
31 extremely well, and it has meant that decisions are much clearer,  
32 much more, better able to be implemented than they ever were in the  
33 past, and that we have developed a dialogue, certainly at the  
34 Governmental level of the church, which has allowed us to move  
35 forward. And for the Maori partner, to exercise full rights as a  
36 true partner.

37

38 MR UPTON: But if we stay with the example that we're talking about  
39 for the moment, I don't know how many hapu there are in the Bay of  
40 Plenty, but I suspect there are a lot?

41

42 REVEREND GREENAWAY: Yep.

43

44 MR UPTON: As I understand what you're saying, it's imperative that we  
45 consult with them all before we decide who to appoint to our  
46 hypothetical board, and at the end of that process?

47

48 REVEREND GREENAWAY: No, no, I'm saying let's not have this  
49 discussion. I'm saying, you go have that discussion - let the  
50 Commission go and have that discussion with Maori, let them decide

1 what the process shall be, because they're the partners with this  
2 State, and it's not - we can only give you the example of how we  
3 work and how we came to that decision.

4

5 MR UPTON: But what you're saying then is that the Commission has to  
6 deal with Maori throughout the whole country?

7

8 MS McINTYRE: Well, they have to deal with Maori in processes that  
9 Maori want to have this debate, and we're still talking about a very  
10 Pakeha model to talk about whether it's one or two appointees to a  
11 board. Now, I think, just to amplify what Jim said about our  
12 experience in the Anglican Church, is that we now work with very  
13 different processes for discussion and decision making, and that  
14 they are not always committee-based but they may be more hui or  
15 other kind of collective decision-making processes.

16

17 MR UPTON: But can you see difficulties in getting a consensus from  
18 Maori as to who should be appointed to a Commission or board?

19

20 MS McINTYRE: Well, we're moving really perhaps to the real edges of  
21 what's pertinent to this Commission, and also asking Pakeha to  
22 comment on things that, really, it's not entirely appropriate for us  
23 to be commenting on. But I think that it is, it is an unfortunate  
24 stereotype to assume at the beginning that it will be difficult to  
25 get a "decision" from the Maori community, and I'm not comfortable  
26 really to be talking from that point.

27

28 MR UPTON: Do you see the spirituality of the tangatawhenua, the  
29 spiritual needs of the tangatawhenua as being something different  
30 from the spiritual needs of New Zealand as a whole?

31

32 REVEREND GREENAWAY: I think we made clear in our submission that the  
33 tangatawhenua certainly have a spiritual view in the whole views of  
34 life which they share with most other indigenous people, and what  
35 we've said in our submission is that all New Zealanders have a  
36 spiritual view of life, whether they express it or not, but there  
37 are expressed views amongst the Pakeha population, and other groups  
38 within New Zealand as well. And, so --

39

40 MS McINTYRE: Well, there's overlap, but there's a difference; I think  
41 that's probably the only way to succinctly respond to that.

42

43 MR UPTON: Could we just go back to this issue that you were asked  
44 about before, relating to selective moratoria, to come back to a  
45 specific point in your paper. What areas do you visualise having a  
46 moratoria? For example, are you talking about a moratorium on the  
47 use of medicines, or are you talking about a moratorium on the sale  
48 of food, or are you talking about a moratorium on research, or are  
49 you talking about a moratorium on field trials? What is it that you  
50 actually have in mind, or haven't you gone that next stage?

1

2 REVEREND GREENAWAY: Well, I think the selected moratoria came out of  
3 this very issue that you raised before, which was how do you deal  
4 with the spiritual needs of the people.

5

6

MR UPTON: Mmm.

7

8

REVEREND GREENAWAY: And do you continue to trample on those while  
9 you're trying to get a system in place, or do we have a moratoria  
10 for a period which - while we're working on that issue? Now, in  
11 being selective I think the selection was more around what is the  
12 critical issue here, right, and if there is selective moratoria on  
13 the basis that we had not yet come to a decision about how to handle  
14 or to stop trampling on the spiritual hopes and well-being of the  
15 whole section of society, then we were continuing to cause death and  
16 disruption in that society.

17

18

MR UPTON: Mmm, but there are some people, it seems to me, speaking  
19 entirely personally, a lot of people who come to this Commission and  
20 are in favour of the continued use of GM therapeutics, GM medicines.  
21 On the other hand, there are a lot of people who come here and say  
22 we shouldn't be selling GM foods, and I'm just trying to find out  
23 where your suggested moratoria would plug into this whole debate,  
24 and I mean there are a lot of people who say we shouldn't have field  
25 trials because we can't predict what is going to happen if we do  
26 have field trials.

27

28

MS McINTYRE: I think you need to understand we're representative of a  
29 group that has very broad ranging opinions and responds to that  
30 question which is probably deliberately why - we could not say that  
31 the Anglican Church holds one position on that issue. However, the  
32 position of the church is to want to seek some broad guiding ethical  
33 principles to determine specifically the answer to the question that  
34 you're raising. And so, what I think I would say is that, the  
35 selective moratoria could well be across all those categories, and  
36 will almost need, um, if not a case-by-case, some  
37 category-by-category - I mean, that's not - it's a cart before the  
38 horse issue that you're describing here. What we're trying to say  
39 is, there needs to be ethical guidelines established in making that  
40 decision.

41

42

REVEREND GREENAWAY: I could give you an example.

43

44

MR UPTON: I work much better with examples.

45

46

MS McINTYRE: I work better with broad principles.

47

48

REVEREND GREENAWAY: Let me give you an example; let me take the  
49 myelin in the cows case at Ruakura. There the local iwi have, Ngati  
50 Wairere, have responded that they do not wish this particular

1 experimentation to take place for a whole variety - I won't go into  
2 all the detail of it. It seems to me that we haven't worked out  
3 the - or given sufficient credence to the spiritual needs of that  
4 community of Maori, and particularly to a wider range of Maori  
5 around that particular issue. And, a selective moratoria may say,  
6 well, we need to put that on hold till we've dealt with this issue,  
7 till we've actually worked out where spiritual values fit in this  
8 mix.

9  
10 MR UPTON: But if what you're saying is correct, that means that the  
11 existing framework within which ERMA works is not adequate.

12  
13 REVEREND GREENAWAY: That's exactly right.

14  
15 MS McINTYRE: That's exactly what we're saying.

16  
17 REVEREND GREENAWAY: Absolutely, yeah.

18  
19 MR UPTON: And then what you're in effect saying, these are my words,  
20 what you're in effect saying is that the structures, the ethical  
21 issues, need to be dealt with in a better framework?

22  
23 REVEREND GREENAWAY: Yes.

24  
25 MR UPTON: That the existing frameworks need to be reviewed?

26  
27 REVEREND GREENAWAY: That's right, and I think we've indicated what  
28 some of those other elements need to be.

29  
30 MR UPTON: You talk in your paper at page 14, I think it is, in your  
31 submission at page 14, I think, about the suggested Ethical Council.  
32 Can I just turn to that; are you able to give us any detail on what  
33 an Ethical Council would look like, because we've got a lot of  
34 ethical committees and frameworks already in place.

35  
36 REVEREND GREENAWAY: Right.

37  
38 MR UPTON: Would this be an overarching type council? For example, is  
39 it going to be a Parliament which controls all ethical issues? Is  
40 it going to work by consensus or by decision making?

41  
42 REVEREND GREENAWAY: That's an easy question. Because you're going to  
43 have people on this council who are representative of the peoples of  
44 New Zealand, particularly of the partnership between the State and  
45 Maori; my guess is the only way to make decisions is going to be by  
46 consensus.

47  
48 MR UPTON: Mmm.

49  
50 REVEREND GREENAWAY: But coming - what this Ethics Council and the

1 Church Commission will give you tomorrow, is basically an Ethics  
2 Council related to genetic modification; that's what we're talking  
3 about?

4  
5 MR UPTON: Correct.

6  
7 REVERAND GREENAWAY: It's not a council that looks at all the other  
8 ethical groupings that are operating, but we felt we needed to  
9 expand its horizon beyond what is normally an ethics grouping, which  
10 is of the - looking at issues of the common good, do least harm-type  
11 approach, to have a much more spiritual, social aspect to this, to  
12 this council, and therefore it may incorporate a different mix of  
13 people. And, a lot of the dialogue that would take place there  
14 would be such as to inform the various sectors of our community, and  
15 I think it needs to be representative of that.

16  
17 MR UPTON: How big would it be, would it be a small group or a hundred  
18 people, or haven't we sort of thought that - haven't we thought  
19 that - haven't we taken the discussion that far yet?

20  
21 MS McINTYRE: We haven't taken the discuss that far.

22  
23 MR UPTON: Have we thought about who would actually appoint it?

24  
25 MS McINTYRE: Well, we - in our submission we have just made the  
26 suggestion that it needs to be independent.

27  
28 MR UPTON: I understand that.

29  
30 MS McINTYRE: So, in terms of appointment, that would mean it would  
31 need some democratic processes engaged in the appointment.

32  
33 MR UPTON: We haven't thought about whether people should be elected  
34 on to it or whether they should be nominated because, as soon as you  
35 say "nominated", you ask, "who is going to nominate them?"

36  
37 MS McINTYRE: We haven't gone into that detail.

38  
39 REVEREND GREENAWAY: No, we were relying on the wisdom of the  
40 Commission.

41  
42 MR UPTON: I'm sure you can do that. Yes, that covers all the points  
43 I'd like to talk to you about, and thank you very much. Thank you  
44 Mr Chairman.

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1 [10.26am]

2 CHAIR: Reverend Greenaway, you raised the example of Ruakura, and we  
3 needn't talk about the specifics there because we're hearing from  
4 Ngati Wairere next week, but it does raise with us the situation  
5 that, to some people the transfer of genes between species is  
6 abhorrent and really not a matter that can be debated or  
7 compromised.

8

9 REVEREND GREENAWAY: Mmm.

10

11 CHAIR: Can we just assume for a moment that that is in the population  
12 of New Zealand a minority view, and I'm only taking this as an  
13 example; one of many situations that are coming before us. How does  
14 one - can you help us as to how one might deal with that, how one  
15 might approach it and address it? Taking up your other themes, you  
16 would in general address problems by, if possible, by a consensus  
17 decision-making; I know that's an oxymoron but by a consensus  
18 process? This is not capable of any consensus, it's not negotiable  
19 on one side. Can you help us at all as to what process we might  
20 suggest for addressing that type of situation?

21

22 MS McINTYRE: Well, my suggestion, just reflecting our experience  
23 within the Anglican Church and our struggle with decision-making  
24 processes, is that it's appropriate to find the Maori practitioners  
25 or scientists perhaps who hold an alternative view and hold the  
26 discussion between Maori and Maori as a first step. I mean, I think  
27 we have had to work through difficult processes and it's always  
28 helpful to start where there's more commonality and see how that  
29 develops as a first stage. Now, I don't know if that really helps  
30 you much, but --

31

32 REVEREND GREENAWAY: To take that on a peg, it seems to be where  
33 certain things are trampled on; then if there is a direct  
34 understanding of how that might be ameliorated at another point is  
35 really important. In other words, I think where dialogue starts to  
36 move, particularly around these deep-held issues, then - and I think  
37 it was true in the Bay of Plenty situation, that actually these  
38 people were able to move in that relationship because there was an  
39 amelioration process going on.

40

41 Some people would say it goes as far as how do you - in a situation  
42 of cancer, for instance, and cancer experimentation, how do you  
43 ameliorate the suffering of the mouse who is the experimental  
44 object? And - who has had a human gene or another gene implanted in  
45 it, etcetera. And, there's a point in all these debates, I think,  
46 where what seems to be a transgression can be overcome by showing  
47 how that transgression can be ameliorated some other point down the  
48 line. And I think one of the difficulties in many of these debates  
49 is that we're dealing with a first process, like with the cow  
50 situation and the myelin, we've got no idea and the scientists

1 haven't told us yet as to how that myelin is going to get wrapped  
2 around the ends of damaged nerve endings of people who have multiple  
3 sclerosis. If that was clear, then maybe that debate would take a  
4 different slant, because the amelioration of that disease was  
5 absolutely clear. So, I think we've got to be happy to - we've got  
6 to understand, take the steps over - to see a much longer timeframe  
7 often over which decisions need to be made. Don't know if any of  
8 that is helpful to you.

9  
10 CHAIR: Thank you, it's all helpful. The difficulty I suppose is that  
11 we get ourselves into a circular situation, to provide the  
12 possibility of amelioration, to use your term, one has to go further  
13 down the track, the research track, of that particular field, and  
14 there is in the hypothetical case that I am posing, there is a  
15 roadblock there.

16  
17 MS McINTYRE: Mmm, and it's the most difficult and extreme example  
18 perhaps that you've.

19  
20 CHAIR: Perhaps it is.

21  
22 MS McINTYRE: And I think --

23  
24 CHAIR: But I'm not asking you for a solution to the problem, I'm  
25 asking for help as to how the problem might be addressed, the  
26 process by which it might be addressed?

27  
28 MS McINTYRE: Yeah, and this will be hugely complicated by economic,  
29 political pressures that insist that New Zealand has to be at the  
30 sort of forefront of these sort of developments, and I think this is  
31 where we get a clash, what I might call a "cultural clash" between  
32 one set of goals or expectations and pressures, and a different -  
33 the different set. And, I mean, we're grappling with the most  
34 fundamental issues here. But I think we're saying one group making  
35 a decision for all is not a solution or process that we would  
36 recommend as ultimately being the most appropriate.

37  
38 CHAIR: (Nods). Bishop Randerson?

39  
40 BISHOP RANDERSON: Yes, thank you, I think, just picking up on the  
41 question of a national Ethics Council, one of the issues that we've  
42 wrestled with on the Commission is whether there could be within  
43 New Zealand a sufficient commonality of fundamental principles to  
44 make such a thing possible? You know, you've mentioned some, such  
45 as a world view, which is based on relationship rather than  
46 domination, you've talked about things like ecojustice, theology,  
47 and intergenerational solidarity, and things of that sort. Are  
48 those principles, and perhaps others that might go with them, that  
49 you would feel - and in the whole exercise of reaching a set that,  
50 you know, most Kiwis would look at and say, "Yes, we would agree

1 with that in principle and this is the base from which we want to  
2 start". Is that an exercise which you feel is achievable and that  
3 we could develop a foundation of principles that might undergird a  
4 national Ethics Council?

5

6 MS McINTYRE: Well, I think the short answer is yes. I actually think  
7 that there is a much wider acceptance of those kinds of ideas and  
8 concepts that perhaps we're often led to believe. I mean I think  
9 that those things that I've described resonate with a lot of Kiwis.  
10 They may not describe them in such religious language, but I think  
11 they're things that are held common by many people and I think  
12 that's part of what undergirds people's scepticism and concern about  
13 the whole area of genetic modification, sometimes rightly, sometimes  
14 wrongly.

15

16 I think the point that we're wanting to make is that typically when  
17 these kinds of bodies are formed that - the potential for that is  
18 actually, is left out. I mean they're primarily weighted in a  
19 different kind of direction, and I think what's been damaging for  
20 development in that area, whole area so far, is that it's been  
21 largely left to technocrats and experts and those with scientific  
22 expertise, and the people who are outside of that have been excluded  
23 and continue to be excluded with a lack of education and good  
24 professional material.

25

26 Not sure if I'm really addressing your --

27

28 BISHOP RANDERSON: That's certainly in line, and I think what you're  
29 saying is you do feel there may be a wider commonality than we might  
30 suspect if we began to talk it around and develop it, and presumably  
31 then it has to be a question of where the rubber hits the road, and  
32 getting from principles to, you know, policies and practices which  
33 then begin to get into allocation of research dollars, the kinds of  
34 things we'll pursue and those we won't. But would you see that then  
35 pursuing, being pursued through, say a set of regulatory bodies or  
36 sub-ethical committees, or something of that sort?

37

38 MS McINTYRE: I think that in all likelihood would be the case, but I  
39 think generally speaking we get the system chasing its tail in the  
40 other direction, which is - that is, we work from the pragmatics and  
41 I think we're trying to suggest and recommend strongly that in this  
42 kind of instance we do have an opportunity to do some collective  
43 visioning; and with something as major as this, this is where it's  
44 got to start. We've got to be able to describe what sort of world  
45 and reality we, we're looking for in the future; and if we don't  
46 start there with an issue like this, we're always going to be  
47 dealing at a very pragmatic level, and, we believe, making the  
48 decisions on the wrong foundation.

49

50 BISHOP RANDERSON: Thanks. My other question was just relating to the

1 Interchurch benchmark project. Is that a document which would be of  
2 help to the Commission, generally --

3

4 REVEREND GREENAWAY: Yes, I think it would be and it is available, and  
5 if the Commission is able to procure it, we could procure it for  
6 them?

7

8 BISHOP RANDERSON: I think it would be helpful, if you're able to have  
9 one to table as some of the Commission documents, that would be  
10 useful?

11

12 REVEREND GREENAWAY: We're happy to do that.

13

14 BISHOP RANDERSON: Thank you.

15

16 CHAIR: Dr Fleming?

17

18 DR FLEMING: Yes, I'm having trouble here drawing a few threads  
19 together, so I'll start at my beginning and maybe I'll get to the  
20 point, I hope. In my experience, and especially in the University  
21 of Otago, many of the leaders in molecular biology, if you like,  
22 have a very very strong Christian ethic, and if they don't have a  
23 Christian ethic then they have a very strong feeling of spirituality  
24 when they regard their science. And we've also heard, and I'm sure  
25 you're aware of all the ethical frameworks. There isn't a scientist  
26 in this country who's ever tried to do an experiment, and this  
27 includes, you know, from the 4th year students up, who hasn't been  
28 aware of Ethics Committees, and even if it's a matter of filling in  
29 forms, they are very aware of those ethical committees and so on.  
30 So that's one thread.

31

32 On the other side of my head there's - I'm hearing you say things  
33 like, that the Crown Research Institutes are now driven by a profit  
34 motive. We hear all the time that we need a knowledge economy, and  
35 there are many people who I think would say that we're sitting here  
36 having this debate because we have come so far; we're no longer out  
37 there struggling to find the next meal and so on. So, we've  
38 benefitted both from science and, if you like, a good economy.

39

40 Where I have difficulty reconciling the two views is somewhere in  
41 the middle, and if I go back to the whole - the idea that the Crown  
42 Research Institute should be driven - should make a profit; we  
43 should be earning money for the country, science should have a  
44 profit motive, if you like, that's the area where I'm struggling in  
45 and where I need your help.

46

47 And I'm wondering - this Ethics Council that you're proposing, I'm  
48 wondering whether one of the groups that has not been mentioned in  
49 this debate this morning has been the, sort of, business level,  
50 either the management of science, but also at the level of how we

1 run a good economy? And, I think that this is the debate where  
2 things get really murky; well they certainly do for me, and I'd  
3 really like your comments about whether you see an Ethics Council  
4 addressing, if you like, business ethics, and how you go about  
5 creating a good healthy, good healthy economy for this country?  
6

7 MS McINTYRE: Well, yes - well, perhaps to unpick back to where you  
8 began from. I wouldn't want you to think from what I've said that I  
9 don't acknowledge that science too has moved from my description of  
10 perhaps the sort of more negative impact of both religious and  
11 scientific world views. But I'm not here to speak for the  
12 scientific community, but certainly it's clear that contemporary  
13 science has moved to an organic, dynamic and more interdependent  
14 view of earth, and there is much in common with religious and  
15 scientific world views.  
16

17 And - so I wanted to clarify that point. But then to jump to where  
18 you ended up; yes, I think that is why we're recommending a  
19 multi-disciplinary approach, that this has got to - I know that it's  
20 a difficult concept to be trying to put detail to, but we believe  
21 it's got to include the scientific health, public policy, social  
22 factors and the moral and spiritual together, because of the nature  
23 of what is being determined, because this also comes to the heart of  
24 issues, to do with who we are and what our world is about.  
25

26 I mean our analysis of our New Zealand situation is that, for more  
27 than a decade we've actually been driving down the track of a  
28 business model, and there are really clear signs that I think the  
29 New Zealand public don't want that to be the case, and that people  
30 are seeking to give expression to their vision and values, and I  
31 think to draw a parallel.  
32

33 We are now in a process with the Prime Minister and cabinet members  
34 where we now have set up a regular six monthly forum between church  
35 leaders and Government, precisely to discuss how the vision and  
36 values that perhaps our community has specialised in can be brought  
37 together with economic policy. And, of course, that doesn't reach  
38 the media, does it? When we have a hikoi it reaches the media, but  
39 when we go into debate with Government, that will never reach a high  
40 profile.  
41

42 But, I say that to sort of perhaps reassure you that there  
43 are - there is work going on, and processes being developed to try  
44 and bring those things together. And, this conversation gives me  
45 much heart and encouragement that at least there's a desire I think  
46 around community - for these discussions to be brought together or  
47 not - I'm coming to a close and I don't know whether I've answered  
48 what you're asking --  
49

50 DR FLEMING: Just before you go on; you talk about communication

1 between the church and the Government. What about Anglican Church  
2 and business leaders?

3

4 MS McINTYRE: It's not just the Anglican Church, and I want to make  
5 that very clear, it's a collection of church leaders?

6

7 REVEREND GREENAWAY: When we introduced the idea of the benchmark  
8 project, which is happening in the north Atlantic, that is - that is  
9 where that focus is, and let's face it, lots of our members are in  
10 business.

11

12 MS McINTYRE: Mmm.

13

14 REVEREND GREENAWAY: And so we're - and thank you for your - the  
15 contribution of Otago scientists, because they have been some of the  
16 people who, on e-mail and through various forums, and forums the  
17 Capital Forum have run here in Wellington, have contributed a lot to  
18 this thinking that we're coming through with --

19

20 DR FLEMING: I have to say it's not just Otago, it goes --

21

22 REVEREND GREENAWAY: We've got some Massey people sitting in the  
23 audience here so I have to be careful. But coming to the business  
24 end of things, yes, that's - the vision for New Zealand, and for  
25 New Zealand agriculture, for New Zealand medical science  
26 development, has to include the discussion with business. Because  
27 the business in our model, as we've suggested, is going to be the  
28 body that is actually going to fund the development and the end  
29 product, and its distribution.

30

31 But how do we - the experience of north America and Europe has been  
32 that that association of churches, business, science etcetera, has  
33 to be a voluntary compact. One of the real issues we face here is  
34 that more and more of our intellectual property is becoming the  
35 property of transnational institutions which do not necessarily have  
36 a great investment in New Zealand's vision, and that's where the  
37 other party has to be governmented in some way.

38

39 CHAIR: Thank you for coming along today and for the thoughtful  
40 presentation that you've prepared for us, we've appreciated it and  
41 enjoyed the discussion with you.

42

43 REVEREND GREENAWAY: Thank you for the opportunity.

44

45 MS McINTYRE: Thank you very much.

46

47 CHAIR: We'll take the morning break for 15 minutes and then hear the  
48 next presentation.

49

50

1 Hearing adjourned from 10.47am to 11.10am

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7 PRESENTATION BY PUBLIC QUESTIONS COMMITTEE (METHODIST, PRESBYTERIAN,  
8 CHURCHES OF CHRIST, QUAKER)

9

10

11 [11.10am]

12 CHAIR: Yes, good morning; Mr Davis, is it?

13

14 MR DAVIS: Yes.

15

16 CHAIR: And Mr Scott?

17

18 MR SCOTT: Hello.

19

20 CHAIR: We're looking forward to hearing from you.

21

22 MR SCOTT: Thank you. Thank you for the opportunity to present our  
23 submission to this Royal Commission. I'm Hugh Scott, I'm one of the  
24 co-convenors of the Public Questions Committee, and Richard Davis is  
25 the Executive Officer of this Public Questions Committee. The  
26 committee originated as a joint committee of Methodist and  
27 Presbyterian churches some decades ago and recently they were joined  
28 by representatives of the Society of Friends, and the Associated  
29 Churches of Christ.

30

31 At this particular stage and during the process of putting in our  
32 submission we've been go through a transition phase that's resulted  
33 from the expansion of the Committee. Once the process of transition  
34 is completed and approved by all the four churches, then we are  
35 likely to be known as the Churches' Agency on Social Issues.

36

37 In seeking to come to terms with genetic modification, and the  
38 complex ethical issues that it raises, all groups need to re-examine  
39 their own world views. Even if they don't think about the  
40 particular world view they have, or don't intentionally re-examine  
41 it, their attitudes to genetic modification will be strongly  
42 coloured by what they take for granted about the world, about life,  
43 and about human nature.

44

45 So, for us the debate about genetic modification is as much about  
46 people's views of the biosphere, the environment, the different life  
47 forms within it, human beings, human nature and the reliability of  
48 scientific knowledge and of technology as it is about the actual  
49 techniques of genetic modification.

50

1 No-one's approach is totally value-free, no matter how hard they try  
2 to be objective. No information given to this Commission is  
3 value-free information, or rather that the Commission's findings and  
4 recommendations may seem at one level to be simply determining how  
5 New Zealand will control specific genetic modification technology,  
6 but in fact the recommendations and decisions, if adopted, will have  
7 a flow-on effect and could have a powerful influence on the shape of  
8 future New Zealand society.

9  
10 As an agency, we don't claim to be made up of scientific or  
11 technical experts. As an agency we have supported the establishment  
12 of the Interchurch Commission on Genetic Engineering, and it's been  
13 a mechanism through which those in our churches who have  
14 technological expertise have had an opportunity to contribute to a  
15 submission to this Commission. That Interchurch Commission has also  
16 been able to travel around and to sample opinion at grass-roots  
17 level.

18  
19 We believe that all sections of New Zealand society need to have  
20 their views on genetic modification taken seriously, because genetic  
21 modification has serious social, ethical, cultural and spiritual  
22 implications. Our expertise and the experience of our committee  
23 over the years has been in reflecting critically on New Zealand  
24 society, and on the major influences that are borne on it, and doing  
25 that in the light of our Christian beliefs and our Christian  
26 understandings.

27  
28 Like everyone else who's grappling with genetic modification, we  
29 were driven back to examine and to restate many of our  
30 understandings about creation, about life and about society. So, we  
31 sought to state those insights and perceptions in the Executive  
32 Summary in our submission, specifically in paragraphs 4 through to  
33 4.15. These aren't exactly the same as those expressed by the  
34 Interchurch Commission or by other church groups, but we feel that  
35 they seek to express many of the same understandings and concerns.  
36 It's our hope that our understandings will assist the development of  
37 ethical guidelines on which New Zealand policies and practices for  
38 GM can be based.

39  
40 Moving from the Executive Summary to Section 4(a) in the template we  
41 simply sought to convert our understandings into a series of  
42 relevant recommendations. I would like to look now at some of the  
43 understandings that we sought to express in the Executive Summary.

44  
45 In 4.1 we say every aspect of genetic modification has a spiritual,  
46 ethical and cultural dimension. For us life is a gift of God,  
47 consequently, all of life's forms need to be treated with great care  
48 and respect. The relationship between genetic modification on the  
49 one hand and people's cultural, ethical and spiritual assumptions  
50 and concerns on the other is a complex relationship, and so, great

1 care is needed.

2

3 Essentially we could say that paragraph 4.1 seeks to highlight the  
4 need for a holistic approach. Regardless of how we define a  
5 spiritual dimension, and each of us here will no doubt define it in  
6 different ways, it's clear that spiritual values are of great  
7 importance to many New Zealanders. Any policy about genetic  
8 modification needs then to respect people's beliefs. If people  
9 believe that genetic modification has significance for their  
10 spiritual life, then the policies developed must take that belief as  
11 a given. That's part of treating all humans with the dignity they  
12 deserve.

13

14 In 4.2 we talk about the grace of God being present in all creation,  
15 including what seems to humans to be imperfect. I think perhaps the  
16 Anglican submission expressed the same idea, slightly differently  
17 and perhaps better than us, when they said, "The impairment in human  
18 lives by way of disability or disease does not in our faith diminish  
19 the value of those lives and their calling to contribute to  
20 community". Page 1 ending number 2 of their submission.

21

22 We believe that the love of God can be discerned in all of life  
23 especially if we look at more than the physical. Of course, we  
24 should work to remove suffering. However, in doing so we need to be  
25 aware of our limited human knowledge. We should work to remove  
26 suffering to the best of our ability, but within the limitations  
27 imposed by our limited knowledge and power, and within the  
28 limitations imposed by any ethical criterion we apply to genetic  
29 modification.

30

31 A number of submissions to the Commission, I feel, have sought to  
32 discover some of these ethical criteria, or at least to grapple with  
33 the difficulties of developing suitable ones.

34

35 For us, the idea that all of life should be physically perfect has  
36 got some serious flaws. We can assume that what our present  
37 judgment of what is perfect is correct, but we know our knowledge is  
38 limited so what seems perfect now may later be revealed to be  
39 erroneous; we need to be humble before creation. From a limited  
40 human perspective too what is perfect may seem to demand uniformity.

41

42 We believe that a search for uniformity is dangerous. For us the  
43 diversity of creation is something that is to be celebrated. In  
44 fact, for Christians the gospel story is the story of a perfect God  
45 who willingly took on imperfection in order to show us God's nature  
46 and love.

47

48 4.3: We talk about human curiosity and research skills. Perceive  
49 those as gifts of God given to us as part of the gift of life, and  
50 so needing to be used in ways that respects the integrity of

1 creation. Again, the implication is, simply, take a holistic  
2 approach.

3

4 In.4.4 we talk about a greater emphasis on loving behaviour and  
5 gracious attitudes in our approach to scientific progress. Maybe we  
6 should have said "in our approach to everything". This paragraph,  
7 though, is triggered by our knowledge of situations where the  
8 purpose of scientific research hasn't been for human welfare. For  
9 example, the amount of research devoted to developing armaments,  
10 biological weapons and so on, is a serious cause for concern. As  
11 Christians we have an imperative to seek human welfare, that's  
12 evidenced in many parts of the Bible, the old Testament, Prophets  
13 and Beatitudes.

14

15 We want to encourage the growth of a world where people seek the  
16 welfare of others and of all creation. We want to apply that goal  
17 to the world of scientific research as well.

18

19 In 4.5 we talk about goodness as the primary criteria in the  
20 development of genetic modification. First of all, in the version  
21 I've downloaded from the Royal Commission's website, I think there  
22 may be a small punctuation error which may have made it totally  
23 incomprehensible. And the letters "GM"; I think there needs to be a  
24 semicolon. That was not the way my computer downloaded it anyway.  
25 If we put that in there, then the second part of the paragraph  
26 indicates what we mean by "goodness" in our submission.

27

28 The paragraph simply attempts to spell out in a little more detail  
29 what is implied by the responsible use of our abilities in paragraph  
30 4.3. Goodness and wholeness are closely associated concepts in  
31 Christian thought. Goodness then, needs to be defined in terms of  
32 the whole universe. It can't simply be confined to economic growth  
33 or even to providing people with a long life.

34

35 In 4.6 we lay the responsibility for creating what is good on the  
36 whole of society, and we talk about informed choice being needed.  
37 Our understanding of human nature says that we are made for  
38 community and for right relationships. Big decisions such as those  
39 involving genetic modification are the responsibility of the whole  
40 community, because they affect the whole community.

41

42 To update John Dunne, "No person is an island". Of course, the  
43 community can operate through representatives, but it is the whole  
44 community who should be represented rather than those who simply  
45 appear to be the direct stakeholders in the narrow sense of that  
46 term. GM has the potential to affect many people in ways that we  
47 aren't yet aware of, and so there's a sense in which the whole  
48 community has to be recognised as stakeholders. And we are pleased  
49 that through this Royal Commission the whole community of  
50 New Zealand has an opportunity to be involved in the formation of

1 these policies.

2

3 When it comes to individual decisions about particular GM processes  
4 or treatments that have been sanctioned by the whole community, then  
5 the principle of informed choice needs to be maintained. That's  
6 more for us than informed consent, because informed consent can  
7 sometimes be read as if it means that, if people are given  
8 sufficient information, surely they will give their consent.

9

10 However, informed choice implies that a person always has the right  
11 to say "no". For example, to refuse a treatment or to refuse to eat  
12 genetically modified food, only this way can the dignity of each  
13 person be respected.

14

15 In 4.7 we focus on something which I think runs right through our  
16 submission; our understanding that our knowledge of the biosphere is  
17 limited and that a consequence of that is that our approach needs to  
18 be cautious. I'm sure that we can all think of plenty of examples  
19 of limited human knowledge. This Commission, I'm sure, has heard  
20 the methodology and the results of the research of some scientists  
21 called into question by other scientists. Our limited knowledge  
22 means that we can never be sure that a particular method or a  
23 particular finding will be valid for all time.

24

25 Just one example of limited human knowledge is indicated by what's  
26 been happening in our newspapers in the last week or two, where  
27 we've had a report of the recent finding from the Human Genome  
28 Project that humans have 33,000 to 40,000 genes, when just last year  
29 it had been common to talk of the total at 60,000 to 80,000. In  
30 many ways we might say that the history of modern science is the  
31 history of a more or less constant process of revision.

32

33 In many ways then, paragraph 4.7 is simply a call to be humble  
34 before creation and to proceed with caution. That humility might be  
35 summed up by coming to nature and asking, "Change me that I may  
36 understand you, rather than make me understand you in order that I  
37 may change you".

38

39 In 4.8 we say that a first principle for research and genetic  
40 modification ought to be, first do no harm. That this includes care  
41 for the non-human world as well as for the human. That means we do  
42 need to test the results of scientific research rigorously and as on  
43 a broad a basis as possible, applying the findings cautiously in the  
44 light of our human fallibility. A useful thing to ask here is, is  
45 there any possibility of a victim resulting from this course of  
46 action?

47

48 In completing Section 4(b) of our submission we simply reprinted  
49 those understandings we considered applicable, sometimes with brief  
50 additional explanation, and we didn't attempt to go into scientific

1 or technical detail, which we've left to the Interchurch Commission.  
2 As a result, the section doesn't appear repetitive; that isn't an  
3 accident, it's our contention that all decisions about genetic  
4 modification must be made in a holistic way, must be based on  
5 ethical criteria. And for us our - these criteria are grounded in  
6 and they grow out of our world view, the world view of our faith.  
7 Thank you.

8

9 CHAIR: Yes, thank you, Mr Scott.

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[11.25am]

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MR DAVIS: I will continue on from where Mr Scott's left off. I will be concentrating on the Executive Summary points 4.9 to 4.15, but before I do so I just want to say a little bit about the involvement of the church's involvement in issues of biotechnology. Our churches are members of the World Council of Churches which in the 1980s, 1982 and 1989, published two documents in genetic engineering, and the churches have maintained an active interest in the last two decades.

Last year our committee was involved in a Capital City Forum event on The Ethics of Genetic Engineering and we've produced this document as a copy of the proceedings on that. We are maintaining a long interest, and we will continue to monitor developments in this area.

In paragraph 4.9 we talk about the Government not delegating great powers to committees of experts, and the emphasis here is on "experts". We believe that ordinary people can understand the ethics of genetic engineering and the implications on society. In other fields of Government we place great trust in the ordinary person, such as on juries, Medical Ethics Committees and even to elect the Government. We believe that ordinary people can express their concern and can take the lead in developing the ethics that will suit New Zealand's situation.

In 4.10 we talk about the effect of the profit motive in genetic research and the development of genetic organisms and we say ethical criteria must always outweigh commercial considerations. The 20th Century has shown that the effect of profit motive on all sorts of research has been to distort the aims of that research. Where we put profit before human well-being, we often end up with very undesirable consequences. History is littered with examples of that, but - and often we don't know the full extent to which that happens, because many corporations that conduct a lot of research into the effects of their chemicals, cigarettes, foodstuffs, may discover things which consumers probably - they wouldn't want

1 consumers to know about. And there are - I mean, it doesn't take a  
2 genius to know that companies will try to hide information that is  
3 damaging.

4  
5 When we speak of ethical criteria we do realise that there is  
6 ethical business, and we don't want to undermine that, but we think  
7 that human well-being, and well-being for the whole of creation  
8 needs to be primary in the face of the search for profit market  
9 share economic growth: Which leads on to 4.11, where we talk about  
10 the power of multinationals, and here I would like to refer to a  
11 survey that we conducted as part of our Capital City Forum last  
12 year, where we asked participants at that forum to answer a range of  
13 questions both before and after that forum, and one question was,  
14 "Rate your level of concern on the following issues". The two  
15 highest responses where people were very concerned was the role of  
16 large corporations in the corporatisation in food and healthcare and  
17 that GE, genetic engineering, will be done primarily for profit and  
18 not for human well-being. The number surveyed was really just those  
19 who have volunteered to respond, and we've gathered about 100 people  
20 here in Wellington, so we're not saying that it's broadly  
21 representative of society, but it does show that there is a great  
22 level of concern about the role of corporations, the profit motive,  
23 taking over from human well-being in general.

24  
25 We, therefore, believe that we must be very careful about monitoring  
26 the role of corporations in this field, putting in place regulations  
27 and laws which maintain our economic and political sovereignty in  
28 the face of large corporations that perhaps wish to shape policy for  
29 their own ends. And we should not, as the last part of that  
30 paragraph, be party to off-loading the risks of research in genetic  
31 engineering onto Third World or poor countries that perhaps haven't  
32 got the controls of and regulations that we are able to have here.

33  
34 In paragraph 4.21 we talk about the importance of the Treaty of  
35 Waitangi. Our four partner churches in their own way have developed  
36 a bicultural journey and treat the Treaty of Waitangi as central to  
37 their church policy.

38  
39 We ask the Commission to give suitable weight to the submissions  
40 that it receives from the Maori people in accordance with their  
41 status as a treaty partner in this land.

42  
43 In paragraph 4.13 we reject the notion that genetic engineering is  
44 the only solution, or even a primary solution for social problems  
45 such as world hunger, ecological destruction and economic  
46 underdevelopment. We believe that social problems need social  
47 answers.

48  
49 And here I will draw on a paper that I gave to St Andrews on The  
50 Terrace on Sunday November 26, and I can provide a corrected copy of

1 this to the Commission if they so wish.

2

3 Through my research into genetic engineering I've created a list of  
4 things that genetic engineering is supposed to be able to solve, and  
5 that is to; one, save species which are under threat of extinction,  
6 to restore balances between the needs of the human kind and the  
7 biosphere, to reduce the use of harmful chemicals in agriculture, to  
8 increase productivity from agricultural land, to find land mines, to  
9 provide solutions for pressing climate change problems, solve world  
10 hunger, cure many diseases and to increase economic growth.

11

12 It almost seems as if there isn't a major social problem that we  
13 face that can't be solved at least in part by genetic engineering,  
14 yet these problems are social, they come about from our inability to  
15 live together in harmony and in an ethically sustainable fashion. I  
16 just want to focus on the world hunger question, one that's been  
17 talked about a lot in this Commission, and draw on three reports  
18 that have been done into this area.

19

20 Food First, a non-Governmental organisation in the United States  
21 issued a document, "12 Myths About Hunger". The first myth is that  
22 there is not enough food to go around. They say that abundance, not  
23 scarcity best describes the world's food supply. Enough wheat, rice  
24 and other grains are produced to provide every human being with  
25 three and a half thousand calories per day; that doesn't even  
26 account for many of our commonly eaten food, vegetables, beans,  
27 nuts, root crops, fruits, grass-fed meats and fish.

28

29 Enough food is available to provide at least 4.3 pounds of food per  
30 person worldwide. Enough food to make people fat. The problem is  
31 that many people are too poor to buy readily available food.

32

33 Another report by the Worldwatch Institute called, "Underfed and  
34 Overfed the Global Epidemic of Global Nutrition" gives the alarming  
35 statistic that the number of overweight people now rivals the number  
36 of underweight people.

37

38 The world's underfed population has declined slightly since 1980 to  
39 1.1 billion. The number of overweight people has surged to  
40 1.1 billion. An author of the report, Brian Halweil, said that,  
41 "While the myth persists, that hunger results from a scarcity of  
42 food, an equitable distribution of sources and gender discrimination  
43 prevents most of the world's hungry from getting enough to eat.  
44 Furthermore, some 80% of the world's hungry children live in  
45 countries with food surpluses. The common thread that runs through  
46 nearly all hunger in rich and poor nations alike is poverty".

47

48 BISHOP RANDERSON: Could you just spell Brian's surname?

49

50 MR DAVIS: H-A-L-W-E-I-L.

1

2

MR DAVIS: Finally, the United Nations Food and Agricultural Organisation reported last April that the long-term food security outlook for developing countries is good even though world population should reach 8 billion by the Year 2030, present growth global agriculture should be more than sufficient to meet world demand. This assessment was made without considering the effects of genetic engineering.

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So that, the conclusion to draw I think from that is that problems of world hunger will not be solved by merely increasing production, or merely increasing the nutritional value of food. We need to solve our social problems, we need to learn to live together on this planet and share our resources. And that is a social, political, ethical problem. It cannot be solved by genetic engineering. Some might say, well, if we had more food then the distribution problem becomes a lot easier. But if we cannot distribute the food that we currently have, I fail to see how we can distribute enhanced food, genetically modified food or any other sort of necessity of life.

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Which leads me on to paragraph 4.14 where we quote from Paul Ramsay, a Christian ethicist and theologian who wrote, "We should not play God before we have learnt to be human, and as we learn to be human we will not want to play God". For me that means that we are trying to, we are trying to take on powers that some might ascribe to God as being creator, as trying to solve problems in a God-like fashion when we need to live as humans on this planet. And, if we can solve some of our social problems of food distribution, of some of the social causes of disease, a lot of the problems that genetic engineering tries to solve just won't exist or will exist in a way in which it's not such a big problem, like an example of that would be land mines. A cruel weapon, completely inhumane. If we could learn to live on this planet peacefully, we would not need genetic engineering or any other technology to try and solve our land mines problem.

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Finely, we talk out of our religious tradition about the nature of humanity itself, and we quote from Genesis, Chapter 2, Verse 7. "The Lord God formed man from the dust of the ground and breathed into his nostrils the breath of life and the man became a living being". We reject a reductionist view of, or materialist view of human life, and all life on this planet. We are not merely the interaction of our genes with the physical environment, we are certain that there is a God who is the giver and sustainer of life, and that to treat human beings and other animals and life forms as material, we will say, even Leggo blocks that can be changed around without viewing the context of inter-human relationships, communities, political systems and a relationship with our creator is to have a reductionist view of life which can never be made whole and can never serve the need, the true needs of people and our

1 environment. And, I will conclude there.

2

3 CHAIR: Mmm, thank you. Now, Mr Hodson, do you have questions?

4

5 MR HODSON QC: Yes, please sir.

6

7

8 \*\*\*

9

10 [11.43am]

11 MR HODSON QC: Yes, gentlemen, my name is Hodson and I'm instructed to  
12 ask some questions on behalf of the Life Science Network, which is a  
13 party to this Commission. Could I - I really want to clarify two  
14 topics with you. The first is at the beginning of Form 1 of the  
15 submission; you note the membership of the Public Questions  
16 Committee, and you note also that you don't claim to represent the  
17 views of all the members, and that there may be other submissions.  
18 Now, you're probably aware that tomorrow a committee of the  
19 Religious Society of Friends will be presenting a submission which  
20 is considerably different to yours? Are you aware of that?

21

22 MR SCOTT: Yes.

23

24 MR DAVIS: We are aware of that.

25

26 MR HODSON QC: Could you tell us please just the extent to which your  
27 committee is representative of a sector of the population, numbers,  
28 or - just, what is the weight of opinion that it represents?

29

30 MR DAVIS: Do you mean of the church population or of the population  
31 in general?

32

33 MR HODSON QC: No, of your committee; see, you've disavowed speaking  
34 for everybody, who do you speak for?

35

36 MR DAVIS: Well, I can - first of all, our church is Presbyterian,  
37 Methodist, Associated Churches of Christ and Quaker; well, there's  
38 over half a million people affiliated with that in the 96 census.  
39 Now, as we say, we don't claim to - we haven't asked all those  
40 people whether we represent their views, but those churches in their  
41 own way have appointed people to this committee as representatives,  
42 and they sit on that committee with the full endorsement of those  
43 church bodies. This submission was approved by our committee.

44

45 MR HODSON QC: Thank you, that's a perfectly usual arrangement. How  
46 many members does your committee have?

47

48 MR DAVIS: Currently we have six Presbyterians, two Churches of  
49 Christ, two Quakers and three Methodists.

50

1 MR HODSON QC: Thank you. Could I go --

2

3 MR SCOTT: I would like just to comment on that too, if I can. I  
4 think the choices that are involved in genetic engineering are  
5 fraught with complex ethical questions, and on those questions  
6 Christians and some members of our churches will have different  
7 views just as people within the scientific community have different  
8 views about them. But our - as churches and as individual  
9 Christians we aren't exempted from the duty to try and discern the  
10 will of God in a difficult decision, whether it affects us or  
11 whether it affects other people. Now, our churches have appointed  
12 us and charged us with seeking to discern that will in relation to  
13 social issues.

14

15 So, our submission's based on that kind of reflection, which we have  
16 carried out as a task for our churches regardless of the fact that  
17 we know that in the complex issue like this there will be varying  
18 views, just as there are in the community at large.

19

20 MR HODSON QC: Thank you for that, and may I acknowledge it's clear  
21 from your submission you've given the matter very considerable  
22 thought. But I wonder if I could explore with you B(m); "Let our  
23 first concern be that we do no harm, that we take no risks without  
24 the informed consent of all the people that could be affected by an  
25 adverse outcome". Have you got the reference?

26

27 MR SCOTT: Sorry, 4.8.

28

29 MR HODSON QC: 4.8 is it, it comes as B(m) in Form 1, but it's the  
30 same sentence?

31

32 MR SCOTT: Same sentence, yes.

33

34 MR HODSON QC: Thank you. When you start by saying that "we do no  
35 harm", do you include in the concept of "harm" economic harm, or do  
36 you exclude that?

37

38 MR DAVIS: I think we would probably include economic harm, but that  
39 would be in the bottom half of the list of harms. I think we would  
40 put harm first of all to physical, mental and spiritual well-being  
41 of an individual as probably the top criteria.

42

43 MR HODSON QC: Yes, you see the concept of harm can rank quite highly  
44 in people affected economically; for example, if you regarded  
45 economic harm as a major factor, you would never have had any  
46 Railways because of the economic effect on the Stagecoach Industry;  
47 correct?

48

49 MR DAVIS: I can't recall the Stagecoach Industry. I understand what  
50 you're trying to make - the point you're trying to make. We - there

1 is a sense of, um, harm to the whole of community. Now, I imagine  
2 that we're grateful that we have a Railway Industry, and that we  
3 would probably have said at the time, well, the overall benefit to  
4 our society is such that the harm to a few Stagecoach operators that  
5 our - well, the benefit outweighs the cost to those individuals, and  
6 they can then be compensated accordingly.

7  
8 MR HODSON QC: You're aware of the enormous concern and the economic  
9 damage to some interests that accompanied the introduction of  
10 electricity to the world at the turn of the century?

11  
12 MR DAVIS: Well, I imagine that there was - whenever there's a major  
13 change in technology, interests are harmed, I suppose.

14  
15 MR HODSON QC: So your test, or part of your test at least is that the  
16 community or the majority of the community, or a very large part of  
17 the community must suffer economic harm before you would include it?

18  
19 MR SCOTT: We suggest in one part of the submission, a bit further  
20 over, in referred to it actually, that a useful question to ask is,  
21 is there any possibility of a victim resulting from this course of  
22 action? Now, I think the use of the word "victim" does imply at  
23 least, it helps this real difficulty, because we have so many  
24 different areas of - that we have to be concerned about. The use of  
25 the word "victim" does imply more than superficial damage, more than  
26 damage that cannot be overcome in another way. It certainly implies  
27 harm of the kind that does not treat that person, that victim with  
28 dignity, but simply treats them as dispensable.

29  
30 MR DAVIS: If I could use an example of the sort, you know, the sort  
31 of prioritisation we would use in discussing harm. Housing; housing  
32 every New Zealander adequately would cause economic harm to some  
33 people, because they might then be forced to pay more tax. If we  
34 educated everyone to fulfill their human potential, that would cause  
35 economic harm to some people. If we wanted to feed everyone  
36 adequately, that would cause economic harm to some people. We  
37 submit that that harm is worth it.

38  
39 MR HODSON QC: Yes, I think that's the point you were making, that  
40 that's a harm, an economic harm to the very large majority of  
41 people. And I thought that we might just perhaps talk about the  
42 "victim" aspect under the heading of people affected by an adverse  
43 outcome.

44  
45 Now, getting back to the harm question. The proponents of organic  
46 certification have said that they would suffer harm because, and  
47 it's economic harm, because they would lose their certification.  
48 They have also acknowledged that they represent a minority, if you  
49 take it by statistics, a small minority, albeit a growing one. Now,  
50 does that - that doesn't seem to me to come within your concept of

1 "harm", it really relates to the people that could be affected by an  
2 adverse outcome; is that right?

3

4 MR SCOTT: I think what we are attempting to deal with here is a  
5 complex of criteria and issues, and that complex can't be dealt with  
6 satisfactorily by picking off one situation after another. It has  
7 to be dealt with in a holistic way, and that's why I think we have  
8 said that ethical criteria must take precedence over commercial  
9 criteria when a conflict between those two is involved; results.  
10 That is not to say that things cannot be commercially viable and  
11 ethical at the same time.

12

13 MR HODSON QC: I think there is good precedent for taking concrete  
14 examples in relation to moral positions.

15

16 MR DAVIS: Could I just ask you to clarify the question, because I've  
17 been thinking about it. You're saying the Organics Industry  
18 labelling - that there's a cost to them when with the  
19 introduction --

20

21 MR HODSON QC: The Organics Industry have come to this Commission and  
22 have said at the moment any genetic modification of crops takes  
23 place in this country they stand to lose their certification and  
24 thereby suffer what they regard as suffer a considerable harm.

25

26 MR DAVIS: All right, I understand better now. A harm could also  
27 include then the reduction of choice, so that if the Organics  
28 Industry is destroyed through perhaps the widespread use of genetic  
29 modification, that's a big "if", I guess, that would be a harm to  
30 those who desire to consume organic food.

31

32 MR HODSON QC: Before I go on to the conclusion, you include animals  
33 in your areas of doing no harm. You say, "Do no harm to animals"?

34

35 MR DAVIS: We have talked about creation throughout our submission,  
36 and at paragraph 4.8 we say, "This includes care for the non-human  
37 world", and so animals would be included in the calculus of harm.

38

39 MR HODSON QC: Well, if you take the position, as some have done, that  
40 genetically modified medicines are to be avoided, if there is any  
41 alternative, in the case of pigs that means that instead of  
42 genetically modified insulin, which is used by most diabetes sufferers  
43 these days, pigs are going to be killed for the extraction of  
44 insulin. What would your comment on that be?

45

46 MR DAVIS: Um, well, I can understand the differing viewpoints on  
47 that. Again, that's a weighing of harm; harm and, I guess, many  
48 people would say that the harm to a pig, you know, is outweighed by  
49 the benefit to a human, and anyone who eats ham or pork or bacon  
50 would have to agree with that.

1

2 MR HODSON QC: This is then your proposal, perhaps, a blanket - it's  
3 rather a blanket concern to do no harm; one has to look at  
4 individual cases, see what harm is caused to whom and weigh up the  
5 benefits of the course proposed?

6

7 MR DAVIS: Well, it's not - as we've said, it's not simply what harm  
8 is caused to whom, but also to what.

9

10 MR HODSON QC: Yes, absolutely. And your next part, "We take no risks  
11 without the informed consent of all the people that could be  
12 affected by an adverse outcome". Now, it's been, I think,  
13 reasonably manifest that some people are never going to consent to  
14 genetically modified crops; again as an example, on the grounds of -  
15 or very wide objection to what they perceive as an adverse outcome;  
16 for some it's spiritual, some it's financial, some it's health. So  
17 that, if you take that literally you're really going to stifle all  
18 developments, are you not?

19

20 MR DAVIS: Not forever. I think the Government and this  
21 Royal Commission have a difficult task that, as we have discovered  
22 in speaking with our constituency, there are such a wide range of  
23 views, such a wide range of knowledge about this, and it  
24 hasn't - there hasn't been a fully informed public debate where  
25 people have been asked to consider trade-offs. And I think it may  
26 be premature to release genetically modified organisms into the  
27 environment before we reach some sort of consensus, given the  
28 unknown and known risks of genetic modification.

29

30 So, I think if we stop it now, it doesn't mean that in five, ten  
31 years time when we have a better understanding of the science, a  
32 better understanding of the risks and the potential benefits, that  
33 we can't open it up then. And may - and I can't predict the future,  
34 but it may be that we develop more of a consensus in that time  
35 period.

36

37 MR HODSON QC: You're never going to get a consensus of everybody, are  
38 you?

39

40 MR DAVIS: Well, I think we have - society has reached consensus on a  
41 wide range of issues where initially there wasn't a consensus.

42

43 MR HODSON QC: Do you mean consensus, universal approval, or a general  
44 approval, whether it's socially acceptable?

45

46 MR DAVIS: Well, take dancing. The church in the past has looked -  
47 frowned upon dancing in church halls and so on, and I would say that  
48 there is a widespread - I mean, it would take me a long time to find  
49 anyone who is still opposed to that. The church was very concerned  
50 about heart transplants when they were first being done, and I don't

1 know of anyone who has a problem with that these days. So, things  
2 can change over time, and we need to respect people's positions on  
3 these things initially, even if they're shown to be erroneous later  
4 on.

5  
6 MR HODSON QC: Well, take alcohol; there is a social consensus that  
7 the consumption of alcohol in New Zealand is acceptable, and the  
8 majority of the population either actively do that or tolerate  
9 others doing it, but nevertheless there is and there always will be  
10 some people totally opposed to the use of alcohol in all its forms.  
11

12 MR SCOTT: It would seem that what we were driving at, at that  
13 particular part of our submission, is that important decisions need  
14 to be taken, we said, by the whole community, we did allow, and I  
15 think I - I don't know whether I said that or not, but we accept  
16 that that can be done in a representative way, that is the way in  
17 which our country and our democracy works. But those decisions then  
18 need to be made by groups, properly appointed bodies, who are  
19 representative of the whole community, and not representative just  
20 of particular segments of the community, so that everybody's  
21 concerns can be taken on board.  
22

23 The precise nature of the decision at the end will often still  
24 remain a dilemma and a difficulty. That's a simple consequence of  
25 the fact that we are all human beings with our own decision-making  
26 powers, and we would say that's part of being made in the image of  
27 God. We have to learn how to work together in community as  
28 autonomous human beings and to give dignity and respect to the  
29 processes by which people reach decisions.  
30

31 MR DAVIS: Can I also just add something to what I was saying. We  
32 have to look at the sort of, the sort of thing we're dealing with  
33 here. I mentioned an example of heart transplants; it's difficult  
34 to see how that effects anyone other than perhaps the donor and the  
35 recipient of that heart. When we're talking about genetic  
36 engineering, depending on who you listen to, we're talking about the  
37 whole environment here. I mean, people are talking about genes  
38 escaping and wiping out native flora and fauna and it's going to be  
39 the end of the world as we know it. I don't know whether that's  
40 true, I think science is only really starting to grapple with  
41 whether that's true. Therefore, you have to not - look at not only  
42 who's agreeing and who's not agreeing, you have to look at the  
43 potential for things to go wrong and the magnitude of the risk on,  
44 you know, our society as a whole.  
45

46 MR HODSON QC: With respect, you're moving into the scientific  
47 argument, and I was trying to stay with the social argument, which  
48 is why I used alcohol as my example.  
49

50 In your attempt, and its a laudable attempt if I may say so, to

1 ascertain community consensus, whatever we actually think about that  
2 body doesn't matter, the best we've got at the moment is Parliament,  
3 isn't it?

4

5 MR DAVIS: For a community consensus?

6

7 MR HODSON QC: That Parliament is representative of the community; it  
8 is the only body --

9

10 MR DAVIS: In theory, yes.

11

12 MR HODSON QC: Yes, but there isn't anything else?

13

14 MR DAVIS: There is other voices --

15

16 MR HODSON QC: There are other voices, but the body representative of  
17 the community is Parliament?

18

19 MR SCOTT: And Parliament has appointed this Royal Commission, and  
20 therefore it is proper that every part of the community has its say  
21 to this Commission and assists the Commission in the drawing up of  
22 the right guidelines, and attempts to say to the Commission what  
23 are, for our part of the Society, the important elements to be  
24 considered. For us, the important elements are the ethical  
25 considerations.

26

27 MR HODSON QC: Respectfully, you are absolutely right, and that's the  
28 function of the Commission, to hear these submissions. What I'm  
29 querying with you, or discussing with you, is the extent to which  
30 the particular sentence under review represents a rather more  
31 absolute outcome that you could reasonably expect this Commission to  
32 take. Your question of doing no harm is subject to qualifications  
33 and consideration; so is the question of taking no risks and getting  
34 the informed consent of everybody. You don't actually quite mean  
35 that literally in the light of what we've discussed?

36

37 MR SCOTT: We would have to say that we have submitted these things,  
38 these understandings as a useful - we consider a useful contribution  
39 to the decision-making process of the Commission. And, like  
40 everybody who has submitted to the Commission, we have had limited  
41 time and resources in which to do that, and therefore teasing some  
42 of these things out; may say in the case of this, "Do no harm", that  
43 that is a guideline rather than a law or legislation never to be  
44 changed.

45

46 MR DAVIS: Could I just pick up: You mentioned the sentence here, in  
47 4.8 in our Executive Summary we say, "In all genetic research and  
48 genetic modification the first principle should be first do no  
49 harm". That's different than saying in developing social policy and  
50 regulations the first principle should be, "Do no harm" which is

1 what I think you're saying. So, it is a guideline for the scientist  
2 as much as anything, and it's the Royal Commission's job; I think  
3 it's the Government's job to create the regulations or guideline for  
4 those doing the research, that they do no harm.

5

6 MR HODSON QC: Can you accept the proposition, and I put it generally,  
7 that what is seen by some as doing harm may in fact be so, but  
8 equally it may be seen as others - by others as beneficial?

9

10 MR DAVIS: Oh, of course, I accept that. That's obvious.

11

12 MR HODSON QC: I've got one last --

13

14 MR DAVIS: Can I - yes, well, that is why we need to start developing  
15 a con - you know, more of a consensus on what is harmful and what is  
16 not. At the moment we're just, you know, in the infancy of this  
17 debate and that consensus hasn't been arrived at due to our limited  
18 scientific and ethical understandings at this stage.

19

20 MR HODSON QC: I was going suggest to you lastly, and I accept totally  
21 the point you've just made, that in the end these matters come down  
22 to something of a trade-off, and I would use for example people, a  
23 party of four people who get in a motor car and set off on a  
24 journey. That's inherently a risky business we know from the road  
25 toll. Those four people have consented specifically to get in that  
26 car and go on that journey. Anyone who runs the risk of being  
27 plowed into by a car has certainly not given any consent, but we all  
28 accept that risk as part of the every day life, and of the benefits  
29 of having a motor car; fair enough?

30

31 MR DAVIS: Yes.

32

33 MR SCOTT: But I would add to that, we accept that risk because we all  
34 have a good understanding of the nature of driving, and of road  
35 transport, and we see plenty of reports from the newspapers of the  
36 dangers of driving along particular stretches of roads, such as the  
37 one I drive along frequently, State Highway 1 north of Pukerua Bay,  
38 and I am acutely aware, when I drive down that highway, of what the  
39 risk is on that particular stretch of road. That is not the same as  
40 launching out into the dark in a sea that we do not know the limits  
41 of, and we are unaware of the nature of the weather that is going to  
42 be thrown at us. Perhaps like a lone round the world sailer, and I  
43 think that a number of people in New Zealand society have that sense  
44 of feeling and fear about where genetic modification might be taking  
45 them.

46

47 MR HODSON QC: Thank you. I accept that totally, and I commend to you  
48 the issues that have been debated in this Commission about field  
49 trials; thank you.

50

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[12.07pm]

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CHAIR: The proposition that, what you started with, what was required, was all persons that might be adversely affected and the decisions such as those involving genetic modification are the responsibility of the whole community, and I was wondering after your discussion with Mr Hodson whether you held by that or you wanted to reformulate that?

10

11

12

MR SCOTT: When I was presenting that particular part I did feel a distinction, which perhaps I didn't make as well as I might, between two segments, of how I treated that particular part of my presentation; I'll refer back to it.

15

16

17

In the first part I was referring to the big decisions, the policy setting decisions, the development of ethical guidelines, the development of any rules and regulations that might be required, and at that point I was saying that the whole community needs to be clearly represented, fairly represented in that decision-making process. Then I went on to individual decisions, and it was at the level of individual decisions that I was saying informed choice is perhaps a better term than informed consent.

24

25

26

So that, I was saying any individual to whom there is the possibility of eating genetically modified food, or not eating genetically modified food, ought to have the right to make that choice maintained for them. I was not seeking to say that they had the right to determine what would happen on the broad spectrum. However, I do agree that there are a number of complexities about how the broad - what precise decision is made on the broad spectrum and the flow-on effects for individuals.

34

35

CHAIR: Yes, thank you, that clarifies it very well. Mr Upton, do you have some questions?

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37

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[12.10pm]

42

MR UPTON: Yes, I've got a couple of points I'd like to discuss. One of them is just a specific question I've got about the wording of your paragraph 3 in your Executive Summary of the submission, and this may only be a small point, but in that paragraph 3 you say that there should have been a separate section to assist those interested parties for whom spiritual values are of fundamental importance.

44

45

46

47

48

49

I just want to clarify for my information what separate sections are we referring to? Is that a separate section in your paper or a

50

1 separate section in someone else's paper?

2

3 MR DAVIS: I think that's talking about, in the template that we  
4 were - we had to comply with in making this submission. And, I  
5 guess we're looking, if we look at Section B(y) there's a list of  
6 things there of public interest, and they include human health,  
7 environmental, economic, cultural, and ethical, and I guess we're  
8 saying we would have liked a fifth one, religious and spiritual,  
9 because we do not think that cultural and ethical --

10

11 MR SCOTT: Are synonymous with that.

12

13 MR DAVIS: -- are necessarily sufficiently --

14

15 MR SCOTT: We don't think cultural and ethical are synonymous with  
16 religious and spiritual, particularly as people view those four  
17 areas.

18

19 MR UPTON: That clears up that point; the only other issue I wanted to  
20 ask you about was the concept of "goodness", and you say in your  
21 paper that goodness needs to be the primary criterion in the  
22 development of GM.

23

24 Are you able to identify any ethical criteria to which that goal can  
25 be achieved? Are there any specifics you can give me that help us  
26 to achieve that result?

27

28 MR DAVIS: If we look at B(h)(ii), and it's about page 10 going by my  
29 pagination. We talk about goodness, as you say, needs to be the  
30 primary criterion; are those which aim for the welfare of all  
31 New Zealanders, other peoples, the environment and the biosphere,  
32 which may be broad, but that is - that is how we would see the  
33 ethical content of it.

34

35 MR UPTON: Yes, and exactly the same paragraph appears at paragraph  
36 4.5 in the executive summary; and what I'm asking is, how do we get  
37 there? What are the - have we identified criteria which help us, or  
38 guidelines or considerations which help us to get there, or is that  
39 something still to be developed? From one point of view, say - one  
40 point of view, you might say, "Well, read the Bible"?

41

42 MR DAVIS: Well, we might, yes.

43

44 MR UPTON: And I understand that argument, but I'm just saying, in the  
45 context of GM are there any particular guidelines that come to mind?

46

47 MR DAVIS: Well, this is an issue of social ethics as much as  
48 anything, and I think over the last 15 to 20 years the idea of  
49 goodness and having policies and regulations that work for the  
50 welfare of all New Zealanders are - I think we have a bit of amnesia

1 about that, began with the change of Rogernomics, the  
2 market-orientated approach, putting economic growth first beyond  
3 people's well-being; the environment last, and in the degradation  
4 of, I guess the idea of a common wealth.

5  
6 Now, we can't sit here and say, well okay, we need to develop an  
7 ethical framework for GM apart from developing a way in which, you  
8 know, we can share, you know, the resources of our society with  
9 everyone. It's putting too much on to this, this Commission, to  
10 solve all those social problems. What we're saying here is we're  
11 applying the church's social teaching to this issue.

12  
13 Now, the churches have been critical of Rogernomics, they've been  
14 critical of this market-first approach, and we're saying here that  
15 in terms of goodness we need to be working for the benefit of all  
16 the people, the whole environment in a way that meets their needs.  
17 That's what we mean by "goodness".

18  
19 MR UPTON: So, if we're looking at policy issues, policy setting  
20 goals, and the need to have the community involved, how do we do  
21 that? Do we look to Parliament to set the framework?

22  
23 MR DAVIS: When we were speaking with Mr Hodson we were talking about  
24 whether Parliament is representative of the people, and in fact the  
25 Government doesn't think that it can speak for all people without  
26 being in dialogue with the church, the community sector, business;  
27 they're not sitting down there thinking they've got all the answers,  
28 they're going out to the community, to Maori business and the church  
29 and hearing their voices. And, I think that is how we move towards  
30 this. We need to be in dialogue with each other and in genuine  
31 deliberation.

32  
33 MR UPTON: And, in the context of the genetic engineering, or genetic  
34 modification debate, one way of getting the community involved is by  
35 having a Royal Commission such as we've got at the moment?

36  
37 MR DAVIS: Yeah, that's one way.

38  
39 MR SCOTT: That's a reflection of the fact that Parliament doesn't  
40 think it has all the answers on this particular issue.

41  
42 MR UPTON: Of course, of course.

43  
44 MR SCOTT: I would say the other thing that lies behind this is that,  
45 as Christians we have an understanding of people living in  
46 community, and have a responsibility to community, and living in  
47 relationships. How can "goodness" in that context be developed? It  
48 must be developed by ongoing relationships, not only at the  
49 individual level, but the development of worthwhile healthy  
50 relationships, not only at the individual level but at the broader

1 social level, so that there is ongoing consultation. Only in that  
2 way will we know what "goodness" means for every New Zealander.

3  
4 MR UPTON: Can I finish by just moving to another topic, and it's  
5 the - it may be something you'd prefer to leave for a later  
6 submitter, but there are statutory frameworks in place at the moment  
7 dealing with ethical issues, for example animal welfare, and human  
8 health research into human health. Have you had a chance to look at  
9 those statutory frameworks or guidelines?

10  
11 MR DAVIS: We haven't looked at them in sufficient detail to probably  
12 answer your question.

13  
14 MR UPTON: Right-o, I'll leave that issue then and take it up with the  
15 people who are coming tomorrow.

16  
17 MR DAVIS: But could I comment generally? From what I know about  
18 them, they're very focused on - say medical ethics, it's very  
19 focused on dealing with that individual in perhaps a drug trial, or  
20 some consenting to a practice which is not customary, or something  
21 like that. Now, that is a different thing from what we're getting  
22 at here, in terms of social ethics, because medical ethics does - at  
23 that level doesn't deal with, okay, are we going to spend more money  
24 on public health, or, you know, surgery, or something like that.  
25 It's those macro decisions we're looking at when we're talking about  
26 goodness, not the individual specific cases.

27  
28 MR UPTON: Thank you.

29  
30  
31 \*\*\*

32  
33 [12.18pm]

34 CHAIR: Dr Allan, any questions?

35  
36 DR ALLAN: No, thank you.

37  
38 DR FLEMING: I was very surprised when I heard you mentioning land  
39 mines, or the removal of land mines as something - as something that  
40 we shouldn't use GM to do, and this confused me. I mean, land mines  
41 is an existing problem; are you saying that a GM way of discovering  
42 where the land mines are and removing them should not be developed  
43 because it's GM? What exactly are you saying there?

44  
45 MR DAVIS: Well, the other time I've appeared before this Commission  
46 was in cross-examination of - I can't remember the guy's name now

47  
48 MR HODSON: Neil Stewart.

49  
50 MR DAVIS: Neil Stewart, thank you. And I didn't come expecting to

1 cross-examine on the issue of land mines but I was fortunate - I was  
2 thankful I was here on that day because I have had a long, ongoing  
3 involvement with the campaign against land mines. And I - through  
4 having a discussion with him I was very unconvinced that that  
5 solution is a good one for land mines, especially in view of the  
6 ecological destruction which his methodology needs to adopt by sort  
7 of, you know, fully defoliating the land, and then planting his GM  
8 crop, and then waiting until the plants showed where the land mines  
9 were, and then you've got to also go in and then you've got to blow  
10 the land mines up in situ. So, then you're destroying the land even  
11 further. And, I didn't think that that was entirely ethologically  
12 responsible.

13  
14 Neither did I think that his - on his current developments, I mean  
15 it's obviously work in progress for him, that it was entirely  
16 fool-proof, and you would also need to work through the land field  
17 inch-by-inch, as they do now. So, you know, that together with the  
18 risks, the potential risks of those GM plants having pollen drift  
19 and horizontal gene transfer into indigenous crops in that area, I  
20 just thought it sounded far too risky.

21  
22 DR FLEMING: Okay, I'd like you to comment on whether you would ever  
23 see any use of GM as beneficial or useful, or - Dave

24  
25 MR DAVIS: Difficult in land mines, or in anything?

26  
27 DR FLEMING: No, we'll leave the land mines; I understand exactly  
28 where you're coming from there.

29  
30 MR DAVIS: I think human insulin has been a success story. On my  
31 understanding of it, I understand that genetically engineered  
32 insulin isn't suitable for everyone in every instance and there  
33 needs to be an alternative. I would just be, shall - I guess I'm  
34 saying let's be very cautious and we need to, I think, not take the  
35 potential benefits of genetic engineering at face value, we need to  
36 say what are - what's the probability that these benefits will flow  
37 to those at which they're aimed.

38  
39 DR FLEMING: Can I follow that up by asking you if you have any  
40 comments to make about the idea of embryo selection, for example?

41  
42 MR DAVIS: Can you expand the question a little bit?

43  
44 DR FLEMING: Okay. Well, this is to do with "do no harm", and I'm  
45 just looking for boundaries, if you like. If you have a situation  
46 of a genetic disease, where you can determine carriers of that  
47 disease, what would be your thoughts about the selection of human  
48 embryos to that - embryos who do not carry the genetic disease?

49  
50 MR DAVIS: If I understand the question, you're talking about genetic

1 testing of embryos -

2

3 DR FLEMING: Of embryos, yep.

4

5 MR DAVIS: Rather than genetic modification of embryos?

6

7 DR FLEMING: Yes, not talking about genetic modification.

8

9 MR DAVIS: Okay.

10

11 DR FLEMING: Or rather, if you want to contrast that, I'm looking for  
12 your, and I guess it's your personal boundaries, really?

13

14 MR DAVIS: I think the destruction of embryos is a difficult question  
15 to answer. I can see potential abuses of that sort of thing in  
16 terms of gender selection and other trait selection, but I think  
17 that would perhaps be - well, I think it would definitely be  
18 preferable to infanticide. That's a really tough one I'm afraid.

19

20 DR FLEMING: I acknowledge that actually; I'm finding that a tough one  
21 too. Thank you, that's fine.

22

23 CHAIR: Bishop Randerson?

24

25 BISHOP RANDERSON: No, thank you.

26

27 CHAIR: Thank you very much for preparing a thoughtful and  
28 comprehensive presentation for us, and for coming along today to  
29 answer questions. It's been helpful to have this dialogue with you.

30

31 MR DAVIS: Thank you.

32

33 MR SCOTT: Thank you.

34

35 CHAIR: We'll adjourn now until 9.30 tomorrow.

36

37

38

39 Hearing adjourned at 12.25pm

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