WAI 863 – WAIRARAPA KI TARARUA – WAI 814 – TŪRANGANUIA A KIWA REMEDIES INQUIRIES

JOINT HEARING HELD AT WELLINGTON

MONDAY 22 JULY 2019 TO WEDNESDAY 24 JULY 2019

Tribunal:	Judge Carrie Wainwright Judge Stephanie Milroy Dr Ruakere Hond Dr Ann Parsonson Dame Margaret Bazley Tim Castle
Crown Counsel:	Craig Linkhorn Harry Graham Anne O'Driscoll – Wairarapa Inquiries Mr Watson – Wairarapa Inquiries
Claimant Counsel:	Owen Lloyd Karen Feint Matanuku Mahuika Thomas Bennion Kelly Dixon Bryce Lyall Adam Tapsell Mike Colson Robyn Zwaan Linda Thornton
Interpreter:	Conrad Noema
Witnesses:	**Day 1 - 22 July 2019** Andrew Coleman **Day 2 - 23 July 2019** Dr Ganesh Nana Gareth Kiernan **Day 3 - 24 July 2019** Dr Richard Meade Dr John Yeabsley

James Mellsop

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[1] Transcript prepared by National Transcription Service (*Ngā Kaihopu Kōrero o Te Motu)*

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(9:07) DR RUAKERE HOND: (MIHI)

Karanga te rā karanga te rā karangahia mai ngā hihi o te rā, kia hui te kaha kia hui te ora kia hui te mārama. Wetekina te pō kia rangi pūaho te kōrero ka ao ka ao ka awatea, horahia mai te ao mārama ki runga ki tēnei minenga. Ki runga i ēnei kōrero ki ēnei wānanga ki mua i te aroaro o tēnei tēpu, e rarau mai rā tātou ki tēnei wānanga e rapu nei ki te ora i roto i ngā uauatanga o te wā.

Kua mōhio tonu kua haria mai o koutou aituā ki tēnei aroaro tonu ki tēnei minenga. Ana e mihi kau ana i te rongo kōrero rā mō John Ruru tērā ka ngaro atu i roto i te mārama. Ka whakaaro atu ki āia mai i te tīmatanga o ngā kōrero ki Mangatū, kāore hoki tēnei anō te Taraipiunara i rongo atu i te mate tae noa ki te rā nehu. Nō reira kāre i tae atu ā-tinana e whakakanohi nei i te kaupapa i whārikihia e ia nō reira ka iri nei ngā kōrero ki runga ki tērā o ngā aituā. Tae noa ki ngā mate nei kei tēnā kei tēnā o koutou kāre he rerekētanga, kua whakakanohi mai rā koutou i a rātou katoa kei roto i tēnei minenga. Engari āpiti hono tātai hono ko te hunga mate ki te hunga mate, ko tātou te hunga ora tēnei e whakatūtuki atu ai i te whakaaro nō reira tēnā koutou.

E ngā iwi e ngā mana e ngā reo he mana whenua he mana moana he mana awa he mana ngahere tēnei kua tae ki tēnei aroaro i tēnei rā. Nō reira ka mihia tēnā anō te mana kia taea ai te kī, “Whakairihia ngā kupu ki te tāhū o tēnei whare.” Ehara i te mea he whare tupuna engari mā tātou anō e huri hei marae mā tātou, hei whare kōrero mā tātou kei roto i o tātou ngākau.

Nō reira e mihi kau ana ki te whakatuwhera i ēnei kōrero. Ana kua oti i au nei tēnei anō ko te mihi whakatau. Ana kia mutu anō ko te kōrero, mehemea he mihi kotahi pea, āna mehemea he kupu kei a koutou, engari ka tīmata atu ki te karakia ka rere ngā kōrero mō tēnei rangi, e pai ana tērā? Nō reira tēnā koutou, tēnā koutou, tēnā tātou katoa.

WAIATA

Ka tīkina atu ko te waiata o Muaūpoko hei waiata nei mō te Taraipiunara i tēnei rangi, e puta nei ki te maungārongo i runga i te whenua, he maungārongo ki a tātou te tangata tēnā koutou, tēnā koutou, tēnā tātou katoa.

Kia kaua e tōroa atu ko tēnei o mihi atu o mihi mai, engari anō kua takoto tēnei kōrero. Mehemea kei tētahi o koutou he kupu poto nei e taea ai te whakautu, kātahi ka rewa atu ki te karakia kia rere pai a tātou kōrero mo te rangi nei. Tēnā koutou.

(09:11) OWEN LLOYD: (MIHI)

Āe, he hōnore, he kororia ki te Atua, he maungārongo ki te whenua, he whakaaro pai ki ngā tāngata katoa. Kei runga tērā whakaaro kei te haere tonu ngā mihi me ngā whakamoemiti ki tō tātou Kaihanga mō āna manaakitanga ana ka tae pai tātou i runga i te karanga o te rā nei. Nō reira kororia ki tōna ingoa tapu.

Ka tika i te tautoko ngā mihi kua mihitia ki a mātou kua tae mai i runga i te karanga o te rā nei. Mihi mai ki a mātou mate. A, kei te tika ki te mihi atu ana te hoa rangatira o tō mātou rangatira a Hoani kei konei. Kei konei ngā taumahatanga mō tō mātou whenua mō o mātou kerēme mō o mātou mate hoki.

A, ka tika te kōrero kua puta mai i mua i a mātou tēnei mahi ana kei te ngaro haere i a mātou kaumātua i a mātou pākeke. Tāku inoi ki a koutou ki a tātou me whakatere i tēnei mea. Ko te taumahatanga kei runga i a tātou kei te ngaro haere. Kei te tipu ake i o mātou mokopuna kāre rātou e mōhio te kaupapa te ngako o te mamae o rātou tipuna mātua ko te mea kāre rātou e kite i a rātou. Nō reira ko tēnei tō mātou mihi ki a koutou mihi mai.

E mihi mai, mihi atu ki te mana whenua, ana kua tae mai a Tūranga e tū ana ki runga i tēnei whenua, me tika, me mihi atu ki a rātou mā. A, ki a koutou ngā Kaiwhakawā kei te mihi atu, a, ki a ngā mema o te Taraipiunara. E hika kei te koroua/koroheke haere koutou pērā i a mātou, i te timatanga he pango te pāhau ināianei kua mā. Engari kāre e toroa ngā kōrero ki tēnei wā engari mihi mai, mihi atu. Koia i tēnei wā nō reira tēnā koutou, tēnā koutou, huri noa – tēnā koutou o te Wairarapa e haere mai i tēnei wā ki te noho tahi ki te mahi tahi ki te whakaoti i tō koutou mahi, a, pērā i a mātou ki

te whakaoti i to mātou mahi. Nō reira huri noa kia koutou, tēnā koutou, tēnā koutou, kia ora tātou katoa.

WAIATA

OWEN LLOYD: (MIHI CONTINUES)

Nō reira āpiti hono tatai hono e tika rātou kua whetūrangitia me pēnei te kōrero pīata mai i te pō pīata mai pīata mai. Tātou te kanohi ora e huihui mai nei i tēnei rā, tēnā koutou, tēnā koutou, tēnā tātou katoa. Kei raro.

(09:15) DR RUAKERE HOND: (MIHI)

A, tēnā koe, a, e te whakautu nei i aku mihi rā ki runga i a koutou. A, ka aroha rā i te aukati i tēnei i te mihi Māori ki te Māori ka pau te rā i te kōrero ka pai he pērā anō tā tātou mahi. Engari ka whai atu au i tō inoi nei kia tere kia kaua e noho nei ko tēnei taumahatanga ki runga i ngā pokohiwi a te tangata ka tika katoa ērā kōrero i runga i a tātou koira anō te haerenga. Engari mō te kaumātua haere, ana kaua e kōrero mō taku hoa nei a Willie mō tērā ana he pērā anō te āhua nei.

Engari ana kua tae ki te wā ana kia karakia, māku nei. Hei āpōpō ka tuku atu ki ētahi anō o koutou pea ana e whakatere atu te tīmatanga o te rā. E kore e aukati nei i tēnei mea te kupu kei a koutou e aku pākeke, engari anō e tika ana kia tae mai i runga anō i ngā kōrero kei te tēpu.

KARAKIA TĪMATANGA (DR RUAKERE HOND)

TE MINENGA:

Tāiki e.

DR RUAKERE HOND:

Tāiki rā tātou.

(09:16) JUDGE CARRIE WAINWRIGHT: (MIHI, APPEARANCE)

A, tēnā rā tātou. E tautoko ana ahau i ngā mihi kua mihia kētia. Engari i mua i te huri ki te kōrero mai o Dr Coleman, kia whakamōhio atu ki a koutou ko wai mātou arā ko

wai koutou. Nā reira ka huri au i te tuatahi ki ngā kaimahi o te Taraipiunara kia whakamōhio atu ko wai rātou.

(09:17) REBECCA FISINICH: (MIHI, APPEARANCE)

Tēnā koutou. I'm Rebecca Fisinich. I'm the Deputy Registrar for today.

JUDGE WAINWRIGHT:

She said, "Tēnā koutou. I'm Rebecca Fisinich and I'm the Deputy Registrar here today." Kia kaha o koutou reo.

(09:17) RYAN ANDERSON: (MIHI, APPEARANCE)

Āe, tēnā koutou katoa. Ko Ryan Anderson tōku ingoa. Ko kaituitui pūrongo ahau. A, kia ora mai.

JUDGE WAINWRIGHT:

Kia ora.

(09:17) LUCY REID: (MIHI, APPEARANCE)

Tēnā koutou. I'm Lucy Reid. I'm one of the facilitators with Leana **(inaudible 09:17:47)**.

JUDGE WAINWRIGHT:

So, just to be clear, Rebecca is a Deputy Registrar, so she is a legal person, Ryan is working with Stephanie and her panel on the Mangatū Inquiry, and Lucy is working with me and my panel on the Wairarapa Inquiry.

(09:17) DANNY MERITO: (MIHI, APPEARANCE)

A, kia ora mai tātou. Ko Danny Merito tōku ingoa. A, he kai ōrite tono i te Rōpū Whakamana i te Tiriti o Waitangi. Kia ora.

My name is Danny. Kia ora anō, I should say, my name is Danny Merito, I'm the claims co-ordinator here at the Tribunal.

(09:17) JUDGE WAINWRIGHT: (INTRODUCING TRIBUNAL MEMBERS)

A, tēnā koutou. Those of you from Mangatū will know that on my left are Tim Castle, Ann Parsonson and Judge Stephanie Milroy for the Mangatū panel, and those of you who are from Wairarapa will know that on my right is Dame Margaret Bazley, Dr Ruakere Hond and I'm Judge Carrie Wainwright on the Wairarapa panel. Today we have a special and even I think unique sitting of the Waitangi Tribunal where both of these panels who are working on the same or at least related issues in those inquiries have chosen to sit together to hear more economic evidence for our respective inquiries. We have all heard a lot of economic evidence and over the next few days we are going to hear a lot more.

So, we are going to start with Dr Andrew Coleman who is a witness that the Tribunal commissioned to write a commentary on the evidence that the Tribunal has received from other parties on economic issues. So, we are going to hear from Dr Coleman first, and then the Tribunals will ask questions of him, and then other parties will have the opportunity to ask questions of him, and then we will hear evidence in reply from other economic witnesses of other parties. So, that is going to occupy us over the next few days.

0920

Before we go any further, I am going to ask counsel to give the Tribunal and the whakaminenga their appearances.

(09:20) CRAIG LINKHORN: (MIHI, APPEARANCE)

Tēnā koutou katoa. Tēnā koutou. Ko Craig Linkhorn ahau. Kei konei a māua ko Harry Graham mō te Karauna ki te haerenga o Tūranga-nui-a-Kiwa. Kia ora.

JUDGE WAINWRIGHT:

Tēnā kōrua.

(09:21) ANNE O'DRISCOLL: (MIHI, APPEARANCE)

Tēnā koutou. Ms O'Driscoll and Mr Watson for the Crown in the Wairarapa Inquiries.

JUDGE WAINWRIGHT:

Whānau, we are going to have to raise our voices because I could barely hear you and so I am sure the people behind you could not hear you so could you just be aware of filling the room with sound. Kia ora.

(09:21) KAREN FEINT: (MIHI, APPEARANCE)

Tēnā koutou katoa. Tuatahi, e tautoko ana ngā mihi ki ngā rangatira o Te Aitanga a Māhaki kua haere ki tua te ārai i tēnei tau, arā a Rūtene Irwin. a John Ruru hoki tēnā kōrua moe mai, moe mai, moe mai rā. Tuarua, ka tuku atu i ngā mihi ki a koutou e huihui mai nei i runga i tēnei kaupapa whakahirahira a tēnā koutou. Otirā tēnā koutou ki te Rōpū Whakamana i te Tiriti o Waitangi. Ko Karen Feint tōku ingoa. Ko au te rōia mō Te Aitanga a Māhaki a Mangatū Incorporation. Tēnā tātou katoa.

JUDGE WAINWRIGHT:

Tēnā koe Ms Feint.

(09:22) MATANUKU MAHUIKA: (MIHI, APPEARANCE)

A, tēnā koutou katoa. A, i rongo au i o kōrero Ruakere ahakoa kua mihi i ngā mihi a tēnā pea he aha tēnei te aha, engari me mihi atu ki a koutou otirā ki a rātou arā te huihuinga o tātou te hunga ora ana ka hui anō hoki rātou a nā reira i te tangohia i o tātou mate ka tika. Arā ko John tērā, ko Rūtene tērā ana ki a koe anō hoki te Kaiwhakawā Milroy arā ko tō pāpā tērā nā reira me mihi atu ki a rātou katoa, tukuna rātou kia haere, ana ka hoki mai ki a tātou te hunga ora, tātou e whai haere tonu i ngā hiahia ngā wawata ngā moemoea a rātou mā. A, nā reira e te Taraipiunara otirā tātou e hui tahi nei ko Matanuku Mahuika taku ingoa. A, ki taku taha ko Tara Hauraki. Ko māua ngā rōia mō Wairarapa Moana a tēnā koutou katoa.

JUDGE WAINWRIGHT:

Tēnā koutou.

(09:23) THOMAS BENNION: (MIHI, APPEARANCE)

Tēnā koutou katoa. Ngā mema o te Rōpū Whakamana i te Tiriti o Waitangi, ā, ngā kanohi o te rā, ā, he mihi ki a koutou. Mr Bennion and Ms Whylie for Wai 507 Ngā Ariki Kaipūtahi claimants in the Mangatū Inquiry. Also, remembering those who have passed, and hoping for a speedy resolution of these issues for all parties, tēnā koutou katoa.

JUDGE WAINWRIGHT:

Tēnā kōrua.

(09:24) KELLY DIXON: (APPEARANCE)

Tēnā koutou te Rōpū Whakamana i te Tiriti, kōrua hoki te kaiwhakawā, ngā kaiwhakawā, tēnā kōrua. Ko te mea tuatahi, ka mihi ki a koe te kaikarakia mō mātou i tēnei wā. Ki ngā whaea, ngā mātua o ngā marae maha o Te Tai Rāwhiti me Te Wairarapa, tēnā tātou katoa. Ka mihi hoki ki ngā mate, haere koutou, haere, haere. Ki a tātou ngā maramara o rātou, tēnā tātou.

Counsels' name is Kelly Dixon appearing with Alicia Castle this morning for Ngāi Tūmapuhia-A-Rangi, Wai 429. Kia ora.

JUDGE WAINWRIGHT:

Tēnā kōrua.

(09:25) BRYCE LYALL: (APPEARANCE)

Tēnā koutou. Appearing in the Mangatū inquiry Lyall with Ms Thornton on behalf of Wai 499 and Wai 874, claims for Ngāriki Kaiputahi. Before we start, I've also received a message from Ms Zwaan, who will be appearing in the Wairarapa inquiry, to send apologies for lateness. She'll enter an appearance when she arrives, and I can't assist you any more with that.

JUDGE WAINWRIGHT:

Ms Zwaan.

BRYCE LYALL:

Ms Zwaan, Z-W-A-A-N.

JUDGE WAINWRIGHT:

Kia ora, tēnā kōrua.

(09:25) ADAM TAPSELL: (MIHI, APPEARANCE)

Tēnā rā tātou katoa ko Adam Tapsell tōku ingoa, ā, he māngai au mō te kaikerēme o te nama 892. Ko David Hawea mō Te Whānau-a-Kai, i mua i taku nohonga me mihi ki ngā rōpū kua tae mai nei mai i tērā wāhi, i ērā wāhi o Wairarapa me Turanganui-a-Kiwa ki a koutou mai i Tūranga me mihi aroha ki a koutou mō ō koutou ngaro mō ngā tōtara e rua kua hinga i te wao nui a Tāne, ā, me mihi, me mihi. I runga i tērā, tēnā rā tātou katoa.

JUDGE WAINWRIGHT:

Tēnā koe.

(09:26) MIKE COLSON: (APPEARANCE)

Tēnā koutou. I'm Mike Colson, I'm appearing for Ngāti Kahungunu ki Wairarapa Tāmaki Nui-ā-Rua Settlement Trust.

JUDGE WAINWRIGHT:

Tēnā koe, Mr Colson.

MIKE COLSON:

Thank you, Your Honour.

JUDGE WAINWRIGHT:

Ka pai. Nā reira, ka huri tātou ināianei ki te kōrero mai o Dr Andrew Coleman. Well, because Dr Coleman is a witness for the Tribunal, he doesn't have a lawyer. So, I am going to call you, Dr Coleman; that means can I ask you, please, to go to the podium and present your evidence for us?

DR ANDREW COLEMAN:

(Microphone switched off - 09:27:34 - 09:27:36)

JUDGE WAINWRIGHT:

I think your microphone isn't on, so make sure that it's pointing in the maximum volume direction and —

(09:27) DR ANDREW COLEMAN (ORAL SUBMISSION):

Off we go. Thank you very much for your invitation to address the Tribunal today and my name is Andrew Coleman. I am a senior lecturer at the University of Otago, where I teach economics. I have a PhD from Princeton University from in the early 90s where I specialised in a combination of economic history, of American economic history and price theory. In New Zealand I have been here since 2006 working in a mixture of Government agencies on issues to do with productivity and monetary policy, as well as working at the University of Otago.

This is my first time appearing before the Tribunal and in fact it's my first time appearing before a court as well, not that this is a court, so that's my background. May I have a way of clicking the slides through?

JUDGE WAINWRIGHT:

So, Dr Coleman, are you going to present a summary of your evidence or are you speaking to the whole thing this morning?

DR ANDREW COLEMAN:

Well, I was planning to go through four parts of my paper. My paper is divided into four parts and start with the first one on the way that losses are valued.

JUDGE WAINWRIGHT:

Right.

DR ANDREW COLEMAN:

But I do plan to go through all four parts of —

JUDGE WAINWRIGHT:

Well I'm sure that the technology will be available to you presently.

DR ANDREW COLEMAN:

You may forgive me for using a lot of slides but this is the way I organise my thoughts, to make sure that I'm going to be somewhat coherent.

JUDGE WAINWRIGHT:

Can you all hear him?

VARIOUS SPEAKERS:

No.

0930

DR ANDREW COLEMAN:

Okay. I don't normally have that problem.

JUDGE WAINWRIGHT:

Just do a little bit of bellowing, Dr Coleman.

DR ANDREW COLEMAN:

Okay. Right, so I was approached earlier this year to provide a critique on the economic evidence that's being presented to the Tribunal. Was that loud enough?

JUDGE WAINWRIGHT:

Taihoa.

DR ANDREW COLEMAN:

No, okay.

JUDGE WAINWRIGHT:

Do we have an earpiece? Right, fine. Do you want to wait a moment, Steve? Okay.

DR ANDREW COLEMAN:

I was approached earlier this year in April to see if I would be able to read the briefs that had been presented on these two claims and then provide an economic commentary on aspects of them. I have somewhat limited time to do this and in doing so I read, I guess, several hundred pages of the briefs and chose four issues, which I'd like to talk about.

The first one is the way that people and iwi and dynasties and other groups value monetary and non-monetary events that take place in the past and this is obvious relevance to the Tribunal, as we want to have a way about the way economists think about the valuation of losses. They may be monetary losses or they could be welfare losses caused by a lack of money, which leads to low consumption or death or other issues.

So, most of my presentation or much of my presentation will concern this issue, as this has direct relevance to the way claims about past unlawful deeds should be valued contemporaneously today. I have a minor number of comments on the valuation of specific claims; there's going to be some claims associated with losses occurring in the 1860s for the Māhaki and there will be some comments about the Maraetai Power scheme.

Then I hope to talk about what modern economics understands about the way that a group or society can improve its economic outcomes and one of the determinants of the way that people raise their living standards and do better and the extent to which monetary payments are a useful means of doing that and the extent to which other methods may be more useful. Lastly, I want to comment on some of the estimates of the economic base that may be necessary to bring the iwi involved to a living standard position, which is similar to other New Zealanders. So, I wish to comment on those four issues, largely from an economics perspective and on the basis of contemporary and standard economic practice.

So, the first one is the way people value events occurring in the past and we're really focused here on valuing past losses, the losses occurred that are associated with the Treaty breaches, that have occurred in various times. Some of the ones in the briefs relate back to the 19th century, the 1860s, some of them relate to loss of land in the

1960s and some of them relate to the loss of land in the 1940s; that's the Wairarapa Moana claim associated with the Maraetai Power scheme.

Now, when you come to think about past losses or past gains, there's really two ways that we split the issue. The first is how we value losses or gains which are associated with monetary returns. The very simple way of approaching this is to say if you were given $1 in the future, how would you value that or if you were given $1 in the past, how would you value that? Typically, this is relatively straight forward and we use calculations to work out what the value of $1 would be if it were invested, either in the past or currently going forward. So, that's the first broad way that economists think about losses, if they are peculiarly monetary.

JUDGE MILROY:

Dr Coleman, tēnā koe, I'm Stephanie Milroy. I just want to ask whether you prefer us to leave our questions until later or if we have a question as you go, whether you'd like the questions —

(09:35) DR ANDREW COLEMAN: (ORAL SUBMISSIONS)

I think it would be most useful to have questions as you go.

(09:35) JUDGE MILROY TO DR ANDREW COLEMAN:

Q. All right, okay. I do have a question then, in relation to the monetary payments, you've referred to compounding returns in order to find out how much that would be worth now if it had been paid in the past. And, believe it or not, this is quite a new concept for lawyers because if we are looking at a judgment debt prior to 1 January 2018, we would use simple interest to figure out what the interest should be in terms of a judgment debt for something, for a wrong that had occurred 10, 20, however many years ago it was. So, can you tell me what the compounding represents?

A. The compounding in this case, if you had a judgment that was two years old and the return was 10% that it hadn't been made and then after a year $1 would have converted to a $1.10. The compounding would say in the second year where interest was due on the original sum, it's not just the 10 cents interest on the original $1 but it would be 10% of the $1.10 that was owed after one year and so

it compounds and then the rate would be $1.21 that would be owed. So, that's how most financial contracts are organised. So, a simple interest would, say, you have 10% interest per year and after one year you would get 10 cents and after two years you would get another 10 cents and after three years you'd get another 10 cents. The compounding says after one year you get and then you get that 10 cents plus interest on that 10 cents at a subsequent time. Now, this turns out to be very important because if you compound over long periods of time the difference between a simple return, which is the straight interest on the initial sum paid every year and the return, which is the interest on interest, becomes much, much greater. Is that —

Q. Yes, yes, that's right. I mean that's what I thought would happen and we can see that in terms of the evidence that has been presented to us. What happens when you're compounding, as compared to what might happen if it had been done at simple rates of interest. The question I'm actually asking you is, why compound? You can see that I came from a simple interest background but what does that extra represent in terms of the role that was done?

A. I'm going to get there, if I may.

Q. Yes, yes.

A. And so would you mind if I delay that —

Q. Not at all.

A. — question? And I would like it asked again, if it's not satisfactorily answered in due course.

Q. Sure, okay.

A. Okay.

Q. Yes.

A. I'll just delay.

DR ANDREW COLEMAN: (CONTINUES)

So, to go back, I wish to split between the way economists and financial markets, for that matter, consider monetary payments but also how we consider non-monetary payments and what I will call welfare or utility, which is how we consider the actual living standards of people in the future or the past, not just the money. So, if you were paid some money or not paid some money in the past, it affects the amount that you could consume and that directly affects your living standards. You may be hungrier

than otherwise, you may be less happy because you have less money to spend on your children than otherwise. Okay, and so that's the welfare or utility that we want to value, which is quite different than the actual monetary sum.

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So, you can get paid a monetary sum but you convert that monetary sum into the things that we actually enjoy doing, the welfare that we get from the access to resources, from not working too hard, from being healthy, all of those things which involve the actual living standards that we enjoy. The contention I wish to make here is that economists say people value the welfare that they have quite differently than the way financial markets value money payments. So, that when we go through and say, what was the loss involved with an action or what is the gain involved with an action, we want to make a distinction between the value of the money or what would have happened if that money had been paid some time ago? What would it be worth if it had been invested and then it had compounded through time and grown versus how do we value the losses of welfare that are involved with the lack of a payment in the past or the lack of a payment in the future?

So, that is the key distinction that economists always try and make, the way that you value a payment and the way that you value someone's life or the welfare they're getting, in part, often times, because they're receiving a payment which they can spend on things that they want to buy. It doesn't have to be monetary, so a monetary payment enables you to obtain welfare. But one of the cases which is discussed in Dr Meade's brief is the value of wrongful imprisonment. This would be a non-monetary event, someone is imprisoned; they have a loss of liberty. The Government currently says that if that has happened to you, you are entitled to $150,000 compensation. So, we have the actual loss of liberty in this case, which is the welfare loss, and then we have a potential monetary compensation, which can buy you things to compensate you for the actual welfare loss that you had. So, we want to really keep thinking about a distinction between a non-monetary aspect of a payment or a welfare change and the monetary payment.

Now, when it comes to the valuation issue, the valuation issue at the front of the Tribunal, part of it is, how do we value today the losses to people that occurred in the past? These losses could be wrongful imprisonment, these losses could be the loss of treasured assets, including land. These losses could be the lack of consumption possibilities because someone was not paid an appropriate amount or they were imprisoned and could not earn an income. In all of these cases we want to say, what is the current value of these past losses, these actual welfare decreases are caused by unlawful acts? Okay. Now, this distinction is crucial to the way that we value, we need to understand the valuation of the past events.

Now, when it comes to valuing past losses, if they are monetary it's very much going to depend on whether the loss occurred to an individual in the past and we're trying to value that individual's loss, whether it occurred to what is a mouthful, an indefinitely-lived entity. So, I'll explain what I mean by that in a moment but I will explain now. An indefinitely-lived entity is a collective group of people who are all related in one way and often times it's related by blood; it's family. So, I belong to an indefinitely-lived entity called the Coleman family. I have ancestors, I have descendants, two of them. My descendants, my daughters, may in the future have additional descendants and, collectively, my grandparents, my parents, my great grandparents, my daughters, any potentially future descendants, form an indefinitely-lived entity. It is a family, okay.

Now, I'm the current representative or one of the current representatives of this family. It's indefinitely lived because my children might not have children, in which case this family will come to an end and we don't know when that will happen and it may not ever happen. Now, when you're talking about indefinitely-lived entities you can see that there's often times an iwi or a hapū or a tribe is an example of an indefinitely-lived entity whose value, when they are valuing events in the past, it's going to matter whether the event occurred to a member of their family or iwi or whether it occurred to someone completely unrelated, okay. So, when we're saying that we want to value, we want to value how a monetary payment that is going to an indefinitely-lived entity may value from a monetary payment that is going to an individual.

So, again, to take my personal example, I might be concerned that a great grandparent was cheated by a Government and I would say treat that as a loss to the family. It's

not a loss to them, it's a loss to the whole family because that money would have not gone really to the individual but would have gone to the collective and would have been part of the whole family's resources back then and some of those resources would have been brought forward into the current day, okay. So, we want to distinguish those situations from the way that individuals may value a monetary payment.

Lastly, we have another type of entity, a legal entity is a corporation. I think most people understand what a company is but it is a legal entity, it's also indefinitely lived. But a corporation really isn't a person; it has owners, it has claimants, people that it may owe money to, it has employees quite often. But it's not a person and when we think about corporations we think about them quite differently than people, partly because they don't have feelings; it's a legal entity. The way they value events, they may not even value events, corporations may only value money. Okay, so we want to think about corporations, potentially, differently and you can see why we're going down here, is because of the Wairarapa Moana Corporation was the owner of the land underneath the Maraetai Power Station. Because that was a corporation we may need to treat it differently than if that land had been owned by an individual or if that land had been owned by an indefinitely-lived collective, okay.

Now, it turns out when we come to monetary payments and investment returns there isn't that much difference in the way that we treat these payments across these three classes of entity, okay. It's all relatively similar and it's all relatively straightforward, at least to people who deal with this on a daily basis. But when you cross to the other side of the page and we start to value welfare, it becomes much, much more complicated. We want to value how much did people suffer in the past or how much did someone suffer in the past? It doesn't have to be suffering, it could be value of an unexpected blessing. It very much matters whether the people doing the valuation of the past are an individual, so it matters to me if I'm considering, how much do I value an unrelated person was wrongfully imprisoned in the past 150 years ago? My answer is, well, I might not value that very much. It's not someone I care about and it happened a long time ago.

Okay, so if we have an individual valuing another individual, the value might be very different than if we had, say, a collective entity and I was asked, well, how much do you value the suffering of someone in your family, in your indefinitely-lived entity? I might value that completely and utterly differently. I might value it in the future completely and utterly differently. So, there's a different way of approaching the value of losses and gains in the past and in the future, depending on whether you, making the valuation, are an individual, whether you're an indefinitely-lived entity or whether you're a corporation.

In fact it's not clear again whether corporations even value the suffering of other people or the benefits of other people. Corporations are these, they're not people but they are entities which sort of live for making profits and losses.

JUDGE MILROY TO DR ANDREW COLEMAN: (CONTINUES)

Q. Dr Coleman, may I ask a question of you there?

A. Sure.

Q. I'll just describe for you for a moment what a Māori incorporation, which is what we are dealing with here is.

A. Right.

Q. It's not the same as a corporation, a company. Well, firstly, under law it holds its land or assets in trust for the various owners, which is a different relationship legally to what a company might have. Secondly, certainly for the Mangatū incorporation it has had a very long life and it was created in order so that people, the iwi, could act collectively in a legal way under the new legal regime that was put in place when colonisation happened. So, the relationships are actually close, the succession is through family descendants, rather than selling shares and so on. So, in that sort of situation, would you put a Māori incorporation into the category of an indefinitely-lived entity, rather than the kind of ordinary company that we see on the stock market because of that iwi whānau dynamic?

A. Personally, I would put it more closely to an indefinitely-lived entity. As you say, most corporations can be bought and sold, although that doesn't have to be true but this is clearly an entity or a legal construct which is based around the family, which is passed on from generation to generation through membership of the

family and which typically is not bought or sold. So, I would be much more in the indefinitely-lived entity.

DR ANDREW COLEMAN: (CONTINUES)

Now, one of the difficulties or one of the features of economists is that we often times don't value past losses and events, okay. Certainly, non-monetary or welfare losses, past losses and events, prove to be very difficult to value. So, how we typically value things that happened in the past is by analogy with things that happen in the future. There's a very simple reason for this, is that we can't change the past, okay. So, we can say, well, when you're asked, well how much do you value something that occurred in the past, there's no action that you can take that can change the past, okay? What happened in the past has happened, it won't be changed.

So, it's very hard to get direct evidence about how we value things that happened in the past. There's no way of going back and changing it. There's no way of doing anything. Whereas in the future we do have direct evidence on the way that we value the future because if we don't like what we think is going to happen in the future, we can make changes now to do that and we can value how much money we're prepared to spend now to make sure that the future isn't as we might like it to be.

Now, obviously there's many examples of this but one that's contemporary is a lot of people are worried about climate change and we can estimate their value of climate change by their preparedness to take action now to change the climate, so that it's not going to be so bad in the future for our descendants, okay. We may be very concerned about the welfare of our children, we can take action now by reducing our own consumption now so that our children have more money in the future.

So, when it comes to valuing the future there's a lot of direct evidence that we have from the way we behave now to take actions that change the future. Unfortunately, when we go back to the past and say, well, how bad was it back then? What is the value we place on the sufferings that occurred in the past from the loss of consumption, from wrongful imprisonment, from other events? We can make up a number but there's no way that we can actually back that with a proper estimate.

Now, currently some economists are doing neurological studies. If you talk about the past and the past sufferings people's brains change, they get unhappy and we can sort of measure how unhappy they are thinking about the past events, so that's one way of valuing the past but that's just in its infancy. Typically, how we think about valuing the past is a what-if question, what happens if I had been given an extra $100,000 50 years ago? What happens if I had increased my consumption 50 years ago? There's a what-if question and we try and make an estimate of that value based on how we value the future, okay.

So, let's first think about valuing future losses and events which are monetary, okay. So, let's just say, how would I value receiving $100,000 in ten years' time or how would I value $1 million in 50 years' time? Okay. How would I value that my children might have to pay much higher taxes in 40 years' time? The way we do that is we say, this is a monetary payment and we discount the value of future payments. We typically use interest rates to do that or investment returns in wider classes of investments. So, to value $100,000 in one year's time we would say, well, if the interest rate was 5% we could invest $950,000 now and add 5% interest and we get $1 million in one years' time. So, we use a formula which says we work backwards and say a future payment is worth less than a current payment because we could replicate it with a current payment which was invested with compound interest until it came due at the time that the payment was due.

Okay, so we typically use a backward discounting formula which calculates the value of this future payment. So, $1 million in the future, in ten years' future at 10% might only be worth about $40,000 now because $40,000 invested at 10% for ten years would compound to become the $1 million, okay, so we have a formula for doing that. Then the question comes as well, do we do it at the bank interest rate or do we do it at an investment that may be related how businesses make returns, the rate at which real estate goes up? There's different ways of doing this. We often use bank returns or returns from Government interest rates because these are risk free. If you make the investment now you will get the money back, whereas if you make an investment in a share or in a business, well the business may not do very well and so you've put the money in and you expected 10% but if the business doesn't do very well you only get 2% or maybe minus 50% and you lose half your money, okay.

So, we can work out whether this is on a relatively risk free rate, an interest rate or a typically higher rate, which is related to the value of businesses. Now, sometimes we can use the rate at which incomes grow. This is actually a special case and we say, well, look, if your wages are going up at 3% a year, then perhaps we can value the value of future money using the 3% a year at which your wages are going up. Now, this isn't actually a proper investment, but it turns out we think about this in this way because there's a way that we can get a return of 3% a year, as a Government or as a people, without making any investments at all. That is by making transfers within a family or a transfer within a Government or a country, something like a retirement scheme.

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So, if we make a transfer in a family we might say, I am going to give my parents some money and in return my children will give me some money when I'm old, okay. If I give 10% of my wages to my parents and my children give 10% of their wages to me and their wages have been going up at 3% a year, you can see that I'm going to get a bigger gift from my children than I gave to my parents because, well, they earn a lot more than I earned, okay. So, that is another way that society can arrange, even without any investment, to get a return growing through time and that's why you would use a GDP growth rate.

Now, typically economists and I'm going to use some jargon here, we're calling the economy dynamically efficient and you don't ever need to know what that means. But an economy is dynamically efficient if interest rates are higher than the return to wages or in fact the return to the growth rate of the economy and that's special. Most economies have that property, that if you invest your money you get a better return than the rate at which your children's wages go up and that means we can use the growth rate of incomes, the growth rate of wages as a lower bound on what interest rates may be, okay. So, if we're pretty sure that incomes grow at 3% a year we can be pretty sure that the returns to investment are going to be at least 3%. So, we can say, well, look, it doesn't really matter that we don't know what future returns are being, we can at least use the growth in incomes as a lower estimate of that.

So, it seems in some circumstances that you could use an investment return, an interest rate or a GDP return and in fact in the briefs all three are used as a measure of the returns to, making an investment, okay. So, there's options here and some of the options matter. It really matters if the interest rate is 2% or the interest rate is 5%. If it's 2% you double your money in 35 years; that's a long time. That means after 100 years your money would have doubled three times and so it would be worth eight times as much. If it's 5% you double your money in 14 years, okay. That means after 100 years your money would have doubled seven times and that's 128 times as much; not eight times as much, 128 times as much, okay. So, small differences in this choice of the interest rate, whether it's 2% or 5%, make enormous differences in the value we attribute to a payment that was or was not made a very long time ago.

This is very relevant to some of the issues surrounding the Māhaki claim, going back 150 years in some of the briefs. Because if you invest at 2% for 150 years you get a much bigger number than if you invest for 5% at 150 years; 2% for 150 years multiplies by about 30, 5% for 150 years multiplies by a number like 1,000, okay. So, if we want to say, well, what is the value of a payment in 1865? It really, really matters what choice we make. But it also matters whether we should be making any of these choices at all and saying the value of a loss is the value of the monetary payment not paid in 1865 or in 1947 or in 1961 or is the value of that loss the actual welfare loss that occurred to the people at the time because they didn't get paid and they didn't have enough food?

Okay, so economists really want to make this distinction, what are we valuing? Are we valuing the loss to the contemporary people in terms of not getting paid, not having enough food, not having clothes for the children and so forth or are we trying to value, they should have been given £1,000 in 1865? If we invested that £1,000 now it would be £30,000 if it was 2% or £1.5 million or dollars if it was 5%. So, you can see that it really matters both whether we're valuing the loss occurring to the person or whether we're valuing the money that could have been paid and, if so, whether we use a low interest rate or a high interest rate. These things are actually crucial to understanding some of the numbers which are being bandied around in these briefs of the value of past losses.

Typically, where I'm sort of heading to is that most often the past losses are valued in terms of money and then it's money compounded at a relatively high interest rate. It's not always high, some of it's quite conservative. It's much closer to the 2% than the 5%. But in either case we have to say, are we valuing a monetary loss that if it had been paid out and then reinvested for 50 years or 70 years of 150 years, what would it be worth now or are we valuing the loss that occurs to someone because they didn't have enough food, because they didn't get the money then? Okay, so that's going to be really the crucial question. My sense is that if you believe that we're valuing monetary losses that the £1,000 that wasn't paid in 1865 or the £1 million or £2 million or £8 million that was not paid for the Maraetai Power Station in 1947 or the money that was not paid as proper compensation for the taking of land in 1961, if we think that we need to say, that money wasn't paid then; the value of that should be brought forward at compound interest, then we are going to have very large numbers of compensation.

Somewhat there's room for debate on whether it's 2% or 5%; in all cases they're going to be very large sums of compensation payable to people, someone now. But if we're valuing the losses in terms of the people back then did not get the money they should have to raise their welfare through consumption, through buying extra food or because they were wrongfully imprisoned, and this was a loss of liberty, then we are going to come to a completely different valuation metric. Well, which one should we use? That's actually for the Tribunal to decide, it's not for me to decide and I have, I hope, assiduously avoided taking a position on either way. What I want to say is that there are these two completely different options. In one case it's appropriate to value at a compound rate of return and that compound rate of return is if we think the money should have been paid and it should be compounded and provided to a contemporary representative of either an individual or indefinitely-lived entity.

But it should be money paid to them because money was not paid in the past and the value of that money not paid in the past is the money compounded at an investment return or the Tribunal should be thinking, actually we value the losses that should be compensated for now in terms of the suffering that occurred in the past and that depends on how we value that suffering. Or there's going to be a third option, we value the money in terms of we're not actually interested that much in money, we're

interested in the land that was taken that we believe should be returned to current members of the indefinitely-lived entity, the iwi, okay. So, there's options here, depending on what we think the event really represented and whether we want to do it according to money or welfare.

Okay, so that's the big question. I don't think this has been adequately addressed in some of the briefs. Many of the briefs assume that the valuation should be done at a historic interest rate or an investment return; the 2% compounding through time and, consequently, it becomes a very big number now, okay.

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That has not always been appropriately defended, particularly if it comes around to the return of land or if it comes around to the suffering involved by people in the past who did not get the money and the resources that they perhaps should have, so that's the big issue. Now the difficulty - and that's what I hope I've written on or tried to clarify in my paper - is that we don't actually know very well how to value losses, non-monetary losses, suffering losses in the past. We have to do it with respect to analogy of how we value the future. We have to do it with how we value the future because we have no direct way of understanding how we value the past, as we can't do anything about the past, so that's where I want to go next, okay.

(10:10) DR ANN PARSONSON TO DR ANDREW COLEMAN:

Q. Excuse me, Dr Coleman. I'm Ann Parsonson from the Mangatū Tribunal and you've just said we don't know how we value non-monetary suffering the past. I have been wondering and I wondered if you'd comment on this, on the kinds of reparations that have been made to people who have suffered in the past, such as holocaust victims and one of the articles that I think you referenced pointed this out, Japanese interned in the United States during World War II, for instance, people who have been subject to nuclear testing. Agreement has been reached with Governments to make payments to victims of those events and of others. Is that of any help to you in terms of the kinds of values that could be placed on those kinds of terrible sufferings or would you see that simply as political

agreements that have been reached without necessarily going through the kinds of estimates and computations that you, as an economist, would go through?

A. I would describe those compensations and so, for instance, during World War II, as you notice, a large number of Japanese and Americans were interned. Their businesses were confiscated and there were striking camps inside the United States and the United States subsequently said, "This was an unlawful action, this was a very bad treatment of these people" and they gave a reparation equal to approximately $20,000 per person. Now, I would say that the monetary recompense that occurred in that case was actually unrelated to the suffering that occurred. I think this is far more obvious in the case of the reparations that the German Government gave to the Israeli Government for the holocaust and the loss of 6 million lives. I don't think you can value the loss of 6 million lives in any adequate way in terms of suffering. So, I would say that that was a political settlement designed to show heartfelt apology and designed to try and make a reconciliation between the Government and the affected parties and also designed to say never again. So, it's much more closely related to a political settlement, which rather than valuing, trying to put a monetary value on the suffering, said, "What we have done was wrong and evil. The evil may in fact be so large that there is no recompense monetarily payable, but we would like to make an apology backed by money". That seems to be a lot of the way that these settlements have been done overseas and it's certainly the way that settlements for the slavery in the United States are being debated. There is very little attempt to work out the – there have been some attempts but there's very little attempt to work out the value of the suffering undertaken or undergone by African Americans in the slave process but there is a lot of talk about compensation acknowledging the evil that was done. Does that help answer?

Q. Yes. So, are you aware in those cases that you've discussed, whether economists have been involved in going through these kinds of values that you've been discussing or —

A. There's a very small literature on the slavery case, which economists have tried to work out, not the value of suffering but the value of lost output associated with slavery. In other words, they would say we had someone, a slave working on a plantation in Louisiana, how much did they produce? How much should they have been paid if they had not been a slave but had been a wage earner? Then

they've tried to work out the value of that. So, there is a small literature which has tried to do that. It's a controversial literature but it's controversial both amongst people who support reparations and people who don't support reparations. I'm not aware of much literature which has tried to value past sufferings because, again, there's no direct way of doing that.

Q. So, that is what is considered lost output, something you can put figures on or that the economist you're talking about can put figures on —

A. Right, so they can work out a monetary value with that.

Q. Yes, yes.

A. But then they can't say, what is the welfare value of that?

Q. Yes.

A. How much better would have blacks in America been better off if they had actually been paid wages? Right. They can work out the value of the wages but not the secondary question, how much better off would they have been?

Q. And there hasn't been attempt to value intangibles, such as the value on the breakdown of family relationships as a result of slavery, which is another element in the suffering that's been highlighted.

A. Not at all. I mean obviously Harriet Stowe's book describes that in astonishing detail but, no, there hasn't been an attempt to value the misery involved with the full separation of families, the removal of children or anything like that.

Q. Thank you.

DR ANDREW COLEMAN: (CONTINUES)

Okay, so the major contention I have on this whole section and I apologise if I'm taking too long here perhaps, is that Drs Meade and Hyslop, have used a monetary investment approach to these losses. Now, it may in some occasions be appropriate. I am reasonably convinced that in some other occasions it is not appropriate, and it really matters to the valuation of past losses. Now, to anticipate or to recap my paper I've essentially said in some cases it is not appropriate to use these metrics, having read the responses I'm not sure they agree with me. It doesn't mean I've said in all cases it's not appropriate because in some cases the losses that are calculated using different methods do seem completely appropriate to me and are large, okay.

So, I'm not trying to say none of the calculations they use are appropriate in my view and, as I say, they don't agree with me on some of these issues or maybe a lot of these issues. But I am trying to say some of the calculations don't appear to me appropriate and that it's really crucial to, in a case-by-case way, go through and say, well, if we're looking at wrongful imprisonment, how do we do that and is it the same as if we are looking at the loss of value because land was taken or a very small sum was paid for this land? There are different ways of valuing each case and I'm not convinced that they've always used the most appropriate way of that.

Now, I keep going on about wrongful imprisonment and it's only because it's such a good example for me and it's not because I'm really obsessed by wrongful imprisonment. But it is a clear case of a non-monetary loss, someone is imprisoned and there is a welfare loss. Now, currently, we, the Government, the New Zealand Government, says that these losses are worthy of compensation of about $150,000.

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If we go back and say, well, what is the compensation that -- how should we think of the wrongful imprisonment back in 1865 for a year? The question is, we could think about it; it's $150,000, that's what that person lost then, they are human back then just the same way that we're human now and the losses will have been very similar.

Or we could say, well, $150,000 invested at 2% for 150 years, that increases the value by 30 times and so we should say the losses occurring there are worth $5 million; that's approximately 30 times $150,000, simply because they occurred a long time ago. In fact, if that had occurred 300 years ago they would have been worth 900 times $150,000; that the longer we go back the more intensive that loss should have been, okay. So, that's one of the implications and, to me, I'm going to argue that that seems a little stretched and strange and that there are other ways of doing it. But what I just want to say now, it really, really matters what type of investment you use and whether you're using historic investment for investment purposes or whether you're using suffering. Now, one of the strange —

JUDGE MILROY:

Sorry, Dr Coleman, can I just interrupt you there for a moment?

ANDREW COLEMAN:

Yes.

JUDGE MILROY:

That $150,000 that the Government uses now, are you aware whether there's any science to that figure or is it just a figure that they've come upon?

ANDREW COLEMAN:

I don't know the answer to that.

JUDGE MILROY:

No.

ANDREW COLEMAN:

It was decided in 1998, I think, and that was $100,000 back then and I've adjusted it for inflation.

JUDGE MILROY:

All right.

ANDREW COLEMAN:

So, I don't know.

JUDGE MILROY:

Thank you.

ANDREW COLEMAN:

There may well have been science, I just don't know.

(10:21) JUDGE WAINWRIGHT TO DR ANDREW COLEMAN:

Q. Because picking up on Judge Milroy's point, if the $150,000 is an arbitrary amount and is being calculated along the same kinds of lines, say, as Treaty

settlements, which is what is payable by, you know, a particular Government in a particular point in time, rather than any science, then there would be other ways of calculating how much a loss of imprisonment was worth at any time and, therefore, what should happen to that sum over time, wouldn't there?

A. Yes, and in fact Dr Meade looks at that. So, the $100,000 from 1998 or $150,000 in inflation adjusted terms now, you can think of that as between two and three years' wages on the average wage and I think that's had some relevance to the calculation of that loss. So, you could then go and say back, well, the loss for someone in 1865 is two or three years' wages. Now, wages were much lower back then than they are now; people weren't so productive and so the accompanying loss would have been, well, relative to wages, similar but different in terms of money.

Q. Because one of the things that happens in the law is that there's a distinction between ordinary compensation, which concentrates on things like what you've talked about, the inability to earn over a certain period, which is a kind of an economic loss calculation. But then there's a thing called aggravated damages where more is paid if the conduct that affected the person is particularly egregious. So, if they're entitled to feel hurt or damaged or afflicted in ways that are not ordinary, then another amount goes on top of that. So, in relation to imprisonment in the past, for instance, if the circumstances of the imprisonment were illegal or particularly humiliating or particularly damaging of the dignity of the people involved because of the flagrant way that it was carried out, what would an economist do with those circumstances?

A. I don't know what economists would do. So, for instance, we could look at Te Kooti, he was on the Pākehā side of the attack on the pā in 1865 but was imprisoned as well; that seems to be particularly egregious and shipped out to the Chatham Islands. So, in those cases economists would normally recommend, look, the suffering has been greater, the compensation should be greater; that would be my general principle on that.

Q. So, that's another kind of value, isn't it? It's not a welfare value in terms of, could I clothe my children or how much would I have earned? It's – what happened after that damage was there to the quality of my life in psychological, emotional, spiritual terms, which couldn't be met simply by paying me the amount I would have earned.

A. Right. I mean my understanding of the $100,000 or $150,000 for wrongful imprisonment at the moment is it's just not monetary compensation. It is for that type of thing that I have lived with the indignity of being imprisoned, of people thinking that I was a criminal, when in fact I was not. So, those sorts of values are already incorporated. I mean, as I say, I do not know whether there is a scientific basis for this. I can't imagine that there wasn't, although I can imagine a lot of things. It seems to me that when the court comes to working out such an important issue they would have taken serious advice on this.

Q. Was it the courts that did that? I don't think so.

A. Or Parliament, when Parliament —

Q. You're attributing to Parliament an internal rationality then.

A. Yes.

Q. Okay, good, all right.

A. That's brave of me, that's brave of me.

JUDGE WAINWRIGHT:

Well, that might be a convenient time for us to break and take the morning adjournment. We will reconvene at 10.45.

DR ANDREW COLEMAN:

Thank you.

HEARING ADJOURNS: 10:27 AM

HEARING RESUMES: 10:53 AM

(10:53) DR ANDREW COLEMAN: (ORAL SUBMISSION CONTINUES)

Just wait for the screen, if I may. Okay. Just waiting a little bit, it was there and it disappeared. So, to recap and where I'm going with the first bit of the next hour is to further explore how we value past and future and to do it on a case-by-case basis and see the very many different ways that it's possible to do this. So, first, I'm going to briefly now return back to monetary payments and investment returns; that will take five minutes. Then we will go to the main course, which is the way that non-monetary losses, welfare and utility, are valued. So, let's consider again how we might value the value of the payment that was

made or not made some time in the future or sometime in the past. I've got a formula up there, I'm told I should never use formulas but sometimes there's no alternative.

The investment approach says if you have an investment in the past, what you need to do is for every dollar you compound it at the rate of return. So, if the rate of return is R you compound it and there's N years, 150 or 70 or 50, you compound it and get an annual average return. If you're going into the future and say $1 to be paid in 50 years, how much would that be worth? Well then, it's one divided, not multiplied but one divided by the interest rate compounded for 50 years. This gives us a curve that looks like that, so on the bottom I've got the number of years from the present and so it goes between 50 years in the past and 50 years in the future and it tells you the investment value of a dollar at different times.

I've used an annual inflation-adjusted return of 2.3%; it's a number chosen because it multiplies to 30 over a period of 150 years and so it's very similar to some of the lower numbers that have been used in the brief. It shows that at that 2% in 50 years' time, $1 in 50 years' time is worth about 40 cents now or if you invested 40 cents at 2% for 50 years you would have $1 back. Okay, so that's at the bottom right-hand end, whereas if we went backwards 50 years we get $3.20, that if we took that $1 50 years' ago and invested it for 50 years, well we'd get $3.20, plus inflation adjustments now. So, you have this steep exponential curve, that's just the shape of the curve; it's a bent curve. The further you go back the bigger the numbers get.

So, I've now extended it to 150 years, either way, and 150 years, as I've said before, the investment returns, $1 invested 150 years ago would now be worth $30. So, it's a big number, whereas the value of $1 in 150 years' time is about 3 cents; you can't see it, it just looks like zero on the graph. So, that's just the power of compounding interest. Now, I've done that over 150 years. One of the issues about compounding historic returns is that if you go back large periods of time the numbers become stupid. I'm not saying 30 is stupid but if we went back 1,000 years to the time that New Zealand was first settled or the time that William the Conqueror sailed across from Brittany to Britain and plundered his way around Britain, £1 1,000 years ago invested at 5%, okay, so I'm raising the numbers but that's within the normal scope of investment returns, £1 invested for 5% for 1,000 years is

worth £1,000 million trillion, okay. That's 500 million times the size of the whole British economy, 500 million. It's a stupid number. It's a number that makes no sense.

Now, it's possible, we have had interest rates or returns of at least 5% for that whole period. But the reason why the number £1 invested for 1,000 years becomes impossibly big, £1,000 million trillion, is because it's compounding the rate of return. You can have a return every single year, which is 5%, so long as you consume it. Think of an apple tree that lasts for 1,000 years, so that's probably an olive tree. Think of an olive tree then, an olive tree every year has a return, okay, it grows olives, you make olive oil and that return may well be 5% of the value of the tree. Okay, so every single year you could have a return of 5% but you can't compound it over time because then we would have 1,000 million trillion olive trees.

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What you have to do is eat the olive oil or eat the apples. So, as long as you consume the return you can have a high rate of return but you can't continually compound it, okay. Now, over 150 years, which is our longest domain for this court, yes, you could compound for 30 years. But the issue is, is that compounding historic returns, ultimately for longer and longer distances, it requires bigger and bigger numbers and at some point those numbers become stupid really and it's not even very long, it's only 1,000 years. They make no sense.

So, that's not a problem for our scope but it does say that the longer you go back, the bigger the numbers get. Okay, now that's all I want to say. No, I don't, I want to answer a question.

(11:00) JUDGE MILROY TO DR ANDREW COLEMAN:

Q. Thank you. Dr Coleman, if we're looking at a period of time, what period of time are we looking at that the figures start just being stupid, as you put it? I suppose that depends partly on the rate of return that you're looking at.

A. It very much depends on the rate of return. In terms of working out the counterfactual, if you had invested $1 or the value of a musket or if we go up to New York back 400 years, there was a few trinkets, $24 of trinkets famously, if you had invested that over a 300-year period that still is a number that makes

sense in the sense that it is smaller than the current value of the assets of an economy. It's much greater than 400 years that you start to lose it. But the principle is still there. It is possible to have an interest return every single year, which is high, but only if collectively the returns are spent and not reinvested, I mean for very long periods. But definitely within the scope of New Zealand settlement by white people but not by Māori, it makes sense to calculate, to do these calculations and get numbers that are sensible. As I say, it's not sensible for Māori settlement because that's 1,000 years ago and if we had invested over a 1,000-year period the size of the economy would be, well not 500 million but another 20, that's 10 million billion times too big; so it just doesn't make sense. It's sort of like having a flock of sheep. I come from Otago, so we think in terms of sheep a lot. You can have it compounding for a while but at some point you just have too many sheep and it's not possible to feed them all and that level of, say, 300 or 400 years, okay.

Q. Well, my next question is, we can see the sense of your argument over that length of time that that's what is going to happen and in fact there used to be a law against it to stop it from happening but if you're the person with the olive tree, just to take your analogy, and you get your olives in one year and you think, "Well, I'm going to eat some of it but I'm going to buy the next patch of land".

A. Right.

Q. Then you can have more olive trees and so on. Are you saying that even so that means that you're continuing to grow bigger than the economy eventually is going to be?

A. At some point there is a limit, yes, so that you can only invest a certain fraction before you get bigger than the economy. This actually is an argument associated with Picketty's recent work that you may be familiar with because he sold 1 million copies of his book about five years ago, where he says that, "If people save a lot they get an increasing fraction of the wealth until all the wealth is held by a very small fraction of the people." That's actually the same criteria for dynamic efficiency that I mentioned before, which is how long the interest rate can be greater than the growth rate of the economy. Yes, if the interest rate is greater than the growth rate of the economy and people save all of their apples or olives or reinvest, then at some point there is a limit where it can't happen any longer because you're investing more than the produce of the economy. Essentially

what happens is that the return goes down because you've got so many olive trees that the value of another one is nothing, right. But we're not in that sphere, it's just to say that that is one of these issues. The more generic issue is is that the longer you go back, the more valuable is the value of a dollar invested for the length of time. It's increasingly valuable the longer ago the investment would have occurred, okay. So, there is a historic saying that if you're valuing according to historic investment returns, the longer you go back the more valuable it would have been, okay. I want to say that that's one of the issues because that's not necessarily how we value welfare losses. So, that's actually where I want to go now, is —

(11:06) TIM CASTLE TO DR ANDREW COLEMAN:

Q. As you do or because you do want to go into welfare next, subject to any other question from Your Honour, before you take us into valuing future welfare, which is where you're going to go now, I just want to try and get some context to what you're saying, please. Now, among other things, we are embarked upon a remedies inquiry, an inquiry whereby we are tasked with trying to assess the nature and extent of redress that should be made available to either remove or compensate for prejudice from which Māori have suffered by reason of or as a result of or because of breaches by the Crown of principles of the Treaty, including its provisions. So, that's the context in which we are undertaking this inquiry. It's with that in mind that I wanted to ask you about, before you engage in valuing future welfare, your use of the language welfare loss, which is what you talked about quite a bit earlier today. It was in that context, as I understood it, that you gave us the example of loss of liberty. I wanted to ask you this, in the context of providing redress and remedies, if the welfare loss suffered includes loss of liberty but includes a myriad of other welfare disadvantages like loss of land, like consequential upon loss of land and loss of liberty, complete dislocation of your society, the structure of your society, loss of autonomy, loss of dignity, loss of the ability to access education, in other words, a comprehensive welfare loss stemming at least from errors and omissions of the Crown, contrary to what they had guaranteed to Māori at the relevant time under the Treaty. One of the mechanisms available to us is to address that welfare loss or the welfare losses of the kind I'm talking about by return of the land lost, some or all of it and to

some or all of those who lost it. That's the first option available to us; remember to remove or compensate for the prejudice. But in addition to returning the land in our discretion, we also can contemplate a monetary payment, the compensation payment. We could contemplate that, for instance, if we reached the view that just the return of the land did not adequately compensate for or remove the prejudice.

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Now, assuming we therefore return the land, how much or what's our approach to be to recognise that the return of the land simplicita is not sufficient and that the other mechanism available to us is money for which there are formulae under the legislation, how do we then move from either the welfare loss and think about the monetary additional payment or think about the monetary payment for a greater purpose, which is to recognise the enormity of the welfare loss and the loss of economic opportunity which accompanies it?

A. Right. So, I will certainly be addressing all of those issues and I think your point is very well made, that the way we should treat the loss of land is quite distinct from the way that we should treat the injuries of all sorts that have occurred through time because of the loss of land. Where I'm going with this is I want to say that the contemporary members or the current members of the iwi, when considering not just the loss of land, if that were to be returned, but the damage and insult done to their ancestors need to have a way of valuing the damage and insult done to their ancestors, which is what I'm sort of calling the valuation by current people of the welfare losses occurring in the past. So, that's the context which I wish to be using this in. It is saying, yes, there has been a loss of land and that may need one remedy. Yes, there is a loss to current members of the iwi, potentially in terms of loss of dignity or in terms of loss of income and I'm going to talk about the loss of income in due course. But, yes, there's also perhaps recompense to current members of the iwi for the losses suffered by previous members of the iwi. That's actually what I want to say is, how do we value them? Do we value them by some monetary metric or do we value them by some other metric? It's my contention that the separation is that we can value the losses by a non-monetary metric and when we do that it leads to quite different valuations, than simply taking a sum and compounding it forward at an

interest rate. So, that's where my contention is going to be, so I'm going to unpick that over the next period of time.

Q. Yes, yes.

A. Does that sort of help, give you some of the context?

Q. Very helpful, it's very helpful to understand the way in which you're going to unpick that. I just want to pick up before you do, one of your descriptions, you talked just a few seconds ago about losses continuously suffered and currently being suffered by current members of —

A. Right.

Q. — the hapū, I'm going to say —

A. Okay.

Q. — where the hapū of an earlier time in terms of its membership suffered a loss. This takes me back to your description of the indefinitely-lived entity because the current members of the hapū are just part of the collective. They're part of the same hapū, just exactly part of the same hapū which suffered the loss initially. So, does it really matter that this is an attempt to recognise a compensation requirement for current members of the hapū? Because they're all part of, over time, have always been part of, over time, the same indefinitely-lived entity.

A. Again, I will get to this but to give you a hint on how I'm going and if we concentrate on this wrongful imprisonment, one way about this would be to say there was wrongful imprisonment in the past, which, in contemporary terms, is valued at $150,000. Should we value the wrongful imprisonment in the past to ancestors at $150,000 to be paid as compensation to current members of the iwi? Should we value it at a smaller number or at a much larger number, okay? I'm going to argue that one of the approaches in the economics literature is that it is perfectly acceptable in these circumstances to value the losses occurring in the past at full value, at full contemporary value. It's also circumstances that you can imagine where these losses are valued at much lower values because they occurred in the past and our memory, for some people, may not treat them as so important as the current people. The brief produced by Dr Meade says that we should value those losses at a much higher number, at the historic compounding interest rate number, about 30 times as much. I'm going to say is that that's not necessary, you could -- Dr Meade does say, yes, those losses to the past, because they occurred in the past, are much worse than the losses occurring if

someone was wrongfully imprisoned right now, as I will get to. I will say that that is not a necessary way to value this. You could simply value them at the same rate or at a lower rate and that there's reasons to be unsure on which valuation. My personal opinion doesn't really matter but I'm going to say that I find it difficult to say that the losses that occurred, such as wrongful imprisonment occurred in the past, should be valued much more highly than ones in the present, simply because they occurred a long time ago and that the longer ago they occurred the more valuable that they should be valued. So, that if that had occurred 300 years ago, rather than 150 years ago, we would value them at 900 times as bad, not 30 times. So, I'm going to go there. I hope that satisfies you. But what I want to say is that it's perfectly reasonable within indefinitely-lived entity to be using a valuation metric which says, yes, these losses in the past were dreadful and the hapū or iwi should be compensated for them at some multiple at what we would value the current losses. What I'm still going to argue is that I don't think the multiple should be 30 but if you can wait for that. Does that help? Because it's sort of saying, yes, because you're the members of the same iwi that we are going to value these losses much more highly than, say, wrongful imprisonment of an aboriginal person in Australia. We don't really care so much about them in New Zealand, right, or maybe you do. But we typically do not provide compensation for unrelated people happening ago but it seems perfectly legitimate to provide compensation for members of your iwi or hapū. The question is, at what multiple of current injustice should we be valuing the past injustice?

Q. I am much helped by what you've said, thank you. I'll just leave it to one side momentarily whether I'm ultimately going to be satisfied but I am assisted, thank you.

A. Okay, thank you.

DR ANDREW COLEMAN: (CONTINUES)

Okay. Now, the question I want, which is very much your question, is how do we value now the current members, current people? How do we value losses occurring in the past, not monetary losses but welfare losses occurring? Lack of consumption, loss of utility because of an injury, wrongful imprisonment, how do we value that now when the event occurred to people in the past or in the future? There's three criteria that go

into the way the economists think about this, is, well, when did the event occur? That's what we call intertemporal discounting. Again, that's a strange phrase but it just means the compensation matters, how much does it matter on when it occurred; 100 years ago, 50 years ago, 50 years in the present now? The second one is, well, the loss of consumption certainly depends on how well off the person is.

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If the person is starving, taking away $100, that causes a much bigger loss than if the person is on $200,000 a year and you take away $100, right. We call that marginal utility and I'm not going to talk much about that. But just to observe that since people were poorer in the past than currently, at least in financial terms, when they expect that the losses in the past are greater than contemporary losses because they had so much less, okay.

The third one is, how much do we care about the person? If the event occurred to someone in the past or occurs to someone in the future it matters, or the way we value it matters if it's -- I'm talking about myself, okay. I'm a bit self-interested, I may be very concerned about losses occurring to me in the future much more than losses occurring to someone I've never met, right. In fact we sort of know this because people don't give enormous amounts to charity to solve the problems of ill health around the world, right, we sort of get blasé about this and say, "Yes, I know you're suffering in Africa or India but, well, I don't actually care enough to do an enormous amount about it". Okay. So, it matters whether we're talking about our individual, our self, an unrelated person, a family member. I may care more about a family member that I do about myself; that's quite possible, a lot of people do that. But if it's a family member, whether it's a distant family member. I may care more about my children than I do about myself but I'm not sure I care more about my great, great grandfather than I do about myself or my children. It really matters if you're a member of the same iwi or hapū or the collective, the family, right. So, we have to think, who is being affected by this welfare loss because that's going to matter for the valuation?

So, I want to go through each of these three bits in turn and I'm going to start with intertemporal discounting, which is how much does it matter when the events occur?

Again, I have to start with the future, even though we're talking about the past because we don't really understand, we don't have a lot of evidence about how people value events in the past. When we look at the future we know a lot more and the argument is that people, on average, care less about events in the future than they care about events right now. So, we discount the future. We say the future's not so important. Look, it doesn't really matter if we cook the planet in 100 years' time because those people are there in 100 years' time and we're really concerned about ourselves now, okay.

When we do this one way of valuing is to use what we call exponential discounting, which just says that the further away in the future an event is the less we value it. In fact, it has exactly the same formula as the way we value monetary losses. We said $1 million in 50 years' time is we divide $1 million by the interest rate raised to the power of 50 but when we use exponential discounting, we say the same thing. If we think that the future's worth 2% a year less every year we go forward, then, well, in 50 years' time we do 2% to the power of 50 and we say that the future's not particularly valuable, okay.

Now, this has exactly the same formula as exponential discounting using interest rates, except we're not using interest rates. This is a personal valuation of how important the future is to people, okay. We're going to use a thing called time preference, okay. Now, that graph looks exactly the same as the graph that I showed before about -- it's the front half of that graph. It's got exactly the same form and I happen to have used exactly the same discount rate, temporal discount rate as my 2% interest rate. But these numbers are completely different. The way we value the future may have very, very little to do with investment returns. It's a personal thing about how much we care about people or ourselves in the future, okay. So, we use an intertemporal discount rate, which has nothing inherently to do with interest rates.

Now, the problem with this method, exponential discounting at intertemporal preferences, is that it means that things in the distant future are valued at very low values. Now that sounds reasonable, but we have a form of it, we'd say something that happens 150 years in the future, that's to someone I can't possibly ever know, is worth 30 times as little as something that happens to us now, okay. But it's not just

that, it then says, well, look, if we go 300 years in the future the way we value someone 300 years in the future is 1/900th. So, here we have two people who live in the future that we can never possibly know, and we've got a very regimented way of valuing them. Lots of economists, actually the best economists in the world, have always said, "This seems very, very strange. We don't believe that -- yes, we believe that we value things in the future less than now, but we don't believe that we value things in the distant future so much less than things in the near future".

Economists have done experiments on people and dogs and rats and they find that actually there's a different way that we value this. Again, you don't need to know this, well you actually might need to know at least that when we do experiments on dogs and people and rats, that they all seem to have something we call hyperbolic preferences, which says, yes, we discount the future; we don't care about the future as much as the current but we don't do it in an exponential way. In fact, if you look at that graph, exponential discounting is the red line. The black line is a hyperbolic discounting, which says, yes, we don't care about the future, but we don't do it at exponentially decreasing rates, okay. So, there's different ways of thinking and looking about this, okay. So, that's the first thing —

(11:26) JUDGE WAINWRIGHT TO DR ANDREW COLEMAN:

Q. Dr Coleman, before you go on I'd just like to ask you about your use of this value in the future as an analogy for value in the past. I want to ask you a question to test whether my instinct about this is right or wrong. It seems to me that one of the reasons, in fact possibly the main reason, why we discount future value is that to provide for maximum value in the future we have to forego things now.

A. Right.

Q. So, you can't provide for an incredibly affluent superannuated time in your life without giving up a lot right now.

A. That's exactly correct.

Q. But that's not analogous with the past because in order for me to value an event in the past, I don't have to give up anything now because it's past, in exactly the same way that you've explained. So, I am just wondering whether that discounting that we do in the future because of what we would have to give up

now to provide for the future is really a helpful comparison with the past, which doesn't involve that dynamic.

A. I'm going to argue it is a helpful way. The difficulty is that we have no way of independently understanding how much people value the past because we can't change the past. You can't say, "Would you be prepared to give up $1,000 to change the past?" Well, you can say that but you can't actually get an evidence based on behaviour that actually changes the past. Whereas if you can say, "Would you give up $1,000 to ameliorate climate change or to help your future grandchildren?" You can actually see people respond to that. So, by looking at the future we have independent evidence in some sense on how much people value the future, based on their actual behaviour, given the possibility of making these investments. So, that's really the only way that we can get a sense of how big our time preferences are. So, that's actually why I'm going down there, is that we can say this is how much I value the past, but we haven't got any experimental evidence on that.

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So, in order to try and understand how much people value the past, we're going to look at how much people value the future and see whether they've got this similar sort of time preference, so that's where I'm going. Because, again, if you think of the question it is someone was wrongfully imprisoned or had too little consumption 150 years ago, do we value that less than we'd value the same event happening now, the same as the same event happening now or 30 times as much as the same event happening now? That's what we're trying to unravel, do we need to overcompensate because it occurred in the past or do we need to same or much less? The analogy I'm using is that we can think about how people respond to people in the future or people very distant from them in terms of my example of an African person, by saying, "How much do we care for others at different places and times to try and work out how much we may care for people going back?" Does that help? You might just have to bear with me for a second.

Q. Yes, I think I'm going to bear with you.

A. Okay.

DR ANDREW COLEMAN:

Now, some people have what I'll call a zero, discount rate, and a zero-discount rate means we value the future and we value the past independently of when it happens. So, a wrongful imprisonment 50-years in the future is valued exactly the same as one now. The loss of liberty, no, the loss of consumption in the future is valued just the same as it is now, okay. So, I draw that on my graph in saying, how much is $1 worth if someone has a loss in the future? Well it's worth $1. The ordinary discounting that economists believe people mainly have is that, well, like $1 in the future is only worth 30 cents, right, we just don't care enough about people in the future. It's not $1, it's -- - sorry, I shouldn't have said $1, it's a loss of welfare in the future is only worth 30% of the same loss of welfare now.

With zero discounting and this is going to be a really important case for the land, we say it's the same value, okay. So, that's a second way that people can value the future. The same or typically less. We hardly ever believe that people value it more. The question is, well, why don't we? The answer is because we observe how much they save and borrow to affect the future, okay. So, people, as you rightly pointed out, can save now so that they have more consumption later or that their children can have more consumption later, okay. We know the investment return from saving now. If we put $1,000 aside and invest it and hold it for 20 years, yes, we are going to have $2,500 or whatever that sum is in the future. We know that we could get a big sum for our kids in the future if we wanted.

The question is, are we doing that or to what extent are we doing that? That gives us an indication of time preference. Because if we find that we don't do that, we could put $1,000 aside so our kids get $2,500 and if we find that we don't do that, it probably means that we've got a time preference of less than 40%, right, because 40% times 2½ is less than one. We just don't value it. Yes, we know they could have lot more stuff than us but we don't value it, okay. When we look at that we get this famous formula first associated with an English genius called Ramsey, which is that the rate of interest should equal the rate of time preference plus -- okay, the elasticity of marginal consumption with respect to consumption, and you didn't hear me say that, times the consumption growth rate.

Which basically means it's an adjustment factor for how much more consumption it will have in the future. So, if I've got $1,000 now, do I want my kids to have $2,500 in 20 years' time? Well, it depends whether I think they're richer than me or poorer than me. If they're going to be richer than me, well, I'm going to be less inclined to do it and that speaks so I reduce the value because they're richer than me. If they're poorer than me I might be more inclined to do that. So, we get this relationship, so in this relationship it might say, look, average returns to investment are 5%, if we think that consumption is growing at 2%, which means that the value of future consumption is going down because we're going to have too much stuff the future, then that suggests our time preference must be 3%; 5 equals 3 plus 2. So, we have a way of estimating our time preferences from what interest rates have been.

So, that's the link, we don't value the future by interest rates. We do it by time preferences, but we can estimate what our time preferences are by the way we behave in response to interest rates and investment returns. So, that's quite a complicated idea but the separation is when we value the future or the past it's not by what the investment returns are, it's about our own internal values of how we value things happening to ourselves or to other people. It's got nothing to do with interest rates, except we can use interest rates to measure the way we value the future. That's why I've gone on to the value of the future, it's because that gives us our best estimate of how much people value the future. The answer is they value it less than they value the current, right. Feelings in the distant future aren't that as valuable as things at the moment, okay.

Now, that's the future. Now, the good thing is that most economists have only really ever thought about the future because, again, we have empirical evidence; we can see how people say it. We are wanting and in special circumstances to say, how should we treat losses, welfare losses in the past? Now, I'm going to say there's no indirect evidence, right. We can't change the past and so we can't see -- what would we do to change the past to alleviate those sufferings? There's no evidence about that. There's very little research on the topic. Very few economists think about this because, again, there's no way of changing the past. That means that there's no real agreed methodology and so I imagine that I'm going to have some debate with the

writers of the briefs about whether what I'm doing is correct or not. The answer is, well, there's not a lot of evidence on this, I'm arguing from analogy.

So, the key question, however is, how now do people value events, losses of welfare, suffering, that occurred in the past. And I am going to argue that there are three obvious ways that we can think about this relative to an analogy in the future.

The first one of these is a zero, discount rate. So, that is the earlier diagram I had, the red line; that is what the value of future discounting is. The black line in the future is zero discounting, which says we value future welfare of our children and of other people the same as our own and then it's just extending it back and says we value events in the past happening to people the same way as if they happened to us now. So, that's zero discounting. It's perfectly coherent and it says that's one way of doing a value.

A second way is to have a positive exponential discount rate and that basically is to say we are going to take our curve from the way we value the front and say, because it occurs in the future it's worth less, and say that means because it occurs in the past it's worth more. What's more, it's worth exponentially more and that means that if a suffering occurred in the past we should value it more than one that's happening now and if the suffering occurred in the distant past, to people that we can hardly remember, we should value that the most highly of all. So, that's what exponential discounting says, it says, going back, because it occurred in the past, it's much, much worse than it occurring now and much, much worse than it occurring in the future. That's just the way we value suffering. It's got nothing to do with interest rates; it's just saying that's how we value suffering. Again, the numbers that we are going back are independent of interest rates; we're not valuing the suffering because interest rates were 5 per cent or because they could have been 8 per cent. It doesn't matter whether they're 8 per cent or 5 per cent; that doesn't change the way we value the suffering of the past. It's a psychological thing that we're talking about here; how we make values; how we're affected.

The third way, and this is sort of novel, is to use something I'll call time-elapsed discount rates. That's to say when we value the future the value in the future depends on how far away it is, the further away it is the less we value it.

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I am going to say that is probably how we value the past. Events in the past are valued less than events now and the further distance into the past you go the less the value. So, that is a different way, so that is a third way, and that looks like that; it's completely symmetric and it says it depends on how far away the suffering occurred, if it was a long time ago that's one value, if it's even longer, well actually we might not care about that so much.

I am not saying everybody has these values; I'm saying this is the range of potential ways of valuing the past that we have. I don't know which one each individual has and it may be that a single person has different ways of valuing events in the past depending on the circumstances. But what I do want to say is that there is a range of possibilities; that it's quite feasible that people value the past much less than they value the present, it's quite feasible that they value it at exactly the same rate and, if exponential discounting goes backwards, it's feasible that we value it at increasing rates simply because it occurred in the past and that the further back you go the more you value it.

You can probably hear from my tone that I'm not a big fan of the idea that things that occurred in the past should be valued lots more than things that occur in the present. My preferences don't matter here, it is the preferences of the Tribunal that matter, but what I'm saying is I find this hard partly because it says that things that occurred in the very distant past, suffering, is much, much more highly valued than suffering occurring to myself, my children, or even near-past ancestors.

JUDGE MILROY:

I would like to ask you a question. You have said that there is no direct evidence in terms of how we value the past because people cannot change the past, but in fact the exercise that we are involved in here is to redress the past and what the claimants

are looking to do is be put back into the position - perhaps not the entire position that they would have been back 150 years ago or 60 years ago or whenever the particular breach occurred - but to a similar position. In fact of course we can know that they value that because they are all here going through this process and that involves, not only their money, but their time and effort and so on over a long period of time, let me tell you, because the Tūranganui-a-Kiwa inquiry started in 2000 or thereabouts and here we still are. So, there is some evidence in that. But the other thing is that, if you are trying to put people back into a similar position or a reasonable position to be the same as back then, it is harder, the longer it is the harder it is to put people back into the position and that might be why the amounts go up. Do you have any response to that?

DR ANDREW COLEMAN:

I do. In the distant past there is nothing you can do. These people are no longer alive, right, my grandparents aren't alive and my parents aren't alive, there is nothing I can do to change their lives. So, if they or anyone else has been suffering because of a wrongful deed of the Government or any other thing, my parents never suffered from wrongful deeds of the New Zealand Government or the British Government, but they did from the German Government, and these events occurred. I want to say how much do I value them? Do I value them much, much more than if the event occurred now, the same or less? I don't know the answer to that. But that to me is the question. What I am going to suggest is that the answer that's been given in our briefs is they're using the exponential positive very high rates of valuation to value the past.

In any of these, people can justifiably be concerned about the events of the past and want to come to 20 years worth of meetings to get redress for these events of the past. The question is whether the redress should be a much bigger positive multiple of the suffering of the past or a smaller one or just the same. That is at the heart of the way that we should be thinking about the amount of redress for suffering in the past. Let's take my $150,000 wrongful compensation, should we be saying, because it occurred 150 years ago we value it at $150,000 or because it occurred 150 years ago and there's nothing we can do for this person, this person has been dead a long time, we value it at $5 million or because it occurred such a long time ago we value it at a 30th of that, $5,000. That's the question. How much redress do we pay now to members

of the iwi or other people based on how long ago, the value that we now impute to the suffering occurring at that time ago, is it a big positive multiple, 30 times as much, is it the same or is it a much smaller number. That's the question that I'm not going to answer because I don't have any authority or ability to do that.

But I want to say that it's working out in the scope and that's really what the members of the iwi should be saying is how much do I value those wrongful events in the past? Are they really a lot worse - because they occurred in the past - than my valuation of them now or are they sort of the same as my valuation now? That wrongful imprisonment 160 years ago; that loss of consumption 60 years ago, I value that the same way I would value it now. Or is it much less? That's the question. Am I sort of making myself clear? I don't want to answer that question; I want to say that there is a range and I'm sort of suggesting too that the briefs have gone on to the high end of that range and said it's a lot more, we value the damage in the past a lot more than damage in the current.

Now, if that's true, then the redress should be much higher, if that's true. I don't have a view on that, but I just want to show that there is this huge range of alternatives and it doesn't have to be higher. I do have a view on which I think is the most likely and I've already made that clear, I think it's a number less than or equal to one. I'm quite happy with the one. But that's just my preferences and I have been hopefully very clear that my preference is irrelevant.

JUDGE MILROY:

All right, I guess I can see what you are saying in terms of individuals but again we are talking about an indefinitely lived collective entity but we will leave it there and let you continue.

DR ANDREW COLEMAN:

Right, no, I mean the indefinitely lived entity, the iwi, I mean it is central to this, because I think if this case was about unrelated people then we would say actually we value it a lot less. I mean that tends to be the way that people value things happening to unrelated people. It's the very point that it is an indefinitely lived entity that the question is do we value suffering in the past a lot more than we would value the same suffering

that occurs now. I think that's the heart of the question that you need to be thinking about. Again, I have no views on what people should be thinking. That's what they're thinking and how they value that but that's the self-inspection that they need to be saying is how much do I value this loss. I beg your pardon, sir. Okay, you're fine, okay.

Right, that's all I really want to say on intertemporal discounting. I want to emphasise that there's money losses, that there's welfare losses, the two are distinctly different in economics, one's valued at interest rates, one's valued at time discounting, there's many ways to do that and, yes, there is a relationship between the two numbers but they are by no means the same.

Now, I don't actually want to say much about how well off is the person other than what I've said already, which is that losses occurring to people in the past, because they were poorer, should be valued more highly. That's a sort of a one-off adjustment factor and that's really all I want to say.

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I do want to concentrate on the third one, which is how much do we care about the person. There I'm making the distinction I've already introduced, which is, is the person that we're dealing with the same person? Was it me that was ripped off by the Government or wrongfully imprisoned? Is it a family member? Is it a stranger? If it's a stranger most of us aren't as concerned as if it's ourselves or if it's a family member. If it's a related person, is it a very distant relative, a third cousin twice removed, is it someone in the iwi but not the hapū; is it my daughter or son? We typically think that distantly-related people are valued less. That's my valuation of the suffering of someone else. The more distant they are the less my valuation is.

Then there's this fourth character degree, the dynasty, iwi, the collective, the indefinitely lived entity, and that's at the heart of this issue, which is sort of why I was so interested in it when it was first raised to me that I might contribute here. It's because economists don't think very much about these indefinitely lived entities, or haven't until quite recently, but in the last 20 years there's been quite a lot of thinking

about how you value the past and the future when you're an indefinitely lived entity and stewardship principles apply. By stewardship, and I'll explain this a bit further, it means when you're really concerned about preserving an asset or the land for your future generations. We want to think about valuation in those cases because it's likely to be very, very different than valuation in other cases, in suffering. So, this is where I'm going to come to is that the valuation of land for iwi or other dynastic organisations may be very different and valued according to stewardship principles. So, that's the group I want to concentrate on.

Now, just for historic reasons, history of economic thought, this idea came to prominence about 1996 when Graciela Chichilnisky, who's an economist and mathematician at Columbia University, came up with something called a social welfare function - we don't need to know this - but she came up with the question, how do we value the future in a way that avoids the dictatorship of the future by the present and which avoids the dictatorship of the present by the future? I want to unpick this a little bit because it comes to the heart of the circumstances when it's really appropriate to say the value we put on events is zero discounting, it's everybody is the same independently of when an event occurs.

So, what she means by the dictatorship of the future by the present is that, if we use discounting and say we really don't care very much about the future, well then we don't care very much about the future and so the actions we take now are done more or less irrespective of the distant future, we cook the planet, we make species extinct, because we don't care about the enjoyment of future people. She says we don't want a way of valuing the future, which puts no weight or tiny, tiny weight on the events of the future. So, that's what she means, we don't want a discounting value approach, which involves the present dictating the future and ignoring the welfare of the future.

What about the dictatorship of the present by the future? If we take zero discounting, everybody is the same in the future, what we could do is we could save all of our money and invest it to raise the welfare of the future. If we take that as what we should do, because we are only concerned about the welfare of the future, we should sacrifice ourselves for future people. She says actually that doesn't sound right either; we don't want to do that.

So, she says the way that people should think about future welfare is a combination of zero discounting, everybody's the same, and a combination of positive discounting that the future's actually a bit less than the present, and it's by getting a balance between those two that we have an acceptable social welfare metric, what she says is an acceptable way of valuing the future. So, that's Chichilnisky's work.

The basic idea here is that there are certainly circumstances where valuing future or past welfare using zero discounting, everybody the same, is completely acceptable. It may be the way that people actually do it. Us economists may have got it all wrong with exponential discounting. We may have got it all wrong with hyperbolic discounting. Actually, there's lots of circumstances where people value everyone the same. So, that's what a stewardship principle is.

So, modern environmental economists have now started to focus much more on stewardship and of course this is very closely related to the way that many indigenous people around the world, be they American Indians or Australian Aborigines or New Zealand Māori, actually treat land. It's stewardship, okay, it means that we are holding the land temporarily for future generations and it is our duty to pass it on in the same way that we got it. So, that's sort of what I mean by stewardship. Stewardship is highly consistent with the zero, discounting world. It says everybody is the same, we leave the land, we leave these assets, for other people to enjoy. So, that's going forward again.

How does stewardship apply to the past when we're valuing the past? This is a question which is basically hardly ever asked. So, you're sort of right on the frontier of this in many ways. How, if you have stewardship principles, should we be valuing losses and actions in the past?

So, I'm going to take my wrongful - it is not mine - Dr Meade's wrongful imprisonment example again and say valuing of an imprisonment currently is $150,000, how would we value it in the past or the future? I've got four columns here and I sort of know that you probably can't read those numbers very well, but the first one is what I've called date-dependent discounting. That's traditional discounting, which says, if it occurs in

the future it's valued much less; if it occurs in the past it is valued much more. Suffering occurring in the past is valued much more.

The second one is what I call time-elapsed discounting and that says we value the past and the present symmetrically. The further away it is from the current, the less we value it. So, if it's happening 50 years in the past we value it the same way as if it happened 50 years in the future. It's the time away from the present that matters. So, that was that curve that I gave some time ago, which looked like that one, the black one going down, it says it's symmetric, it depends on how long between now and the future.

The third column you can just see is a straight value of $150,000 and that just says we value the wrongs the same no matter when they occurred. Now Chichilnisky came up with a mathematical formula and she said, for valuing the future, you should average the first and the third columns; that it should be partly everybody is the same and partly the future is worth less. So, you can see that in my bottom half of the fourth column, it says, look, if we just did discounting, imprisonment 150 years in the future we value at $5,000. We don't know much about those people; we don't value them very much. Zero discounting says we value that at $150,000; they're people, they've got blood in them and it flows red and their suffering is just as real as mine. The last column says actually we'll take an average of those two. It is a long way in the future, they are people, we're going to take an average and the average in this case is $77,000. So, Chichilnisky argues that that's the way people should do it.

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What I have done is gone back and, instead of averaging the first and the third columns, I've actually averaged the first and the second columns and said, look, if it's time-elapsed discounting and we don't value things in the past the same as the present because they're a long way away and really it's a long time ago that that happened, then, yes, the average is going to be less in the past than it is in the current. It's again completely symmetric with the way that we're valuing the future. Yes, we put some high value on the future, much higher than with discounting because these are people, we say that for the past. But we also say it was a long time ago and, yes, they did

suffer but my value of that suffering is actually a bit less. Again, I'm just saying that this is a range of ways that you can go through and value this.

In the briefing, it appears to me that most of the valuation - and certainly it is for the wrongful imprisonment - is done on the first column and it's saying imprisonment wrongfully occurring 150 years ago to our ancestors are worth 30 times as much as now and we need redress for that. It's not the $150,000 if we were wrongfully imprisoned today; it's 150 times 30 because it occurred so long ago in the past. I'm sort of saying, look, yes, I can understand that some people might say that, but I don't think that's universal and there are these alternative ways, which put a smaller value on that, and that's really all I have to say on this.

I'm taking far too long, aren't I, and overemphasising? People say I say everything four times when I only should say it once.

So, for the fifth time, just to rub it in, the column 4 is what I call a Chichilnisky style hybrid, it's avoiding three things, it's avoiding what she wants is the dictatorship of the future by the present. We don't want to wreck the planet to stuff up our children's future, so it's avoiding that; that's great. It avoids the dictatorship of the present by the future. It's saying, look, we don't have to sacrifice ourselves to make our descendants much, much better off. But it's also avoiding the dictatorship of the past over the present, which says actually what we do now is going to be determined at exponentially high rates by the need to make exponentially large redresses for past events. We want to avoid that. If the event had occurred 1,000 years ago we don't need to pay $1,000 million trillion simply because it occurred 1,000 years ago, we're avoiding that valuation. We are down-weighting it by, yes, it was dreadful that it occurred then and we want some recompense, but we don't want full recompense.

So, this column is a way of trying to say, yes, the past does not fully determine what we do now, it has some bearing on it, we need some recompense, this is the way we do it. Now I'm not saying that you have to believe this; I'm saying that this is one of the options. In some sense you need to search yourself and say how much should my iwi be compensated for the past sins? Is it exponentially big because of the events of the past? Is it the same value? Is it less value? That's a question for yourselves

to be thinking about. It's not a question for me. I'm just trying to say that there is this range of answers.

Now this is not just wrongful imprisonment; this is also the way that we value the losses in the past due to consumption losses. It's completely symmetric. When land is bought at ridiculously low prices in 1947 or 1960 or 1865, then that leads to a loss of consumption for people. How do we value that loss of consumption? Is it a big, multiple times because it occurred in the past? Is it the same, maybe a bit more because people were a lot poorer then, or is it much less because it occurred in the past? So, every one of these questions, which says there was suffering in the past, there was lack of consumption, all of these should be thought in the same way. That, in some sense, is a very different way than saying what is the value of a dollar if it was invested at 2 per cent interest or 5 per cent interest 150 years ago? They are completely different questions.

I am nearly done you'll be pleased to know. My contention is that we need to go through these separate cases quite separately and think each one out in its own circumstances. I said I'm nearly done; I'm not quite sure when we're finishing, but I'm quite happy to go on; I've got long legs that can —

JUDGE MILROY:

We have the break for lunch at 12.30 pm; it's 12.05 pm. If you finish —

DR ANDREW COLEMAN:

No, not at all. I would like to talk about land loss. Oh man, you now pity my students, don't you? Except they have a bell, which shuts me up after 50 minutes.

A key question I think for the Tribunal is land loss and stewardship. If you have long-lived entities that place a very high value on land and the stewardship of land, how do we value losses in the past where land was taken? That seems to me one of the central questions. If that is the question, I am going to argue, in these circumstances what economists normally do - which is all this discounting gibberish - just doesn't apply. It's a different question and the standard economics approach of intertemporal discounting applied to individuals is just a different thing; it doesn't apply. Past

unlawful loss of land in this context of an indefinitely lived entity, an iwi, has deprived current owners and their descendants of an asset, which they could reasonably have expected to have received, because that was the ethic of this group. We are stewards of the land; we use it and pass it on, we don't sell it and get rid of it and spend the money on whatever, we pass it on because that's who we are.

So, when you have that ethic, the taking of land or the compulsory purchase of land at stupidly low prices - I've got to stop using that word "stupid" - at low prices is going to be treated very, very differently to a group who has a stewardship ethic. This is something that obviously is an issue for people in this room, it's an issue for American Indians, in particular under the Mabo settlement in Australia it's an issue for Australian Aborigines. So, it's not an isolated case and the answer seems to be, just as I said, if a group is wrongfully deprived of land in circumstances where they clearly have a stewardship approach to land then the value on that land is full return of the land.

So, I would say, in these circumstances, it does not seem unreasonable at all to consider reparations based on the current value of the land. In addition to that, you may want to make additional reparations —

JUDGE MILROY:

Sorry, can you just say that again? Following on from your point that the ethic of intergenerational stewardship means that the usual economic principles would not necessarily apply, what is the —

DR ANDREW COLEMAN:

The discounting principles.

JUDGE MILROY:

The discounting principles, so then you said full value for land, so what does that mean?

DR ANDREW COLEMAN:

If a group has had its land taken and the group is one of these indefinitely lived entities, which specialises, or which has an attitude towards land, which is towards

stewardship, the only way to compensate is for that land to be returned. So, no, I wish to withdraw that comment. The only way to calculate the value of compensation - that's quite different - the value placed on that compensation should be the value of the land. That's what's been deprived of them. This is an asset, which has meaning to the group.

JUDGE MILROY:

But what about the value of the absence of the land over the intervening period?

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DR ANDREW COLEMAN:

So, we've got a two-part solution here, or a two-part issue, the current members of the iwi have been deprived of the use of the land that they could reasonably have expected to have had because of an illegal event in the past. So, the value of that deprivation to the current people, just to themselves, is the value of the land. Now I am not saying that, as a political solution, they should have their land bought out. That's a political solution. I'm saying the value that they may put on that deprivation is the current value of the land.

JUDGE MILROY:

When you say "may" what do you mean?

DR ANDREW COLEMAN:

I'm beating around the bush. The value to current people of land that has been taken from them in the past is just their valuation of it would be the value of the land because they could reasonably have expected to have that bequeathed to them.

JUDGE MILROY:

You mean the current value of the land?

DR ANDREW COLEMAN:

Yes.

JUDGE MILROY:

Do you mean the value of the land or the land itself?

DR ANDREW COLEMAN:

I would probably say the land itself, but that's not always practical. But if you have a treasure, and the land in this case is being treated as a treasure, and if it has been taken illegally and there is a reasonable expectation that treasure would have been bequeathed to you in perpetuity, then it seems that the value of the loss is the value of not having that treasure, or not having the land.

JUDGE MILROY:

So, if you give the land back today, is that, you say, the value of the loss in the past to the current people?

DR ANDREW COLEMAN:

No, that's the value of not having the land to the current people. There may be additional redress because of the losses occurring to the past. Members of this iwi in the past were also deprived of the land and they had welfare losses; they didn't have the ability - it may have been a spiritual loss - but they didn't necessarily have the ability to consume what they could have if they had been earning on this land and that would be an additional loss but that may well be valued at a different way than the land. This is where you would use discounting value, which says the discounting of the welfare losses of previous members of this iwi at earlier times, they occurred, and how do we value them? Is it at full rates, 100 per cent, is it at lower rates because it occurred in the past, is it at much higher rates because it occurred in the past?

JUDGE MILROY:

Just looking at the land now, there is obviously the land itself, so if the land in question were returned that is one element. If the compensation for the welfare losses - that is the clothes and educational experience and health consumption and everything that was foregone - because you did not have the financial proceeds of the land that is another element.

DR ANDREW COLEMAN:

No, I am not saying that because you didn't have the land, right, so the land may have helped you earn financial proceeds.

JUDGE MILROY:

That is what I mean.

DR ANDREW COLEMAN:

Yes, sure.

JUDGE MILROY:

But then there is another dimension with this particular context, which is the element of land that relates to identity and spiritual wholeness and the mana of the group and its ability to do what it needs to do to be who it is, if that also is foregone as a result of the wrongs of the past, where does that come into the economic perspective?

DR ANDREW COLEMAN:

Again, I am trying to make a distinction - and maybe I am making the distinction incorrectly - but I am trying to make a distinction between the current members of the iwi or the iwi who are arrive currently - for want of a better word - that is what I mean by current members of the iwi or hapū, they have a loss of land. They may have a loss of welfare, which could well be restored fully by restoring the land, and in addition there is this loss of welfare to earlier members of the iwi taking place at earlier times, which the current members of the iwi might want to be compensated for that loss as well. But I am saying that those losses, which could include the loss of consumption and the loss of mana and the loss of spiritual welfare, need to be valued by current members of the iwi and that valuation could occur using one of my many paths. It could be less than, because it occurred in the past; the same, because people are people and they all bleed inside; or more, which is that we actually value losses occurring in the past much more - I mean welfare losses - than ones in the present simply because they occurred in the past.

JUDGE MILROY:

So, are you saying then that, say for instance that the current members of the iwi were to say, "The way we conceive this loss is that we lost our whenua, our land, but in the

process we also lost our tribal structure and a good deal of our mana as tangata whenua, the people of the land, and our sense of who we are in relation to the land". And the people of that iwi, from the time when the land was lost, have continuously experienced that loss, so it is not a loss that just belongs to the people in the past, so the people in the present will be saying, "The loss is ours as well because it belongs to us and it belongs to all the people who went before us".

DR ANDREW COLEMAN:

Yes, that is what I am saying, but I am saying I do not know how you value that.

JUDGE MILROY:

So, can I continue? So, my question is, I think you said that how you would value that would be up to the perception of the current members of the iwi?

DR ANDREW COLEMAN:

If we are interested in their valuation, yes. That is the question, how do current members of the iwi value the loss to their ancestors and earlier members of the iwi from being deprived of the land and from having large consumption losses, yes. That seems to be a reasonable thing. But that is a question for current members of the iwi.

JUDGE MILROY:

Because what we just said is it is not just them valuing the loss to the earlier members of the iwi, it is them valuing the loss to the entity over time of what the loss of the land represents for them.

DR ANDREW COLEMAN:

Yes, that would be part of what I would consider to be the welfare losses. But, again, I don't know how, you know, I am trying to separate, and I think I probably made myself clear, that there's one question around the land associated with stewardship and there's a second question associated with the valuing of welfare losses because earlier members of the iwi did not have the land either or did not have the resources either or were wrongfully imprisoned. They are two separate things and they may need quite different valuations, there is one for land, which seems, in these circumstances of stewardship, so I am conditioning everything, what I call stewardship,

in these circumstances the loss - it seems reasonable to say - is at the full value of the land; that's what's been taken. And then there's these other welfare losses.

Now, the bit I want to, when I asked to retract a comment, it's not that I believe that people should be compensated by this amount, because that is a political question, and because a compensation of that amount might be a very large amount, which will then cause a lot of welfare losses for other people and that's the big debate in the States about reparations is that if you make compensation to one group then you are essentially having one group of people being compensated for ills done to their ancestors by taking resources from the descendants of another group of people who may have had very little to do with the original decisions. So, that becomes at the heart a political issue.

JUDGE MILROY:
Those political issues are beyond our purview.

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DR ANDREW COLEMAN:
But I just want to make a distinction between what is the appropriate compensation and what is the valuation. The valuation is something, which I will say in this case is iwi based, how much they actually have lost, both because the land is no longer available and because of the welfare losses to the past, valued at some metric, which, as I said, there's a range that you can use there and I don't know which one currently we use, although I have my suspicions about the one I would use. Fortunately that's irrelevant. And that leads to a sum, but I'm not saying anything about whether that sum should be compensated. That is a political issue, which is even more outside my scope than the rest of it. But have I sort of made this reasonably clear?

JUDGE MILROY:
Yes, you have ten minutes; can you just wrap up the rest of your presentation in that time? Have you done it? No?

DR ANDREW COLEMAN:

On discounting, yes, on the rest of it, no. I'm sorry.

JUDGE MILROY:

All right, so how much —

DR ANDREW COLEMAN:

But the rest, discounting I can stop in ten minutes, the rest of it I probably need a half hour.

JUDGE MILROY:

All right, do you want to start on that then?

DR ANDREW COLEMAN:

Yes, since you would like me to start on that.

JUDGE MILROY:

Finish up what you need to say about discounting and then press on.

DR ANDREW COLEMAN:

In my notes I made two other comments about discounting, one involves corporations, it's that if you have a legal entity, which has been deprived of money, a corporation, different rules may apply again. There are different rules for different circumstances. If you are dealing with a corporation that was not paid or had money stolen, corporations don't have feelings, or at least legal, and you may not want to value anything in terms of welfare metrics, it may be far more appropriate to just say this is a money investment process, you didn't pay me $1 million in 1947, I'm owed $1 million plus compounding interest. So, that's a completely different circumstance where, on a case by case basis, you may say that that is the appropriate way to do it.

JUDGE MILROY:

We do not really have those kinds of corporations before us so I think we do not need to spend much more time on those.

DR ANDREW COLEMAN:

The second one is an issue, which economists call moral hazard, and that's really going away from the valuation problem to what I'll call the need to punish the aggressor. It's that, if we say, look, the value of a loss in the past is much less now than it was in the past simply because it happened so long ago, then the aggressor who did the wrong thing in the past is actually getting away with not paying - back then - the full amount. And you may want to punish that person to ensure that they don't do it again. So, that's the sort of moral hazard problem and the moral hazard problem says, yes, it's appropriate to punish the transgressor and we will have high punishments, not because we have high valuations on the losses, but to make sure that the transgressor does not transgress again.

I really haven't talked about much in my paper, I have just acknowledged that that is an issue, but it doesn't have anything really to do with the valuation of the wrong. It's a completely different issue; it's about punishment, and I think I was told that that wasn't the approach of the Tribunal; it's much more about the valuation of the wrong rather than the need to impose harsh punishments on the transgressor. So, that's basically it.

So, I have a summary on this, the big number, losses in the past and the future need to be evaluated on a case-by-case basis. There's little reason for current people to automatically value losses occurring to others in the past based on historic investment returns. You need to go through each case and say what's the problem here, what are we trying to value, is it an intertemporal discounting issue, is it a historic investment issue, is it a zero-discount issue? My argument would be welfare losses in the future and welfare losses in the far-removed past to unrelated people are typically valued less than contemporary welfare losses, but that's in the eye of the beholder, but that's what I'd say as an economist. That's how it is.

Then when it comes to dynastic groups, they may well value welfare differently than the typical individual approach that economists use. Groups with strong stewardship principles for assets, especially land, may value land losses very differently than consumption losses and that should be recognised. In such cases it may be appropriate to value the losses of contemporary members of the group associated with

historic land claims by the current value of the land where stewardship is the defining or a defining principle of the group.

I am going to go over those and just go to part 3 in my remaining seven minutes. Changing subject almost completely, I want to talk about issues that were raised in the brief, which is what is an appropriate development strategy to enable a group or society to improve its social and economic outcomes? If a group is not performing well economically, how can we help it do better? This is related to a lot of work in economics.

JUDGE MILROY:

I am just going to stop you, Dr Coleman. Did you understand that you had another seven minutes for the whole of your presentation?

DR ANDREW COLEMAN:

Yes, that's what I thought you meant, which I didn't think I'd get through anyway, but that's what I thought you meant.

JUDGE MILROY:

I have looked at the balance of your presentation, which —

DR ANDREW COLEMAN:

Is somewhat shorter than previously.

JUDGE MILROY:

It is shorter than what you have done so far, but it is still reasonably substantial. We would not want you to condense all of that into seven minutes. We will have a conversation over lunch about the extent of our questioning because the day has been broken up between the presentation that you are to give us and our questions, so the longer your presentation takes the fewer questions that we have. However, we have been asking questions along the way, which has taken up your time. So, before you move on, I think we'll break now, it's just after 12.25 pm, give you the opportunity to look at the balance of your presentation and essentially pick the eyes out of it, give us the knuckle or the gist —

DR ANDREW COLEMAN:

How long?

JUDGE MILROY:

For as long as you think it will take, so using your less-expansive mode, the essential elements of it that you want to present and we will hear you on those when we resume at 1.15 pm and meanwhile we will confer about our questioning and hopefully the two condensed versions will coincide to mean that we will all conclude by the end of today.

CRAIG LINKHORN:

Would it be possible for the presentation to be circulated over the lunchtime electronically?

JUDGE MILROY:

These pieces, yes, sure. I think so, I say, "Yes, sure", but of course I am not going to be doing that. Kei te pai, all right. We will reconvene at 1.15 pm. Kia ora.

HEARING ADJOURNS: 12.28 PM

HEARING RESUMES: 1.15 PM

JUDGE MILROY:

That means we're going to start again, Dr Coleman. We are just waiting for Dame Margaret who should be here imminently. But I understand that you all now have copies of the PowerPoint presentation and I am sure that Dr Coleman has looked at his notes and brilliantly distilled the balance of his presentation and we have likewise been through our questions with a black pen, so we are ready to reconvene I think. I think we can reconvene in the expectation that she will be here very soon because we have passed 1.15 pm and she is generally very punctual, but we do not want to lose time. We are going to send out a search party but in the meantime, Dr Coleman, you can press on. If there is more than five minutes before she returns we will stop you again and have a concerted effort to see if we can locate her.

(13:18) DR ANDREW COLEMAN: (ORAL SUBMISSION CONTINUES)

Thank you. In the next few minutes I would like to address two topics, which are completely different to what I have talked about before, and that is on development strategies, which have proved successful at explaining why different groups in different countries perform so differently economically and whether or not redress, compensation, is an effective tool to enable groups to start to flourish. So, I am going to split this into two pieces, more or less again following some of the work in the briefs. The first part I want to discuss some of the international experience with what it takes to make a people flourish economically and in the second part I want to discuss some estimates of potential redress needed to restore people, the iwi, to have average incomes similar to those in the rest of New Zealand.

So, the first part is to discuss the question, what do economists know about how groups or countries flourish economically and there are some sub-questions here, so they are why do living standards vary within countries? Why do indigenous groups, including New Zealand Māori and native Americans, oftentimes have lower living standards than the rest of their people in their own countries?

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The key question motivating all of this is how much can wealth transfers help improve ongoing material living standards? I use the word "material" to mean that we're talking about the process of generating incomes, which may not be the metric that you're interested in, but that's the metric I can talk about or that we know a lot about, is how do groups generate higher incomes.

Now there's essentially in some sense five necessary conditions, you've got to have all of these things going right for a group to thrive economically and if you take any one of them away it's not going to work. It's sort of like Tolstoy's Anna Karenina, there's all happy families are the same, but you can be an unhappy family by having just one thing removed.

Internationally, the source of high living standards, the biggest thing is to have institutions or rules, habits, that provide appropriate incentives for people to

accumulate, to participate in economic activity, or to have access to participate in economic activity, and for them to have the appropriate rules and incentives to accumulate these assets.

But in fact it's not just enough to have the appropriate rules at a national level; you must have a belief that these institutions or rules are fair and will be upheld. And I raise that because that seems to be one of the key issues for indigenous people, why their economic activity is worse than other people in their same country, even though they have the same rules as everybody else, there may well be good reasons why they don't trust these rules because of past experiences.

So, the first two are about the rules that are prevailing and the beliefs about those rules and then underneath that to have an economically thriving community you need well-educated healthy workers; that's you need to be well-educated and healthy yourself to participate in the workforce. You need an ability to work for highly-productive firms. You can be very well-educated or very healthy but if your employer is actually not very good then you won't earn very much. And it's also helpful to have the ownership of valuable assets, which could be land, it could be natural resources, it could be other factors. So, when you put all these five things together things tend to work out well.

Now, international differences in living standards, the biggest single issue, the reason why very poor countries are much poorer than rich countries, is national-level rules and institutions. The rules that a society has governing economic activity really, really matter. That's the number one issue. However, most rich countries now have very similar rules and then the question is why are some rich countries doing so much better than others? New Zealand is one of the countries that isn't doing very well amongst the group of OECD countries and the answer seems to be, not only do you have to have good rules, you have to have highly-productive firms. Some firms are really good and they know how to manage themselves and they know how to produce things properly and some firms are just not nearly so good and they work at half the ability of others and it's that difference in the quality of firms, particularly in the last 30 years, has been one of the biggest drivers of within-country differences in economic outcomes.

This goes down to regional areas as well, if you live in a region where good firms don't choose to be, then it doesn't matter how good you are, you may not end up earning very much or producing very much because you'll be operating in a firm that simply isn't as good as a different firm.

The problem increasingly around the whole OECD is that mediocre firms find it very hard to copy what the best firms are doing, so there's not much copying going on, and so the real advances amongst good firms aren't filtering through, and the good firms choose to live in a very small number of generally large cities. This explains a lot of the regional differences in economic outcomes. There's a general rule that we would say as economists, if you want to get wealthy it is generally easier to migrate to a wealthy area than it is to wait for the wealth of the other areas to migrate to you. It's easier if you live in Hawke's Bay to get a higher income by moving to Auckland or Sydney than it is to wait for the local firms to get better. And that seems to be a general rule around the world and it explains some of the big demand for international migration that we see.

So, within-country differences are often met, as I've said, by differences in human capital. Now human capital is a horrible phrase, it means the talents that people have, so their abilities to do things well, it might be their social, their ability to get on with people, it might be their education, it might be their strength, it's whatever, if you're a rugby player it's your dexterity, it's whatever helps you perform. So, the distribution of human capital is very lopsided and so some people don't have very much and some people have a lot, some of that's random, but some of it reflects the ability to get good training.

The other is a distribution of other resources, whether or not you live near the sea and fishing is a productive activity, whether or not you have land, which can be used for farming, does regional differences in firm productivity really matter if you are otherwise good but live in an area, which isn't very productive, your economy won't thrive.

And there's also these differences in the beliefs and attitudes. So, one of the differences that we notice is that some people just don't think that the rules that apply in the economy they live in are particularly fair. And that may well be because of past

experience where they have not been fair, where land has been confiscated, for instance, or injustices and unlawful confiscation has occurred, and there's just no belief any longer that, if they perform well, things will go fairly, because they haven't in the past.

Now, evidence from New Zealand and Australia migration is quite interesting on this because it shows that there is a big gap in average wages in Australia and New Zealand and New Zealanders, whether Pākehā or Māori, going to Australia earn a lot more than New Zealanders in New Zealand. This should be something of national shame in some sense but it's just true and it's been increasingly true since 1966. But when you look at the Māori who have migrated to Australia they earn average incomes the same as native Australians, so do Pākehā New Zealand who move there, in fact they earn about $4,000 more, so we are talking in average incomes in New Zealand say $35,000 and in Australia $55,000 and so Māori moving to Australia do very well; they earn the Australian average. And this goes back to this idea that it may not be the people involved, it may be the area that they're living in is not very prosperous. So, that's one of the evidences that economists look at, what it takes to thrive.

Now there's a lot of evidence from the United States, there's a big Harvard project investigating what makes Native Indian tribes, who are often self-governing entities, thrive. Because their performance has been very poor for a very long time, but in the last 30 years there's been systematic study of the Native American groups, which are doing well. And the number one thing that comes through is the ability to choose what they call culturally appropriate rules and institutions, rules that work for Native Americans, not the rules that might work for European Americans or Black Americans, but the rules that work for Native Americans that they choose themselves and implement themselves. Once they adopt these rules things get better. It's the cultural appropriateness of these rules seems to be an important determinant of turning around economic activity and thriving communities in the United States.

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Education always helps; there's worldwide evidence that high returns from education help a community thrive and do well, so that's another of these factors that can be changed to lead to thriving economies.

Now the one thing that the evidence is really mixed about is what is the role of large-scale wealth transfers? They can be helpful but they don't always work and in fact they often don't work unless the other conditions necessary for a successful economy are working. And we sort of know this because oftentimes major aid transfers fail when they're given to countries, there's been a lot of evidence in the United States again with Native Americans or Native Indians being given large transfers and nothing happens. So, the transfers can work if appropriately used but they don't necessarily work.

And you also notice that you get a lot of poor, very poor, migrants into a country, people who start with nothing, and they end up doing very well. So, there's another case where you don't actually need the capital as a start-up to do well, it can be helpful, it's not necessarily helpful, and you can certainly thrive without it.

Now, none of these theories, and I am just going to read what I wrote in the paper, none of these theories are inconsistent with the payment of sizeable compensation to members of New Zealand iwi and hapū for past wrongs. So, everything I've said doesn't say that, if you give people a lot of money, it's not going to be helpful. But it does suggest that payments by themselves are insufficient, particularly if they do not lead to a subsequent improvement in the opportunities available to members of the iwi. If you're stuck in a very rural economy, not attached well to anything, our experience is it doesn't work very well. A sizeable monetary payment does not make it inevitable that people will be employed by well-functioning firms. The well-functioning firms may not choose to migrate to where you are and it's very hard to copy a well-functioning firm, it's not easy to do. This is particularly the case in areas that are remote from major population concentrations or areas that have bad access to these concentrations. Large payments also improve education and health outcomes, you can invest the money in education and better health, again, this does not inevitably lead to better job opportunities in relatively remote locations. Finally,

large payments could improve housing, and certainly you've got money to build a better house, but it does not guarantee improved economic performance.

So, what I am saying, it's not a sufficient condition, money by itself will not create miracles and it is less likely to create miracles in very rural areas, you need the opportunity to work for good firms and you need belief in the ability of the economy to perform for you, a belief which has oftentimes been missing in some indigenous groups because of their past experiences of wrong under the Governments.

So, taking that as an introduction, and mindful of the time I have, in Dr Meade's briefings there has been various estimates of, not the amount of money that is owed due to past wrongs, but the amount of money that may be necessary to raise the material living standards of iwi up to those of average New Zealanders by giving them a lump sum payment, which can be used by the iwi to do whatever they want with it I guess. And so he has estimates for three groups and there are three estimates that are used.

The first estimate goes around and says what is the average income of the iwi at the moment, how much less is it than the average income for New Zealanders, and that will give a number, let us say $4,000 or $5,000 a year, and then if we project that forward for 50 years what is the discounted value of that sum? The calculations are done in various ways, but they use interest rates to discount that sum and that's actually the right thing to use, because it's saying that, if you had this money in the future, if you were given a lump sum now you would earn an interest or an investment return on that money and that investment return is what is going to bridge the gap. Okay, so that's one way.

A second way is that they look at the differences in wealth between the iwi and average New Zealand and say that is a measure of how much money would be needed to restore the members of the iwi to the economic levels of the rest of New Zealand.

And then there's a third measure, which looks at measures of social deprivation, people doing very badly, and it estimates how much wealth would be necessary to overcome that social deprivation.

I want to discuss three of these estimates and I just want to emphasise that these estimates are completely different from the measures of redress that may be warranted because of past wrongs. They are aimed at saying how much money may be necessary to fix things up, two completely different concepts.

So, let's talk about the income gap measures first, so essentially, as I just said, the measures based on the difference between what current iwi members are earning on average, what other New Zealanders are earning on average, projected forward and then discounted. The problem with this measure is it doesn't say or explain why the income gap exists and because it doesn't explain why the income gap exists it's quite unlikely to solve what the problem is. It is saying, "Here is the money, which represents the difference in your earnings", but it doesn't tackle the fundamental problem or it doesn't necessarily tackle the fundamental problem.

Moreover, the way that the calculation is done, when you project forward how big the income gap is going to be, typically it's assuming it's not going to close, which suggests that the problem isn't being fixed. You can change that and make some assumptions on how quickly the problem is being fixed and that will clearly reduce the size of the sum that would need to be paid, but both of these things suggest that the fundamental issue is not being taken into account.

Now I'll just draw a quick analogy with a different group. Women in New Zealand earn about 20 per cent less than men, 80 per cent of what men earn, and we could go and calculate an income gap for women and you could say the average woman in New Zealand earns $10,000 less than the average man and we project that forward for 50 years and then discount that back and we would have a measure of the wealth needed to overcome the female/male income gap. So, we can calculate that sum quite easily, but it doesn't tell us why this income gap exists, and it doesn't tell us how it can be fixed. I think everyone in this room will know that we didn't get a female judge in New Zealand until 1976 and that female police weren't paid the same as male police until the 1960s and so forth. There used to be a lot of regulations, which prevented women from participating properly in the workforce and that, amongst other things, was the core problem. Calculating the income gap doesn't get to what the core problem is and

it doesn't necessarily get to what the solution is. So, that's one issue with these things, it's a measure of what the difference is.

The second problem is that it doesn't really take into account the potential role of regional income differences. This has been a big problem around the world really, but especially in New Zealand since about 1976. In 1976 the income gaps between regions weren't particular large and there was manufacturing right around everywhere. You will all remember this, even I'm old enough to remember this, where everyone used to work in a manufacturing job. My dad did. And then these jobs were lost everywhere but the new jobs that came about, the new jobs in the financial services industry, the bankers, the lawyers, the business services, they disproportionately occurred in Auckland, far more of them appeared in Auckland than anywhere else.

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So, everyone was losing jobs in the regions but the new high-paying jobs tended to open up in Auckland and so we now find that there are these big regional income gaps and if you don't live in Auckland and you live in some of these other areas it can be very hard to get the same incomes as the rest of New Zealand because the firms offering the high pay don't work where you live.

So, that's been a bit of an issue and we can sort of see this. I've got some of the numbers that were provided by Dr Meade looking at the median income - that's the income earned by the middle person - for Māhaki, for people in Wairarapa, and for all of New Zealand, and you can see the numbers. For Māhaki iwi it was $23,800 and that's $4,700 less than average New Zealand. And in the Wairarapa it's very similar, $23,500 or $5,000 less than average New Zealand. And the income gaps are based on these numbers. So, they're calculated using a discount rate and you get a big number coming out at the end.

But you can see also from that other is that people in the Gisborne region on average only earn $24,400, okay, it's much lower in Gisborne than in Auckland, Auckland is above average, so you could actually work out a Gisborne income gap as well and do the same calculation and say this is the size of the problem of Gisborne. But what's

the problem in Gisborne? Is it that they just don't have enough capital or is it more fundamental that Gisborne is no longer a good place to offer high-paying jobs and the firms that offer these jobs don't, on average, choose to live there?

So, when calculating these gaps, the ones that are calculated really haven't taken into account where the people in the iwi are living. Now, 40 per cent of the Māhaki iwi apparently, or 43 per cent, were living in the Gisborne region and so already part of the low incomes that they may be experiencing is because of where they're living, not because of other factors. And so when calculating these gaps you might want to make an adjustment for the difficulty that anybody has earning a decent income in some of these regions. So, that's reasonably straightforward and I haven't gone through and calculated the gaps myself, I didn't have the time and I don't really have the data on where everybody is living, but you can see that if you were wanting to do this properly you would want to take into account some of these factors, particularly the regions where people are living, because where you live is a big determinant of how much you earn, not necessarily your standard of living which is non-material, but your material standard of living, and that's partly because the firms that offer high incomes are not found everywhere.

Now, we could do the same, there's a basic principle there, we could do the same and instead of using an income gap we could go and take a wealth gap and we could calculate the wealth of everybody in the iwi and we can calculate the wealth of everybody in the rest of the country and say, "Here's the difference", and this is a measure of how much money would be needed to raise living standards or at least raise wealth to average New Zealand levels. Okay, so again it's relatively straightforward to do, but it doesn't answer the question firstly, will large wealth transfers actually help improve the local economies and the living standards of the people involved? Do they tackle the fundamental issue?

Now of course it should be helpful but it's the evidence from around the world is that wealth by itself does not generate high incomes. Well-used wealth is helpful. Having everything else is helpful. But wealth by itself is not. So, it puts very similar figures up here, the mean wealth for Māori in New Zealand was $175,000 and for all New Zealand was $297,000, so that's a gap of $122,000; that's a very large sum. The

median wealth, that's the wealth of the average person, is much lower in both cases, it's $23,000 for Māori and $87,000 for all New Zealand, and that gap is $64,000. And so if you're making a gap, working out $64,000 per person times 4,000 people you can get an estimate of the wealth gap for the iwi.

But let's look again at the Gisborne region, the median house price in 2015 or 2016 in Gisborne was $224,000. For New Zealand it was $475,000. Maybe this is 2013 corresponding to the census. I think it's 2013. And so if you live in Gisborne you might have a perfectly nice house on a perfectly nice section, the median person does, but it's worth a lot less than houses around the rest of the country. And so your measured wealth is going to be a lot less. Now partly it may be valued less because the income earning opportunities in Gisborne are lower and partly it may be because there's fewer people living in Gisborne than in a really big city like Auckland. But whatever it is that $250,000 per house, and there's about a third of a person to each house, so that works out at about $90,000 per person, right, $250,000 a house for three people is $90,000 a person in rough terms, the difference in per capita of people living in Gisborne rather than other places is a wealth of $92,000. That's higher than the wealth gap of Māori and all New Zealand. So, once again you might want to take into account very seriously where people are living because that's going to have a very large impact on the measured wealth gap and simply saying the wealth gap is large doesn't necessarily explain why it's large or what can be done about it.

There was a third set of estimates, which looks at the relationship between wealth and social deprivation. Again, social deprivation would be looking at people who are doing very badly. And the estimate by Dr Meade sort of found out how important wealth is as a determinant of people doing really badly and it may come as a surprise but the answer is not much. Yes, people with a lot more wealth are less likely to have very bad outcomes, that's true, but the relationship is very weak. So, if you have a very weak relationship between wealth and outcomes and you want to improve outcomes, we have to have an enormous increase in wealth because actually wealth surprisingly isn't the major determinant of extreme social deprivation.

The estimates that came out were something like $4 million per person. That would be how much you have to give, given the weak relationship between wealth and social

deprivation, to eliminate the social deprivation levels amongst the Māhaki iwi. This number doesn't seem particularly reasonable to me in a country where the average income is nearer $50,000 that you need to give $4 million to get people out of social deprivation.

The link between wealth and social deprivation is weak and that means it's not really the right thing to target or to use to target social deprivation. It's what I call an inefficient strategy to overcome the problems. Throwing money at the problems doesn't necessarily work. That's what economists would say. Yes, it can be helpful, but there are circumstances where it's helpful. So, this is sort of where I've got to.

On the gap measures, yes, we can make these measures of gaps, but the ones that I found in the briefing papers I didn't find a convincing measure of the deprivation of the iwi. It doesn't really take into account the regional differences and it doesn't really tackle what is the fundamental issues causing poor economic outcomes and it doesn't really tackle the question, is a lump-sum transfer an efficient way to deal with these issues? Now, again, some of the experience from American Indian people is that actually there are ways of dealing with this.

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Perhaps these ways aren't available to New Zealand because they involve a lot of self-governance, but by changing the belief structures about the fairness of the economy plus some monetary interventions, they seem to have found ways of improving their local economies that are worthy of study and in fact are being studied at the moment.

I'm going to finish here since I'm getting the evil eye. Thank you.

JUDGE WAINRIGHT:

Thank you, Dr Coleman. You might want to have a drink of water before you stand ready to respond to the questions of the Tribunal relating to your presentation and the brief of evidence that preceded it. I am going to ask Judge Milroy if she will begin.

(13:51) JUDGE MILROY TO DR ANDREW COLEMAN:

Q. Thank you, Dr Coleman, for your presentation and the evidence you have given to the Tribunal. I think I can safely say that all the Tribunal members have found it very enlightening in terms of the kinds of things that economists think about in their approach to questions. The first question may not be fair to put to you and you are quite welcome to say, "I am sorry; I just do not know" or "That was not part of my brief". But it comes about because I think you have probably read all the briefs of the other economists and while you were asked to comment on their methodologies and approaches they will also have included in their briefs - or they did include in their briefs - discussion of the actual compensation scheme that is before us in terms of forestry. So, my first question is, did you happen to look at the compensation scheme in the Crown Forest Assets Act and its schedule?

A. I did read those parts of the briefings and, yes, I made a point to understand them. I didn't consider myself competent to provide guidance on those. Again, in terms of the briefings, there was a multi-stage or multi-faceted approach to ways of calculating the redress, some of those I found less compelling than others and some of those I would say required an approach that was dominated by legal criteria rather than economic criteria. So, for instance, I can give you an example, and it's after the 1991 and the forests have been sold and the proceeds are available, whether it should be the value of the land or the value of the land plus the improving forests. And my view as an economist is that, if you had the land taken off you and then someone else has put a large valuable asset on the land, and then you're meant to be returned the land, you should be returned the value of the land but not necessarily the asset. So, to have a parable, if someone buys an urban section at a compulsorily ridiculously low price and then builds a shack on it or builds a multi-million dollar mansion on it, I would say the compensation should be independent of the structure that has been built on it, it should be dependent on the value of the land but independent of the value of the structure. So, that would be my economist's view on that issue. But if there's a legal requirement, which then goes and says the person is to be compensated for the value of the land plus the structure, well I understand that that's what they should be compensated for, irrespective of the economics. And my approach to a lot of the forestry issues was my understanding as an economist was

secondary to some of the legal structures that had already been agreed upon on how the compensation should be arranged.

Q. Thank you for that, Dr Coleman, and I understand why you have approached that question in the way you have because you are correct, it is related to the legal structures and agreements that were entered into in 1989 with the Forestry Agreement. There is one particular question that I would like to put to you - and I am only putting it to you because I want to put it to the others as well - in terms of the calculation of the compensation, and again this is in the first schedule to the Crown Forests Assets Act, and there are three methods of valuing the monetary compensation. The first is simply taking the market value of the trees that are there now and that becomes what is called the specified amount, and the claimants, if they are successful, get given 5 per cent of that specified amount and then the Tribunal has a discretion in relation to the other 95 per cent. So, the first one, as I said, was in terms of the value of the trees as they are now. The second is market stumpage, which I have sort of thought in my own mind that it is really the value of the trees taken over time and that is why it is a whole lot higher than the value of the trees now. The third is taking the value of the trees back when the forests were sold and then adding a return on to that. The way the return is calculated is for the first - let us just call it the four years; it is not quite four years, it depends on the claims - but for the first four years it is the real value of the forest is maintained. Then for any time after that, I will read it out to you, "In respect of any period after that period, a return equivalent to the return on one-year New Zealand Government Stock measured on a rolling annual basis plus an additional margin of 4 per cent per annum." So, basically it is whatever that figure us plus 4 per cent and let us call it 10 per cent for ease. So, as an economist approaching that question, that calculation, do you approach it in terms of simple interest or compounding interest and why one or the other?

A. Okay. When I read that I immediately thought I would choose option 3, partly because it's compound interest, because it's basically saying it was essentially any failure to settle in the Tribunal process - for want of a better phrase - would be rewarded by the initial value plus Government plus 4 per cent and then that would accumulate. And accumulating at a compound interest seems to be the appropriate way. But when I saw that, to be blunt, I thought, wow, that's a huge

cost and return. That's why I'd say, yes, I'd take that. There's nowhere else that you're likely to get a guaranteed return of the Government Stock rate plus 4 per cent. And, as you will be very aware that the length of delay in the settlement has taken what was a relatively modest sum and multiplied it by a very large factor and I see that as one of those legal issues that is beyond ordinary debate. I am surprised at the high level of the 4 per cent but I didn't comment on it because it seemed to me that that was beyond comment. And it seems to me completely appropriate, in those circumstances, to be compounding returns. That would be the normal way these things are done.

1400

Q. Okay, and that is really the point of my question, it is the normal way things would be done, but you might recall I said that, in legal circles, it was not the normal way things were done until quite recently. And it comes back to my original question in terms of what does that compounding represent? But from the rest of your presentation it is representing the lost opportunities, is that the right way to look at it?

A. It's providing an opportunity to the people who were not paid out at an earlier time to invest the money so that they will have a much larger lump sum available to do what they want at a later time. That is what it is doing. I would say it is generous relative to the time value, sorry, the welfare value of the opportunity cost, but it's what is written down and so I just assumed, well, that was a very generous process and, again, I think I worked it out once - and I can't remember the numbers - I know I worked it out that over a 17-year period the difference between Government interest and the Government interest rate plus 4 is just a phenomenal number; it's like a factor of two or three. And so I was surprised to see it but I just did not see that as anything that I could change or have comment on it, so I didn't comment.

(14:01) JUDGE WAINRIGHT TO DR ANDREW COLEMAN:

Q. No, well there is no use doing a critique of what Parliament decided.

A. No, no, exactly, so —

Q. But can I just take you back to that comment that you just made to understand it more fully, I think what you said in response to Judge Milroy's question was that the compounding rate provided - on the face of it - looks like it is providing an

opportunity for those not paid at an earlier time to later get a lump sum as if they had invested it at a very good rate.

A. Well they have, yes, and that is to compensate them for the inability to spend the money as they saw fit at an earlier date and I would say that is a generous rate relative to the likely time preference, and again I have always made this distinction between an interest rate or an investment return, the way you value money, because of the way that money can be invested to generate higher amounts, and the time preference, which is used to value welfare, and so it's essentially saying, "If we can't pay you now, you will have to wait for the payment, some of you may die in the meantime, some of you will not be able to improve your lives in the meantime, and because of those fundamental welfare factors we are going to compensate you". I suspect that the interest rate plus 4 per cent is a much higher number than the time preference rate, but again that is —

Q. But we could say that, inherent in that - what you have said - relatively generous rate is a time preference factor that is that people, if they had had the choice, would have preferred to get the money earlier so that they would have the ability to spend it as they saw fit over that time and, having lost that opportunity through whatever circumstance, that when they finally do get paid they are paid at a level that generously compensates them for that deficit that they did not have the utility of the money at the time; they had to wait.

A. Yes. No, that's exactly right, and I mean I think just the word is that it is a generous compensation relative to what I would personally estimate is most people's rates of time preference. It's very hard to get 4 per cent plus Government as a guaranteed return.

Q. Yes.

(14:04) JUDGE MILROY TO DR ANDREW COLEMAN:

JUDGE MILROY:

So, you and I think economists assume that it should be a compounding rate, so what does the simple rate of interest do then, or not do, that the compounding rate does do?

DR ANDREW COLEMAN:

At the beginning of the set period, which from memory is about 2001, which is when this Government plus 4 kicks in, the Government interest rate - and I'm going to make up a number - would have been 5 per cent I suspect. And it would have been possible to double an initial sum, say we started with $1,000, at 9 per cent, the Government rate was falling, but the Government rate plus 4, it was probably possible to double in about eight or nine years in that order, and I am making these numbers up but just to give you a round figure. And so you've gone from $100 initially to $200. In the compound interest case, after 2009 you would be paying the then Government interest rate, let's say 3 per cent by then, plus 4 per cent, you would be paying 7 per cent on the new value of $200. And in the simple rate you would be paying 7 per cent on the initial value of $100. And so after eight or nine years you can see that the amount of interest being paid will be twice as much as initially and if you double that again after 17 years - and again that is in rough round figures but you will see where I am going on this - the accumulated sum will now have gone to $400 and so the compound interest in year 2018 will be four times as much as under the simple rate because one is compounding, one is just based on the initial sum and the other is based on the initial sum plus all accumulated interest that would be due. And so, again, commercially, normally you would do this using compound interest. That didn't strike me as being surprising whatsoever, but that's what it's doing. It's saying that after time, it's not just the interest on the initial sum which is being added to the payment, but it's the interest on the initial sum plus the accumulated interest, and that in these circumstances will go from, again, 7% on $100 to 7% on $200 in 2009 and $400 in 2018 or whatever those numbers were. Again, I can't remember, but I did calculate them once and they are big numbers because compounding, it goes up exponentially on how high the interest rate is, and some of those interest rates were very high.

JUDGE MILROY:

So, the simple interest rate represented actually a discount on what people should otherwise be able to get if they had invested the money and –

DR ANDREW COLEMAN:

I would use the word "reduction" just because "discount" has a slightly different meaning.

JUDGE MILROY:

Yes, okay.

DR ANDREW COLEMAN:

But yes, if it was paid at simple interest, it would be less than you would normally expect in a commercial transaction for the delayed payment of an item. They normally would use compounding interest on the initial sum and then on any additional sums owed as interest that had not been paid in the meantime. If you had paid it out every year, that would be different, right? If, for instance, in the first year it was $100 and you paid out $9 interest, then in year 2 you would only be expected to pay out on the $100. So, if you paid out interest every year, you would only be ever expected to keep paying out on the initial sum that had not been paid, but it is when you do not pay out the interest in the intervening periods is that it's accumulated and it grows. I think I should have said that first, because that may have cleared it up a little. That's the real issue, is whether you're paying the interest as you go or whether you're not, so it's then accumulating.

JUDGE MILROY:

All right, thank you, Dr Coleman. Now, you were discussing why or you were ... start again. You took the approach that stewardship of land for entities such as the ones before us should be looked at differently from money investments. I just needed to understand a bit more why, because in this day and age, of course people are buying and selling houses and making profits and so forth all the time.

1410

So, is it simply the nature of the entity that's owning the land or is there something inherent in the land itself that you are referring to as the reason why there should be something different?

DR ANDREW COLEMAN:

No, it's not land itself. I would apply a stewardship principle to any asset which a group found incumbent to pass on in similar form to the way they received it. So, it could be the quality of the water or the quality of the fishing in water or any asset, so it's not inherently land at all. The process is where a group believes that it is using an asset

temporarily and is essentially intending an incumbent to pass that on to a next generation. Now, there is different ways that different people could do it, but that would be one way that economists use or treat stewardship. It's not well-discussed in the economics literature. It's increasingly discussed by environmental economists – all economists are environmental economics, by the way, and have been for 40 or 50 years. But it's the act of passing it on as an inheritance in some sense. It's bequeathing, which I think is a characteristic or that's what I have taken as characteristic of a stewardship asset. So, why I would say it would be valued in a non-monetary value is that there really isn't an intention to buy and sell it, right, so that's where I would see as an essential point of difference. Plus when I was going through these valuations, I was sort of saying we've got the valuation of wrongs or welfare and we have the valuation of an investment return to a historic payment and then a stewardship asset, which is inherently passed on from generation to generation, would be different. Some people have necklaces that they pass on from generation to generation. I guess the Queen has those, for instance, and they don't really have a monetary value. They are passed on from generation to generation and that's the expectation.

JUDGE MILROY:

Thank you. I've got here, "Harvard project, tell us more" because we were discussing during the lunch break actually the issue about not only redress, but how to address some of the social ills that afflict Māori. You indicated that you didn't think that it could be done here in New Zealand because of our – well, why?

DR DAVID COLEMAN:

Again, I will preface this by saying I am by no means – I am not an expert at all in Native American or Native Indian affairs and so my knowledge of this just comes simply from reading let's say half a dozen or thereabouts articles. There's a few more than that, but it is not an area I have significantly studied. But from my understanding of this, the first thing is that many Native American tribes can elect to be self-governing and so they actually have different rules and laws than those prevailing in the rest of the United States. So, that would be one difference which I don't think anyone is discussing in the context of New Zealand, where a tribe goes and says, "This is the way that we're going to do it" and it's actually a different set of rules for at least many

things than is prevailing in the rest of the United States. So, that's one aspect which makes it different. My understanding from the literature – and again, it's reading the Harvard Native Indian project, I'm sure it's Native Indian is what they call it – is they have systematically gone through with large numbers of often research students from Harvard and studied different attempts to generate enterprises that succeed or generate social interventions that succeed in either making money if it's an enterprise or eliminating poverty or deprivation if it's a social intervention. So, they have just systematically gone through and said what works and what doesn't work and that's essentially – and a lot of times, there has been, first of all, a decision by the leadership of the tribe to adopt different rules and to set down rules which work for that tribe to generate positive outcomes. Now, some of those are negative rules, so oftentimes enterprises have failed because of intervention from tribal political leaders who basically aren't good at business, but they found that because the enterprise was theirs in some sense that they would intervene in the management of the business and intervene badly and fail. So, one of the things that they systematically found was that tribes which adopted rules which kept out the political leaders of the tribe from the operation of businesses did far better than those which enabled the tribal authorities to intervene in the operation of the business. This may be as simple as saying, "Oh, you have to employ another two people because they are unemployed and we need jobs for them", right, so that would be an intervention coming from the tribal leadership, which says, "Well, we have got a business here. Oh, go on, just hire these two extra people." It's that sort of thing that they were finding was systematically associated with failure of the businesses. So, again, I am not an expert at all. I would encourage you to read it. To be honest, I'd say it was one of the huge unexpected benefits of undertaking this work, was to read a lot more about the Harvard American Indian project and the ways they have discovered have worked in practice, because I did not know much about it before and I still would encourage other people to read that rather than to take my word for it.

JUDGE MILROY:

Thank you. Now, just moving to the issue of productivity and where good firms are located and so on, and the fact that the people that this Tribunal panel is dealing with are based in Gisborne, it seems in an economic sense to be difficult for them in terms of employment, because they are less likely to have good firms and so forth, although

they might be able to set some up. That is really where my question is. Is the location of the good firms a significant factor in terms of their success, that is that they are close to bigger markets, they are likely to have better access to technologies and those kinds of things or is it something else?

DR DAVID COLEMAN:

It's largely something else, so this is a field of work which is, in economics, about two decades old. Some of it goes back a bit further, so some of the best evidence on the importance of working for a good firm. I am just advertising: I tell my first-year students now, "This is the most important thing you will learn from me, is that work for a good firm because that will make a huge difference in your income." Now, that evidence is about 30 years old and it's coming largely from the United States and Germany, whereby the gaps between the productivity and the wages offered by good firms relative to mediocre firms and not very good firms are increasingly growing. But the evidence on this has only really come in the last 20 years, or largely come in the last 20 years, because we just have not had the data on this. So, that's the first thing. It's a relatively recent branch of economics. It's very well-documented now, because we have good evidence on this from almost all countries. The evidence suggests two things: (1) it's really hard to copy a good firm. There's something about them, they're doing something right which is not easy to copy, which is why not all firms are good firms. It's hard. So, that's the first thing. It's disappointing that if a good firm doesn't come to Gisborne, can we invent it ourselves? Well, the answer is, on the whole, no. It's hard work, right?

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Maybe with time we will find that, but the OECD currently says the number one reason for the slowdown in the world OECD is the speed at which mediocre firms copy good firms is getting slower and not faster. That's what the OECD says is the number one reason for the productivity slowdown around the world. So, it's not easy to copy, so that's the first answer. That's bad luck. The second answer, do firms – I think in some sense some of them exist in big places because it is easier to operate there, but some of them then move to big places because of the advantages of working in a big place in terms of having a ready market and having hip consumers and having all the

business inputs that you need to make something successful are found in a big place, but you might need to wait three days in Gisborne before you can get something ordered in, for instance, in a consumer example. So, no, the economists are looking at this and saying, "Oh, there is a problem for regional economies. They are great places to live still, but they're unlikely to, under current circumstances, be offering high incomes." They might offer high living standards – that's different – because the best firms in the world find it hard to operate at high productivity and wages in these places.

JUDGE WAINWRIGHT TO DR ANDREW COLEMAN: (CONTINUES)

Q. So, you've said that there are criteria of the good firm that are hard to copy and may be hard to identify. Judge Milroy said, "Well, do good firms have to be in cities, really, where all these advantages of location and market and so on exist?" and I think you said they're more likely to exist in a big city with those attributes, but don't necessarily exist there. Is that right?

A. They don't necessarily have to, so again, big firms tend to have lots of branches. So, the ANZ, for all its current issues, is a big firm headquartered in Melbourne with a local headquarters in Auckland, but branches in Gisborne. The work they do in Gisborne is very different than they do in Auckland or Melbourne, okay. So, the firm may be locating there and the productivity of the branch firm in Gisborne may be similar to the productivity of a branch firm in South Auckland, but the jobs done there are both quite different than the jobs done in central Auckland, which are often much higher paid, or the jobs done in Melbourne. It's that sort of idea.

Q. But that means that the good firm is not actually a Gisborne firm, it's just that there's a little satellite of the good firm that happens to exist also in Gisborne.

A. Yes, and they will pay higher wages than the Gisborne Savings Bank.

Q. Than a local firm?

A. Yes.

Q. So, are you saying then that being in a big place is a necessary but not sufficient cause for a good firm, that is, you would have to be in a place with those attributes, as the headquarters, sort of the genesis of the firm?

A. Yes. Where headquarters choose to live – locate, they don't live, obviously – where they choose to locate is much more likely to be in a densely populated area with good access to other big firms than a small regional town. That's increasingly –

Q. Well, if you think about something like Silicon Valley, that presumably started out as just –

A. Relocated very close to San Francisco.

Q. Right, so the chances of somebody sort of with a brilliant enterprise brain setting up in Masterton or Gisborne, there's not much experience of that worldwide, in your knowledge?

A. If they prove themselves to be very good there, they move, okay. So, there are exceptions to this. Walmart in the United States, which is possibly the world's biggest retailer, started in Arkansaw and then expanded into small places. They have kept their headquarters there, so there are exceptions like this, but increasingly big firms, the best firms choose to live in a subset of the numbers of cities of the world. It's typically big cities. McKinsey has done studies on this. None of them live in New Zealand, these cities. The closest one is Sydney and Singapore, actually. So, it's possible, but when firms are very good and they can expand rapidly, they don't often choose to expand in a small town, they tend to move. I mean, that's true for a lot of New Zealand firms. When they get to a certain level they choose to move to Australia as well, not all of them, and there are exceptions, but this is the general thing, the quality of the firm matters and that's very regionally different. This is one of the reasons why big cities around the world have been expanding. That's more or less the dominant phenomena of the last 60 years, is the growth of very large cities. There were three cities in 1950 with more than 3 million people around the world – I think I got that wrong, 15 cities with 3 million people in 1950. That's it. There's 120 now. It's been a global, phenomena where the biggest firms have located to big cities.

JUDGE MILROY:

That's very depressing, I must say, not just for the Tribunal, but I'm thinking particularly of the people out there.

DR DAVID COLEMAN:

Well, if you don't think New Zealand has a big city, if we think that Auckland is just a branch town, then yes, I think this is one of the productivity conundrums facing New Zealand, but it still can be a nice place to live. That's material standards of living.

JUDGE MILROY:

Yes. So, let's look at the non-material standards of living, and that is the association that Māori have particularly with their tūrangawaewae, their ancestral land. When I visit Gisborne, I find it a great place to be, no traffic and all those kinds of things and great beaches. So, in material ... I'm asking this really because of the people who are listening and they, if they're successful, will be receiving money, compensation and return of land. I suppose the question for them will then be, how can they best use that pūtea to do the best thing. If it's going to be very hard to set up a good firm, a good commercial enterprise, what other – and so it might be better just to put the money in the bank or wait longer for the forestry settlement to come. So, what should be the objectives if you are those people who are in those regional areas and you can't move because of all those associations? Or you have to keep coming back and forth.

DR DAVID COLEMAN:

I don't really know the answer to that. It's not like you can't run a business in Gisborne, because businesses do run in Gisborne. It may be that you can't run a very high returning business in Gisborne, but you may see that as with the freedom and the dignity of work that may be involved in a particular business that you want to run, you may find that that's ... okay, you're giving away some of the return, but you're getting self-determination and self-income that is well-warranted. But I would say that on average the returns for new businesses in many of these areas are not as high as the returns of businesses in other areas, which is why they don't do so well. I mean, you've mentioned the nice beaches. In New Zealand at the moment, we sort of have three classes of city. We have sort of Auckland and Wellington in one class. We have cities located on nice beaches where the climate is warm, which is another class, which are doing very well, as they are attracting people with money and then there are jobs servicing those people with money in such places as Nelson and Tauranga, but they don't offer very high incomes. They are rapidly expanding, but they are rapidly expanding without offering very high incomes. Then you have other cities, oftentimes in small remote parts of the North Island, or the climate-challenged parts of the South Island, which I think is everything but Christchurch, Blenheim and Nelson.

1430

I come from Dunedin and I think we're in the climate-challenged part, which has stagnant populations and stagnant incomes. So, we see this in New Zealand as a three-way split in success. It's the same in the United States. The fastest-growing places in the United States are either San Francisco, New York and Los Angeles or actually relatively moderate-income cities in the Sun Belt States. They're fast growing, but they don't offer high incomes. It may well be that if the money is settled that Gisborne and/or the Wairarapa have a healthy future as really nice places to live with good beaches and so forth, which attract other people to them and provide economic opportunities, but never provide very high incomes or the types of jobs which excite many people by being at the frontier of technology or the frontier of science or commerce even. So, we are seeing this sort of two or three-stage development right around the world at the moment and it's very present in New Zealand. There are 30 cities with more than 30,000 people in New Zealand, and of them 12 have had less than 10% population growth in 40 years, right, they are just stagnant. Okay, that's not smelling, they just don't grow, as they don't attract people, whereas seven or eight of them have had really rapid population growth, including Auckland, but also places which aren't Auckland and which aren't offering the wages of Auckland, so we really see this bifurcation across cities. I don't think either – Gisborne has not done well economically for 40 years. It's in one of these sort of stagnant areas and low income stagnant areas, but no, I wouldn't be – there is potential there. I just don't think it's going to be potential at very high incomes. Sorry, I did a long reply.

JUDGE WAINWRIGHT:

No, I wasn't looking at my watch as any rebuke to you, Dr Coleman, I was simply reflecting on the fact that kua tae tātou ki te wā o te kapu tī. Nā reira, kia hiki tā tātou hui mō te 15 meneti. Fifteen minutes.

DR ANDREW COLEMAN:

Yes.

HEARING ADJOURNS: 2.32 PM

HEARING RESUMES: 2.56 PM

(14:56) DR ANN PARSONSON TO DR ANDREW COLEMAN:

Q. Kia ora, Dr Coleman. I have just one question, which arose from when you were talking about land loss and the importance of stewardship. So, you said discounting doesn't apply and you referred to it as I think the reason for that being it was the deprivation of an asset that people would never have expected to lose. I think that's what you said. So, then you went on to talk about the importance of the full return of the land or the value of the land and then you said that there may be an additional value owing because of the period during which the tribe didn't have that land. So, my question is whether you see any sort of analogy to the loss of people killed at Waerenga-a-Hika in 1865 as a result of what the Tribunal found to be an act of Crown aggression. There were some 70-people killed, of whom a large proportion were Te Aitanga-a-Māhaki, the Tribunal thought, and so in that particular event Te Aitanga-a-Māhaki lost a high proportion of males and that had an effect obviously for all those whānau. There one would look at the suffering that that battle caused and the circumstances in which it happened, at the lost leadership, at the lost mana, at the lost production and also at the inability of those who might otherwise have been in the next generation of leaders, for instance, to protect the lands that remained to them subsequently. That's my question really, is whether you would see an analogy with that particular event and the loss of such a cluster of males within the tribe at that time to what you talked about in respect of the loss of land or whether you would see all the losses arising from Waerenga-a-Hika as welfare losses.

A. Ann, I will preface this by saying this may be outside my area of expertise and so I am not sure. My initial response would be the members of any dynastic family or iwi are expected to die at some point and so the relationship between the bequeathing of an asset from generation to generation to generation – in this case, it may well be land – is a different process than the process by which one generation surpasses another generation through natural birth and death.

So, I think there is quite a distinction between two losses, and I'm not saying that the loss of life is –

(15:00) JUDGE WAINWRIGHT TO DR ANDREW COLEMAN:

Q. Can you say that again, please, because I don't think I understood what you were saying?

A. I possibly didn't understand what I'm saying, so ... a family or an iwi, the people in that family are expected to die and to be replaced by younger members of that family and that will go on for generations and generations. We all understand this, whereas an iwi or family which is focused on a stewardship idea would be expecting to bequeath something relatively constant from one generation to another generation and then for that to be bequeathed in turn subsequently. So, I see a distinction between those two processes, which is the asset which is subject to some sort of stewardship idea is expected to be handed on, whereas the members of the generation are expected to die. We all will do that; I suspect that's not a surprise to anyone here.

Q. Well, actually, that's a proverb that's in the Tribunal's founding song that you didn't hear sung today, but it's basically, "The people will go, but the land will be forever." Right.

A. And so that whilst the loss of people involved in unlawful activity is entirely – well, I mean, it's horrifying, but it's one of the regularities of life on earth. Well, it has been. I have been the fortunate generation, but my parents lived in Britain during World War 2 and they were bombed, and their relatives died, and that's not caused by their own Government, it's caused by another Government. The whole history of the world has been one of unmitigated misfortune and mishap, in the way I see the world, anyway. And I'm not trying to minimise this, I'm trying to say it's actually very common and that I think we treat – I'm not wanting to say that this is worse or better than the loss of land. It's completely different. We grieve for people in the way that we grieve for land differently. I may not grieve for land much at all personally, whereas I do grieve for people. Enough about me, because it's not about me at all, but what I'm trying to say is that the process by which people are killed unlawfully, which is very common around the world – much less common now than it used to be – involves a suffering and grieving process and losses which are different than the losses associated with assets that we can reasonably expect to bequeath from one generation to another. I think I'm clear when I'm saying that, or at least I hope I'm clear when I'm saying that. They are different things, and for me, my preference is maybe that the loss of life is worse than the loss of land, but I can understand why other people have completely different preferences on that. What I'm trying to say is that it's completely legitimate to value these things differently. That's really all I want to

say, which isn't saying very much, perhaps. So, what do I consider – I don't know how to consider the loss of life and the loss of tribal leadership involved in 1865 with the attack on the pā. It's clearly evil, for want of a better word. That's probably not the word. It's not a bad word, but it's a different process than involved in the loss of land for a group which has stewardship as a major principle. And for groups that don't have stewardship for a major principle, it's going to be valued differently. I don't know if this has helped you.

DR ANN PARSONSON:

Thank you, yes. I just wanted your view on how you would apply those values in that particular case, so thank you.

JUDGE WAINWRIGHT:

Kia ora, Dr Parsonson. Moving to you, Mr Castle.

(15:05) TIM CASTLE TO DR ANDREW COLEMAN:

Q. Thank you again for your evidence, Dr Coleman. Do you have your principal comments, the principal report of 8 May 2019 available, please?

A. It's in front of me.

Q. If so, would you mind turning to paragraph 68, which begins – at least on my copy – at the bottom of page 28?

A. Yes.

Q. Just so that everybody is aware of what you say there for the purposes of this question – correct me if I am wrong – you say, "Around the world, many indigenous groups value land for non-financial reasons and they place a premium upon preserving access to the land. The cultural damage that occurs when land is confiscated or illegally appropriated [and I just want you to bear in mind that in this context, we are grappling with degrees of subversion associated with the appropriation] is immense and ongoing. In these cases, the valuation metrics are close to those inherent in the concept of stewardship rather than a consumption." You go on to say, "It's difficult to understand why valuation metrics based on financial concepts would be relevant. Indeed, it is difficult to see how the losses suffered by these tribal groups can be fully redressed unless the land is returned."

A. That's pretty much what I wrote.

Q. Yes. Now, here's the first question: assume, if you would, for the moment that the land or some of it within the context of the land as you are describing it there, so embracing the principles of stewardship and the other features that you've identified in the passage I've just read, assume for the moment, if you would, please, that the land or some of it is returned. How do you then provide for what you described when referring to the studies on slavery for the lost output, given what's occurred since the land was appropriated?

A. The first comment is it may not be possible, right, to provide for the lost output, at least fully. You know, in the slavery case, it –

Q. Just speak into the microphone a bit, please.

A. Oh, I beg your pardon.

Q. That's all right.

A. In the slavery case, if the output losses are so enormous, it may literally not be possible to make up those gaps. You know, sort of not wanting to be light about this, but it's easier to destroy things than to build things, so if things are destroyed, it may not be that there's enough left over to compensate people for what has been destroyed, at least that sort of idea. So, my sense of reading the literature on American slavery – and American slavery is actually a subset of African slavery around the world, quite a small subset –is that the losses are immense and there's no real practical way of making them up. And I'm not sure there's either a desire to make them up, recognising both the impracticality of doing that and the new political issues that that would raise, because it would involve a transfer from a large number of people who were not involved in the slave trade to a larger number of people whose ancestors had been shipped as slaves, which is causing new transfers, and so I don't think there is necessarily a political desire to have them compensated for because it may not be possible. Again, I make a comment in one of my paragraphs that if you added up all the evil in the world, it would be an unbelievably large sum.

1510

I don't think there is any recognition that it is possible to compensate for all the evil that has occurred, even in the last 100 years, let alone earlier periods. I mean, that's at the basis of my response. It may not be possible, in which case there needs to be, in thinking about compensation or recompense or

acknowledgement of the past evils, what is actually trying to be done there. It may be an acknowledgement for past evil is a first step in ... I don't want to – I'm tempted to use the word "rehabilitation" of a people that has suffered from these losses and wants to make a new start in life, in the case of slavery.

Q. Sorry, what about if you start with the return of the land? That could be the first step. We're dealing with, in the language you've just used, significant losses, shall we say, depending on the view we take of the evidence that we've heard and the findings that we've made, so we start with the return of the land, which seems to fit with the proposition at your paragraph 68. Then when we look at whether it's lost output in the slavery terms/studies or lost opportunity in our context, there is no inherent boundary to compensating for that lost opportunity, is there, economically?

A. No. I talked at some length about the way we value losses in the past and I deliberately did that. To some societies, valuing the lost output of a deceased ancestor from many, many years ago, it may not be large.

Q. That's really for us to judge, based on the evidence that we've heard.

A. Oh, it's not for me to judge at all.

Q. Yes.

A. I hope I've been very clear on that, and I really have no views. I have some self-introspection about what I consider important, but it's not for me to judge at all what others consider, and I have made no attempt to do so. But that is the process that you would want to go through. You would say, "Well, what were these losses? How do we value these losses in terms of –"

Q. Those who suffered them.

A. "– those who suffered?" bearing in mind that these people are not the same always. Certainly in the 1865 case, they are not people who are currently alive, and we need a way of valuing those losses. As I say, in some cases they could be valued at large positive multiples of the loss and in others it may be the same as we would value the loss today, which is potentially feasible to compensate, or it may be much lower than we would value a similar loss today simply because it occurred a long time ago. Again, there are different ways of doing this. It's conceivable that you could calculate a sum and then it comes down to once that sum is calculated on a political willingness to make a compensation from one group of people who are currently alive to another group of people that are

currently alive to compensate for evils that occurred in the past. I don't want to use the word, so I won't. I'll have to try and think of a different word. I don't want to use the phrase "zero sum game" –

Q. No.

A. –but in some sense, if you're making a compensation from one group to another group and according to a historic loss for whom there are very few or no people alive involved in the historic occasion, you are making a redistribution now which involves a lot of people who – well, none of whom were involved in the original circumstances. So, that then becomes a political issue on how much you are willing to compensate the ancestors of one group who suffered a loss by taxing or otherwise another group whose ancestors may or may not have been involved with that occasion, but who certainly weren't involved themselves. That is subject to some of the philosophical discussion that's underpinning the particularly American literature on this, but you can see – well, I can see, anyway – why that rapidly becomes a political issue. It's going to become a political issue if the sum of the losses are much greater than current output possibilities, for instance, and that then becomes a political issue on how you divide and compensate people for a large amount of the evil that has happened in historic times. I don't know the answer to that.

Q. In some respects, would you accept the political imperative has already been determined by reason of the legal construct with which we're dealing here, the framework which Her Honour Judge Milroy asked you about? In many respects the political imperative of which you speak in paragraph 69 has already been identified, hasn't it?

A. Yes.

Q. Yes, so if we –

A. Yes, but the political imperative as a concept hasn't necessarily said what the size of the reparation would be.

Q. Precisely, and that's exactly the issue with which we are now grappling within that political framework.

A. Right. I have no problems with that at all.

Q. Thank you.

A. In fact, that seems perfectly – you know, that's sort of what I expected to be talking about or that seems to be the question. The sum question is how do you value these losses?

Q. Yes.

A. In some sense, however, when you come to a value, they ... in line with the politically determined size of a settlement, right, because the political – the settlement may, for political reasons – and I am using the word "may" – be capped at a certain number and then a question would be, "Well, is that number, that cap" if there is one, "larger than a reasonable valuation on the losses?" In which case you might not want to go to the top of the cap, or is it lower than a reasonable valuation of the losses, in which case you might want to say, "Well, yes, this cap actually is binding, because we think that the losses involved in the historic events are much worse than that number, but as a political solution, we have in some sense agreed to come to that"? I mean, that seems to be the question and certainly when I was writing my brief, the way I was writing it was in response to claims about the value of early losses, which to me seemed sometimes calculated in ways which inflated the value of those early losses to be much higher than I would value them myself, not because of the value of the contemporaneous loss, but because of the way the value of the contemporaneous loss in the past was then inflated to a much higher number when bringing it to the present. That comes clearly on whether that sum is smaller than the cap or bigger than the cap, so I think you're completely right.

Q. I am right in understanding that if you overlay what I have described, or what you really described in your evidence as a political imperative or what we've just discussed as a political imperative, if you overlay with that with an economic or commercial context, the exponential compounding technique is perfectly acceptable, is it not?

A. I discussed at least two exponential compounding techniques, so I would say that the use of investment approach to past losses is in many circumstances the wrong approach to value past losses. So, one of the reasons I have focused on wrongful imprisonment is because to me that is a case where I do not consider it is appropriate to value the suffering involved with wrongful imprisonment at 150 years ago as being 30 times as bad as the suffering that would be involved with the same imprisonment now.

So, that to me would be a case where, in my opinion, it is unnecessary to inflate the value of the suffering of the past by a factor of 30 when valuing those losses now. In other cases it may be appropriate, but there's an exponential discounting using time discounting, right, time preferences, which is separate from those using historical interest rates. The way we value things in the past is conceptually separate from whatever happens to be the value of interest rates and other business returns occurring in that process. I would not like to think, for instance, the value of my grandmother's life – on a personal level – depends on what interest rates were between when she died and now or when she was living and now. It seems to me that that is a valuation which involves things that aren't related to commercial rates of return. That's the difference I'm trying to stress here.

Q. Is that not just a product of your personal preference?

A. No, I think the way economists think about the valuation of welfare losses does not depend in generic terms on interest rates or historic returns. I have no real problem believing that the way we value the joy and suffering of other people at different times should depend on whatever historic rate of return is. If the historic rate of return is high, I don't see why that should affect the way I value the joy or pain of people at different times.

Q. Through whose eyes should it be valued?

A. The people involved. Again, this is where I have wished to stress that the value we put on people depends on whether they are ourselves, they are unrelated strangers, whether they are related –

Q. Well, we know that we're not dealing with unrelated strangers here, are we? We are dealing with a collective.

A. We are indeed, but you asked me what economists think and the answer is economists, when they are valuing the welfare of other people, take into account the identity of the person doing the valuation and the identity of the people to whom the welfare loss or gain occurred. In this case they are members of the same iwi, and then there is a valuation metric which depends on the people doing the valuation now, on how they valued the losses occurring to members of the same iwi at an earlier stage, right? That is the question. I completely agree and I hope I have made that clear in my writings that that is the question and it's not

obvious to me that those values should depend on say the rates of return available to American businesses or even New Zealand businesses, that that is a valuation about welfare occurring to other people that isn't inherently related to business returns. In fact, when economists model this, they write down a rate of time preference and that rate of time preference is a completely and utterly different concept to a historic interest rate or they write down – you know, they think about these in non-interest terms.

Q. Thank you. So, the rate of time preference of which you speak, how does that accommodate the fact that those of the collective who suffered the loss in the beginning through successive generations still suffer from the loss?

A. Right, so again you can add up and say the current generation members, the members of the collective who are currently alive should be able to come to some statement of value of the losses of earlier members and say, in some sense, how much they value those losses, how much it pains them now because their ancestors suffered unlawful events or other welfare losses. That's a personal arrangement. You could imagine – I mean, to extend the analysis perhaps where I shouldn't – a large number of Māori died from introduced diseases; measles was a clear case. Those diseases were not deliberately introduced, first contact in some sense caused this. There are losses involved with the deaths of these people, right, and we should be able to value those losses or say how much their deaths, caused by inadvertent events, hurt. Now, there's a valuation process which in some sense is very similar to the valuation process of deliberate hurt, right, and that's the valuation process. So, if you're saying, "Well, in one case we are not expecting compensation for deaths occurring from measles in the past, but we should be able to value those deaths." Oh, what a pity it was that the measles was introduced into our society. I mean, measles needs 5,000 people to survive, right, so it was lost through the Pacific voyagers. It must have been present at an earlier age, but it was lost, and it gets reintroduced. We can say that that was a tragedy and the value we put on that tragedy doesn't seem related to what business returns were over that period. That is sort of what I am trying to say, is that I think in that case it becomes, "No, I don't think I'm going to value the deaths of these people from measles according to whether interest rates were 5%. Oh, that's much worse than if interest rates were only 2%." I don't think that that seems a reasonable way that we would make these

valuations. We would say, "It was a tragedy that these people died from measles and the way I value that is in some sense related to my rate of time preference." I might say, if I have got a zero rate of time preference, "That tragedy hurts me now in the same way that the value hurt then" and if we've got a declining time preference we'll say, "Well, actually, it was a tragedy, but it occurred a long time ago. It was an advertent mistake and I don't value it as much now because it happened so long ago." I mean, that's not my choice, but that is the choice that you should be facing, and I don't think that's related to historic interest rates, and most economists wouldn't either, that's my guess. I mean, the economists that are going to come up after me might disagree, but if we just take that example, death from measles in the past –

Q. Well, just leaving the measles example to one side for a moment, in fact, other economists have applied the interest rate mechanism as distinct from the zero rate of preference, of time preference.

A. Right. They have in the past.

Q. But ultimately what's at the core of that, the foundation of that decision, as I understand your evidence, is how the people themselves value the loss, including the welfare losses –

A. Yes.

Q. – the suffering, including the land loss and all the other elements of the suffering. So, what's determinative of the choice of the theory, is what you're saying that it's for us to assess the value those of the collective who have suffered the losses value it?

A. No, I agree. No, it's a standard economic approach. Now, having said that, the standard economic approach is not to value past losses, right? The standard economic approach is to value future events, right?

Q. Which is why you –

A. But that's important.

Q. – remind us to look at how we value future losses for the purposes then of –

A. Oh, I know, and it took so long, and I had to bore you for so long.

Q. – returning to the past.

A. But every time an economist writes down an equation saying how we value future welfare, it involves a time preference parameter and it doesn't involve an interest rate parameter. Now, we sometimes replace those time preference parameters

with an interest rate parameter, not because that's the right number, but because that's a proxy for how we value future utility, but every time we write down a utility function as an economist, when we're thinking, "How much shall we save for the future? How much shall we spend now?" we would write down a utility function and then we would write down a time preference parameter.

1530

They're the parameters that –

Q. But that's a – sorry.

A. – that's how we value welfare losses in the future, and so by parallel – which is what I'm saying, or by analogy – when we write down how we value welfare losses in the past, I'm saying, well, we would use a similar sort of thing and we would write down some sort of time preference parameter.

Q. Which is another proxy?

A. Well, we have to have a value for that, but it's not a proxy. No, when we're writing it down we use a time preference parameter, because this is actually how we value the future. We don't care so much about the future on the whole, but most people don't. That's reasonably established in empirical literature, and so we make a parameter which is a time preference parameter and not an interest rate parameter when we do that. Yes, all I'm saying is that that's not a proxy, that's actually how we think as economists about the way people value welfare, and so when I'm going backwards, which we don't normally do in economics, I'm using exactly the same process. I am writing down a time preference rate and where I'm suggesting is the question that I find particularly interesting as an economist is whether that's a positive multiplier, a number more than one, because it occurred in the past, or whether it's a one or a smaller number. My view would be I don't understand why most people would think that losses in the past are much worse than current losses simply because they occurred in the past and that the further they occurred in the past, the bigger the loss we would value. Now, that's my own preference, but I'd have to ask people, "When thinking about losses in the past, do you say, 'Someone who died 500 years ago affects me much worse than someone 300 years ago and it's much, much worse than a parent or a child now?'" You know, that's the sort of thing that I want people to do and it's got nothing to do with interest rates. Where the interest rates come

in is that we use interest rates as a way of measuring time preference rates when we're thinking about the future. That was the equation I wrote up.

Q. Yes.

A. The Ramsey equation. That's why we sometimes see interest rates as being a proxy for time preferences. The real question is when we go backwards whether we're using an exponentially increasing one or one that could be exponentially decreasing, in the same way that things further away in the future are valued less or whether it's what I'll call flat, the zero case, where we value things independently of where they occurred. Now, it's not my decision at all. I hope I'm very clear – I'm sure I'm clear – I don't want to do that for people. The iwi members, the currently alive members of the iwi, should be making those decisions themselves about how much they value the losses suffered by earlier members of the iwi.

Q. Yes, yes.

A. Right. I'm sounding defensive and I don't want to be defensive. I'm wanting to be as clear as I can on that.

Q. I don't think you're sounding defensive. I'm just identifying, at least thus far for me, that the challenge here is to have a really, really clear and for that matter comprehensive understanding of the past losses before you can embark on the exercise of valuing them.

A. Oh, I completely agree. I completely agree, and to me it's a welfare metric that you will be using, which is why I have oftentimes stressed the wrongful imprisonment. It's not that I'm besotted by wrongful imprisonment, it's just such a good, non-financial example. Yes, we give a financial compensation these days for that wrongful imprisonment, but it's actually the wrongful imprisonment which is the welfare loss.

Q. Thank you very much.

A. Okay.

JUDGE WAINWRIGHT:

Kia ora. Dr Coleman, I'm going to hand you now to Dr Hond.

(15:34) DR RUAKERE HOND TO DR ANDREW COLEMAN:

Q. Tēnā koe, Dr Coleman. Many of my questions have already been asked by other members of the Tribunal. Firstly, the information you presented has greatly helped myself understand some things that I hadn't considered before, so that's been really helpful. Also, much of what we're talking about are commercial assets, and in a business environment, would compounding interest rate really be the model at which compensation is calculated? In contrast with a future focus, where you're looking at a time lapse discounting model, how much of that is influenced by having clear information about the future? You used the example of climate change, and as more information becomes available, then the emphasis or the drive to resolve those issues in the future becomes more strong, so making all cars in New Zealand electric cars, those sorts of things, I mean, at a point at which it gets to a significant investment for something that's actually quite far off in the future is based around information, so they're two quite different perspectives. One is the past, with a commercial lens, and one is a future one based on evidence and seeking to change conditions in the future.

A. Okay. I might start with the information issue, so the information issue can go either way. It is if you're very uncertain about things in the future, you could either want to discount at a greater rate or a lower rate, you can sort of go either way on that, depending on your preferences. There is a famous result which says that when you have deep uncertainty at the future, you should discount by the lowest possible interest rate, and that's really reflecting the asymmetry of what can happen. Things can go very bad or things can go very well and when you're trying to discount these things, you should use one of those extremes. So, it can go either way. I probably hadn't made that as clear as it should be, because it's not completely clear in my head at the moment, but if I came back tomorrow, I could probably get that right bang on. There's a famous result in economics. I think it's associated with Nordhaus, maybe not.

Q. Kei te pai.

A. It doesn't matter on that. So, you're right, once things become clear, oftentimes people will then stop debating about what to do and actually do it. Now, there's another reason for that and we call it the real options problem. The question for many decisions is not, "Do I do it?" it's, "When do I do it?" and it's there may be information that comes out in the next five years which suggests that actually it

would have been wrong to commit myself down one path when in fact that could be a very expensive path and there could have been a much better path. So, there's an option for waiting and if you wait, then yes, you may be two or three years later down the track before something that you want to build gets built, but it prevents you from building the wrong thing in the meantime, so you wait for information to clarify whether you should go down path A or path B. That's a very well-established principle in economics, which we'd say, "Yes, you can often wait, and when the certainty becomes much better, then you act because there's no longer much benefit from waiting for more information" and you just go and do it and it gets done.

Q. And if that certainty is here now?

A. Sorry, on climate change?

Q. So, whether you're a climate change denier – sorry, the reason why I'm asking is that the indefinite living entities you're speaking about, particularly whānau, hapū, iwi, and the evidence you've – well, the perspective you've provided around what the future looks like, because every ounce of my being is rebelling against what you've just described for our rural communities, and if in actual fact it is that clear of the future, well, then the investment we're talking about in these areas, if it's that bad in Gisborne, what it is like in Masterton, what is it like in Mangakino and what it is like in places like Castlepoint, these small areas, what is their future? Then the evidence is out there for the investment that needs to be put in place to allow those communities to exist.

A. That's part of the issue and I'll get back to the commercial loss later.

1540

I really don't know the answer to this. There's one thing, it's that in the old days, we had ghost towns, right, you'd have a flurry of activity in Hokitika or somewhere and then it would disappear. These days we build long-lasting assets, houses, buildings, roads, and that means that even if a major industry closes down and the workers move out, there's these long-lasting assets left, the houses, and someone else is going to move in to take advantage of a cheap house and so the places don't actually disappear. Just for New Zealand economic history, Tokoroa in 1976 had a population twice as large as it is now and it's halved since 1976. The next biggest decline is Greymouth, which dropped 10%, and of the other 28 cities that had a population in 1976, all of them are at least as big as

they were. There's been one major example of a city that's half disappeared because of the closing down of the forest mill, and Greymouth, well, I mentioned inclement weather before and, you know, they specialise in that and mosquitos this big. But it doesn't happen. Places don't go away when you've got long-lived assets, or if they do go away, they die very slowly. The question is really the reverse. It's they don't thrive either and we have a large number of cities or towns and cities in New Zealand which are in those circumstances. That's replicated across Canada especially and in parts of the United States, where these places that once had thriving communities, often based on resource processing, are now no longer seen as particularly vibrant economies and investing them is not going to generate high returns. Now, it could be that the future changes, but I don't know what's going to change in the future. It's not that all small towns in New Zealand are doing badly. Those that are located with very nice consumption amenities, great weather or mountains or good surfing, are doing fine. It's the ones that were located in areas where they were there for the work initially and the work has vanished and they don't seem to have much future. That's been the phenomena of 35 years around the world and in New Zealand, and no, I don't think the prognosis is good for these places. I don't think that's necessarily what you were really interested in, but that's the concern. I think it's a valid concern.

Q. It's also you made the comments around evidence that was presented by other experts around using the wealth within communities and looking at those differences and not understanding the things that drove those disparities. You made that comment, that it didn't give a full enough picture, whereas some of your evidence also is along those lines, where it focuses around house prices and income prices as the key way to measure how well some of our communities are doing in these areas, because it's unlikely that Te Aitanga-a-Māhaki or Kahungunu Wairarapa will move all to Auckland because there's a better living to be made there. But my point is how do economists view standard of living? How do they measure standard of living that is beyond purely income and wealth? Because that would help explain some of the ways in which our iwi within these rural environments can survive more effectively.

A. I mean, we do this all the time and we've got a phrase called "compensating differentials", which just means that you may choose to go somewhere, say Whakatāne, which has got a great climate and nice beaches, but in choosing that

you might forego some income. The balance of great beaches and nice climate offsets the reduction in income that you can earn there and that people with choices between moving to overcrowded Auckland and Whakatāne, well, depending on your preferences, you will choose one versus the other, in which case there is what we call the compensating differential, that you might need to get paid more to move to Auckland rather than Whakatāne because the other benefits of living in Whakatāne are so nice. People may say that about Gisborne as well. I don't go to Gisborne very often, but whenever I do, I kick myself for not living there because it's such a nice place. So, then if you're measuring the income gap, you in some sense can say, "Well, this is a measure of the deficiency of standard of living". That would be the wrong measure, because it's underestimating the additional welfare benefits you may get from living somewhere very nice. The downside of this is what's very nice – and it's very hard to measure and it changes over one person's life – when you're young, living in Gisborne may be the most boring thing ever and you want to go to the bright lights of the big city and chase opportunities and spouses and goodness knows what, and when you're older, you know, "No, I don't want to be the best lawyer in the world any longer and I've found a spouse, and yes, the beach looks really nice in Gisborne" and so those preferences change over time and are different between people and so it becomes very hard to measure. Whereas we can measure the incomes that people get much more accurately, but it doesn't necessarily mean that that's the welfare gap that we would have.

Q. Yes, so –

A. Someone's laughing. I don't think I said anything funny.

Q. No, no, it's just your depiction of the beach and that in Gisborne. I was just thinking you're obviously a surfing background, but really this understanding around a restorative approach as well is also recognising the role of iwi and hapū to provide other levels of value other than purely economic gain, so investment in cultural assets, the investment in those things that will draw people, add another level of value other than the jobs that they can get in a large urban environment or in Australia or in New York.

A. I completely agree that money is completely overrated as an input into happiness. All the studies of happiness say that, yes, money is good because you can buy things and it means that your kids don't die very young, but beyond

a certain level it doesn't lead to an awful lot more happiness. Economists have been in this camp for also 40 years, if not more, and in fact you can go to the very first issue of the Economic Journal published in 1892 in Britain and they have an article about living standards, so we've been in this space for a long, long time, but it's easy to measure incomes and so if you're thinking about gaps, what's easy to measure often gets measured. If thinking about what is necessary to provide people with the standard of living or to live in the way they want to live, which is sort of the Amartya Sen approach to living standards, giving people the opportunity to live the way they want to live, it may have an enormous number of non-financial components, and if money can help build up those, then that's clearly useful. That would be, I would say, a standard economics approach, is that money is a way of enabling you to live the lives you best want to live.

Q. I appreciate that it is difficult to measure, and in particular, if we're looking back in the past, how do you quantify standard of living at that point of loss and then calculate it also into the future? I wondered whether there is a way in which you look at it in relative terms, and continuing to use Gisborne as an example, if you look at the economy of Gisborne and the percentage that Māori have of that economy, so it's not so much based on – I've forgotten the term you used, stupidly – a very, very large number that goes beyond what we think is possibly feasible within this country into one of looking at what is actually realistic within a particular region and what is the economy and the percentage of that, is that another way of looking at ... like the percentage of that which Māori had, their presence at the time of the loss and through until now, where we are now, and then looking to where it should be in the future?

A. There's many questions involved there. One would be very current and forward-looking, which would be what interventions are necessary to raise living standards to those that can be reasonably expected in this area.

1550

So, conditioning on the fact that actually it may not be a very good area to live for material standards of living, but may be very good for other reasons, there is a question. It is how can we best live to the potential of this area? That seems to be a reasonable question to ask and it's a particularly reasonable question to ask if you believe that the inability to live to the potential of this area is caused by unlawful events and takings from the past which have destroyed the ability, for

one way or other, to live to the potential, to a community's potential. So, I have a lot of sympathy with that. I don't know how to measure that at all, and to me it's not obvious how much of that is finances. Again, one of the criticisms I made about one aspect of Dr Meade's work, and it wasn't any kind of metric criticism, it was if the link between wealth and deprivation is such that it takes $4 million to raise people, on average, out of deprivation, then it seems that wealth is not a particularly important component of that deprivation or indeed of happiness, which keeps coming up in the economics literature, that large amounts of wealth in these circumstances don't seem to be the solution, that interventions involving potentially smaller amounts of wealth or completely other factors may be the solution. That to me seems to be what modern communities – and amongst them, iwi – are looking for, is how can we raise living standards to be as high as possible, whatever that means, and it's not always or even often material, but that enable us to enjoy our lives or have satisfying lives to the best of our ability? I think I'm repeating myself four times again, so I apologise.

Q. Kei te pai.

A. I didn't answer your question on commerce. Do you want me to –

Q. Kei te pai.

A. Okay.

(15:52) DAME MARGARET BAZLEY:

Thank you, Dr Coleman, and thank you for your contribution today. You've certainly helped me see the solution to the problem that we've been set, to see it a lot more clearly than I was seeing it this morning. I haven't got a question for you, but I've got a couple of comments. I've chaired the economic development committees for Canterbury and the Wairarapa over the last ten years or so and I've come to the conclusion that this country has always had a rural economy and that that's how it's going to be going forward, and we need these small towns to be vibrant because they are the places that have to house the workers who are working in these economies that are increasingly focused on technology and mechanisation, so they're quite a different workforce to what has been there traditionally. Certainly, I've also been involved with Gisborne, so Gisborne and the Wairarapa and the Canterbury small towns are all great places to live and people want to live there for the quality of their lives. So, I think there's got to be a lot more rethinking on just how the vibrancy of

those towns is maintained. Now, it may not be economists that have to do that, but I suggest that throughout the country there's quite a renaissance taking place. I know that Carterton was the fastest growing town in the country, I think it was last year or the year before, and there's huge development in all the small towns in the Wairarapa, and I think you'd find the same further up the east coast. So, it's been a pleasure to listen to you today and I'd be very happy if you could come and visit us. You might be able to develop the next wave of thinking of economists for the future of these issues we're discussing today. It's been a pleasure to listen to you.

DR ANDREW COLEMAN:

Thank you.

(15:55) JUDGE WAINWRIGHT TO DR ANDREW COLEMAN:

JUDGE WAINWRIGHT:

We're nearly at the end, and like the other Tribunal members, I have really appreciated the way in which you've introduced concepts that have enabled us to dig more deeply into the questions that face us and our conversation amongst ourselves has been very lively and inspired by your work. I'm sure that will continue to be the case. I just want to return to a topic briefly that I raised this morning. You talked about the discounting that is involved in future value and I suggested to you that the discounting, when one is future-looking, is largely predicated on the preference of human beings to have utility now rather than later and when they have to forego utility in the present for utility in the future, there needs to be something very pressing to make them do much to sacrifice their current enjoyment of consumption in other goods. But I questioned whether that circumstance is really at all apposite for looking at the past, and I didn't pursue when you talked about it before, but I'm going to now. I mean, really I think what your answer boiled down to was, "Well, we can only test for the future, so in the absence of being able to get real evidence about what people are prepared to do to value things in the past, we have to use the future, because that's all we've got."

DR DAVID COLEMAN:

That's a blunt but reasonable summary of what I said, yes, but I take that very seriously. I stressed that in my paper, is that we can use investment returns as a way

to measure our preferences over future outcomes because we can do something about it, so I have made that –

JUDGE WAINWRIGHT:

Yes, you did.

DR DAVID COLEMAN:

I think we're both in agreement with that.

JUDGE WAINWRIGHT:

But what I'm asking you though is really whether the absence of other evidence is a very compelling reason for us to pour what we know about the future into our analysis of the past.

DR DAVID COLEMAN:

So, one of the graphs I showed you was the symmetric graph, what I have called the symmetric graph, which is sort of saying, "Actually, there are reasons that some people at least will have declining valuation on events that happen more and more distantly in the past." I have never seen anyone test that. You have actually inspired me to ask a survey question that might try and approach that in a future survey I'm going to do, but I don't know how to do that. Economists often ask people how much they value things. The technique is called contingent valuation, and basically, we ask people, "Would you like to spend $1,000 to save the kiwis?" that sort of question, and people respond or they ask, "How much would you spend to save the kiwis?" and they'll say, "Oh yes, I'd pay $50." The problem is that the numbers they come up with are almost completely unreliable. In fact, a famous paper by Peter Diamond, who has a Nobel Prize, and Jerry Hausman, it basically asks, "Is contingent valuation better than nothing?" and they conclude no, it's completely misleading. It puts a number in your head, and that's the problem with it, if you have a number in your head, if someone says, "Oh, it's $4 million" that number then starts to influence whatever you're thinking about. So, they would say contingent valuation is really unfortunately completely unreliable as a guidance to how much we value the past.

1600

So, if we take that avenue and say, "Well, we haven't worked out how to do that properly" and we have no way of looking at savings behaviour or anything else because it's in the past and we can't change it, we are starting to run out of options. Now, I sort of hinted that there are nascent studies about the brain, you know, we can put a CAT scan on your head and charge you up to the Maraetai Power Station and turn on the volts and read what's going on in your head when you are asked about certain events. Psychologists and behavioural economists are increasingly using this type of technique to see how upset you may be or how you value different activities. That really hasn't been done yet about the way people value the past, but that may be an approach. You know, you can imagine writing a Marsden grant or getting someone to give you a large sum of money to find out whether in fact you value something occurring 150 years ago much differently than something that occurred 50 years ago, but we haven't done this yet, and so –

JUDGE WAINWRIGHT:

Extrapolating though from what you've said today, and you've said lots of things, but if I can be so bold as to synthesise it, in the absence of evidence about how people value losses in the past by contrast with how people's behaviour indicates how they value events in the future, we do get driven to looking at experiences quite idiosyncratically, so personally. I think you've suggested in your answers to questions that there would inevitably be a high level of subjectivity around these things. Instinctively, and without ever having looked at the results of brain scans when loss of the past is canvassed with people, one could imagine how a tribal person, asked about the suffering of an eponymous ancestor in a reasonably distant time in the past, would be agitated to a level that you would not replicate if somebody asked you about when your great-grandfather had a bad time 100 years ago because you're not a tribal person and you're not linked in the same way experientially, spiritually, emotionally, psychologically to your ancestors – I don't wish to make you sound like you're a class of one, or my ancestors – in the way that a tribal person would be. That sort of leads us back, I think, to what you've said to Mr Castle, which is that when we look at those welfare losses of the past that the place that one would need to go is to the present generation of the people whose forebears experienced that loss and their experience today of the loss and how they value it.

DR DAVID COLEMAN:

That seems completely reasonable, yes. In fact, that's what I've been trying to imply.

JUDGE WAINWRIGHT:

Good.

DR DAVID COLEMAN:

What I've also been trying to imply is that the extent to which that is say valued the same as a loss currently or less or more is one of the crucial questions here –

JUDGE WAINWRIGHT:

Yes.

DR DAVID COLEMAN:

– that economists, as far as I can see, have very little – we have really not thought much about that, as far as I know the literature, and I may not know this literature particularly well. This is my first time thinking seriously about it, but I have read quite extensively on other things, and it seems that we don't have a good grasp of that. Part of the paper I wrote for the Tribunal was essentially to say it is not necessary to multiply that number by a factor of 30 if it's 150 years ago, because it could easily be a much, much smaller number in some circumstances. So, I keep saying it's a case-by-case case.

JUDGE WAINWRIGHT:

Yes, yes.

DR DAVID COLEMAN:

But there is no inherent reason and it is based around the preferences. I completely take your point, I have said the way I value the difficulties that my grandparents and great-grandparents had – I never met most of these people – doesn't really bother me, you know? It doesn't bother me that my grandmother died when my father was two. I have never met her. I am just saying that. It's completely irrelevant to this Tribunal, but you're completely right, it does not bother me.

JUDGE WAINWRIGHT:

I think that's really helpful. I'm not going to embark on a mihi to you for your evidence, because you are by no means finished before us. All you have done is got to probably a halfway point at least, because tomorrow we are going to turn to the parties' lawyers to give them the opportunity to speak to you. Engari kua tae tātou ki te whakamutunga o te rā nei. Nā reira, ka huri au – te rākau ki taku hoa.

(16:06) DR RUAKERE HOND: (MIHI)

Tēnā koe, ahakoa ko tēnei te kōrero o te Kaiwhakawā ana kua kōrero nei a ia mō te roanga o te rā, e tika ana kia mihia me te mōhio tonu he mahi anō āpōpō nō reira tēnā koe e te tākuta. Otirā tātou, e mōhio ana ka hoki mai te nuinga āpōpō, nō reira ka purutia nei ngā pātai, mō tērā wā ka huri atu ki a kōtou ka whakakopani atu i a tātou kōrero mō tēnei rangi. Kua mihia te mate, kua mihia te ora, kua eke te taumata o te whakaaro i tēnei rangi, ana kia āpiti atu, kia whakatārewa atu te whakaaro mō tēnei wā tae noa ki āpōpō. Nō reira, unuhia, unuhia, unuhia i te uru tapu nui kia wātea, kia māmā te ngākau, te tinana, te wairua i te ara takatū. Ko ia rā i ronga whakairi ake ki runga kia wātea, kia wātea mai rā kua wātea ahau, pai mārire. Pai mārire.

JUDGE WAINWRIGHT:

Tēnā koe. Tae atu ki te iwa karaka āpōpō.

HEARING ADJOURNS: 4.06 PM

HEARING COMMENCES 23 JULY 2019 AT 9.05 AM

(09:05) DR RUAKERE HOND: (MIHI)

Ko ngā kōrero iri nei ki runga i a tātou inanahi, ka iri tonu ki runga i a tātou i tēnei rā. Engari e tika ana kia huri atu ki tērā o te wāhi ngaro, ki ngā papaka ruru, nō reira, pai tonu ana kia tuku atu ko te Māori karakia hei iri nei ki runga i ngā kupu, i ngā kōrero a ngā, i te roanga o tēnei rangi. Nō reira, ka tuku atu ki a koe, te matua.

CHARLIE PERA: (KARAKIA)

WAIATA

CHARLIE PERA: (KARAKIA)

(09:12) DR RUAKERE HOND: (MIHI)

I mua noa i te tuku atu te kōrero ki te tēpu nei, e mihi atu ki a koe e koro, kia noho mai ko te mauri ora, o tika, o pono o te māramatanga ki runga i tēnei minenga, ana e hoki wairua mai ngā tupua, ngā tawhito, ngā pā whakawairua, ngā pā whakaruru o mua. Tēnā koe e Koro Tiare, tēnā tātou katoa, kua ea.

(09:13) JUDGE WAINWRIGHT:

Tēnā anō tātou. I mua i te tīmatanga o ngā patapātai o ngā rōia ka huri au ki te minenga, Sir, no he has gone. Did you want to sit inside the whare? Kei te pai. Because I am keen that everyone who wants to be in the room is able to be in the room. It looks like there's only a few people outside the room, and I think we could put some chairs over here if you would like to bring a chair in. Don't worry about walking across the middle. Kei te pai. So, anyone who's out there who'd like to come inside, bring a chair and we'll find you a place. Ms Feint has a chair beside her.

All right. So, now, Dr Coleman, it's the opportunity for the lawyers to question you on your brief of evidence, and we have an order in which it is proposed that

that will happen. But, unhelpfully, the first one doesn't have anything but a WAI number. I'm afraid I haven't committed them all to heart. Is it you, Ms Feint?

KAREN FEINT:

Yes.

JUDGE WAINWRIGHT:

All right. Thank you.

KAREN FEINT:

Tēnā koe, Dr Coleman. Ngā mihi o te ata, kia tātou katoa. I'm the lawyer for Te Aitanga-a-Māhaki and Mangatū Incorporation, so I'm first in the batting order.

Now, to assist with the questions I've made some copies of documents, and I'd ask the registrar to hand them out. There's one for Dr Coleman and those are for the Tribunal.

JUDGE WAINWRIGHT:

All right, whānau. For those of you who may wish to refer to these documents again, they are document J74B in WAI 863, document P59B in WAI 814, and document A61B in WAI 1489. That's really simple. Kia ora, Ms Feint.

(09:16) KAREN FEINT TO DR ANDREW COLEMAN:

Q. Thank you, ma'am. So, Dr Coleman, I just wanted to start by setting the scene, and Judge Milroy asked you yesterday whether you had looked through the Crown Forest Assets Act, and my first question is: do you understand that the Act is a bespoke regime and it confines the Tribunal to determining two things, First of all whether the Crown forest land is to be returned to Māori, and secondly, if so, how much compensation to award?

A. Yes, I understand that.

Q. Good. And do you understand that the Tribunal is constrained by the parameters of its jurisdiction in this regard so that some of the ideas that

you've expanded upon, like, for instance, providing self-determination through the provision of culturally relevant institutions for Māhaki, they're a good idea, and Māhaki supports them, but we have to, for the purposes of this remedies inquiry, we have to discard those options because the Tribunal simply has no power to order anything of the kind?

A. I understand that, but when I prepared my brief I was asked to provide general economic information about how people, how societies develop and so forth, which is the reason for those pieces of the brief. But I understand what you're saying, yes. I understand fully.

Q. So, you took more of a green fields, expansive approach and looked at it as a matter of principle?

A. I was asked to provide economic information to the Tribunal about the way economies work, about the way assets and welfare is valued at different times, and so I used that as part of my brief.

Q. Okay, thank you. So, if we look at the paper you've got in front of you, it's a copy of schedule 1 of the Crown Forest Assets Act, and I think you discussed some of these provisions with Judge Milroy yesterday. Clause 1, "Compensation shall be payable if the land is transferred", so the compensation goes with the land. You understand that?

A. Yes.

Q. And then in clause 2 it sets out that, "The compensation shall comprise 5% of the specified amount and the remaining portion of that amount or such lesser amount as the Tribunal may recommend", and I think you said yesterday you understand that clause 3 works out the specified amount of compensation according to three methods for valuing the forest on the land.

A. Yes, that's correct.

Q. And we know from the history of the 1989 Crown Forest Agreement that the Crown was not willing to simply impose the SOE regime which would have resulted in the improvements going back with the land, so that's why the split was made between the land and the forest, and compensation provided instead. Were you aware of that?

A. I was aware of that from reading it four months ago, but I wouldn't say my knowledge of that is profound.

JUDGE WAINWRIGHT:

Can you ask that question again please, Ms Feint?

KAREN FEINT TO DR ANDREW COLEMAN : (CONTINUES)

Q. I said we know from the history of the 1989 agreement that the Crown was not willing to simply impose 27B memorials because that would have resulted in the land returning with the forest, and that created a problem for the Crown in selling the forest because there would have been a discount in the amount, in the sale value. That came from the evidence of Paul Quinn. Now, if you turn to clause 5, Dr Coleman, you said yesterday that you thought that clause 3(c) was by far the best option to go for, and indeed that's what Māhaki and Mangatū have opted as their method for valuing the forest, and that's the net proceeds plus the return on those proceeds.

A. Yes. I'd say that from an ex post position, given how long it's taken for the settlement to take place, that the option 3(c) seems to be the most valuable one.

Q. So, the way that it works is set out in clause 5, and there's essentially a four-year grace period where the real value of the proceeds is maintained, and then after that four-year period you add to the return on one-year New Zealand Government stock an additional margin of 4% per annum, and I think you described that as a very generous investment return in your evidence yesterday.

A. Yes, I do.

Q. But there's no delineation. It doesn't differentiate that rate as to the type of loss that's being measured. It's just a flat rate, isn't it?

A. It appears so, yes.

Q. And if you look at clause 6, it sets out there that there's a period of four years. "The four-year grace period may be extended by the Tribunal if the Tribunal is satisfied either that a claimant has wilfully delayed proceedings or (b) that the Crown is prevented from reasons beyond its control from carrying out its obligations under the agreement."

A. Yes, I remember reading that as well, and it's in front of me.

Q. So, it appears from that that the 4% additional margin is a way of incentivising the Crown to dispose of the claims as quickly and as efficiently as possible. In other words, it's a sort of penalty rate.

A. I have no knowledge of why that clause was put in, so I don't wish to comment on why it may or may not have been put in.

Q. But you would agree that it's an economic incentive to –

A. Oh, it does provide an incentive to – well, for one side to settle.

Q. So, within that context – and in the Mangatu remedies inquiry we're only looking at the return of the Mangatu Crown Forest – do you understand that the purpose of Dr Meade's evidence was to say to the Tribunal, "I will look at the order of magnitude of the historical losses, and I'll do that as a form of cross-check so that you're comfortable that the schedule 1 compensation calculations are fair compensation for the claimant"?

A. Yes, I understand. May I ask a question of you?

Q. You may.

A. To just clarify my understanding. It's that my understanding was that the Tribunal had some scope to decide how much of the remaining 95% could be awarded in damages or as compensation, and my understanding was that Dr Meade's presentation was partly aimed at establishing the size of the losses to provide some guidance on how much of that 95% may be appropriate to use as compensation.

Q. Yes. Well, that's a matter of law, but yes, that's the purpose of Dr Meade's evidence.

A. Right.

Q. And do you understand that he has calculated the maximum available for the Mangatu Forest on the basis of clause (c) of schedule 1 of the Act –

A. Certainly.

Q. – and the maximum available is approximately $192 million as at June 2018?

A. Yes, I understood that.

Q. Right. So, for practical purposes, that's the cap. That's the most the Tribunal can award. So, in that context would you agree with me that we certainly want calculations of historical loss that are more robust than back-of-the-envelope calculations, but, provided that the methodology is

sufficiently robust, whether we agree that the amount of the historical losses is, say, $500 million or $1.5 billion or somewhere in between is essentially irrelevant for the purposes of the cap that the Tribunal has imposed on it by the Crown Forest Assets Act?

A. I'm afraid you're asking the wrong person. I think the Tribunal has to determine whether the amount above the cap has any influence on the extent that they will award between 5% and 95% of the cap as compensation. And they may well find that that is dependent on whether the amount that is calculated as the losses is a lot above the cap or $500 million above the cap or $1.5 billion above the cap. I can imagine circumstances where the Tribunal would make a judgment on the extent of the compensation which depends on the extent that the losses are greater than the cap. But that's not my job.

Q. So, you're saying it's a matter of judgment for the Tribunal?

A. That was my understanding.

Q. All right. But it seems fairly clear, does it not, that the Tribunal can't do more than award a proportion of the overall losses that Māhaki have suffered because the cap is $192 million and they can't go above that?

A. Assuming that the losses are more than $192 million, you're right. But if the losses were less than that, you would not be right.

Q. Okay. Well, let's take one head of loss that you said yesterday, and you said in your evidence that it's difficult to see how the losses suffered by iwi can be fully redressed unless the land is returned. Have you got Dr Meade's evidence there with you, Dr Coleman?

A. No. Dr Meade's evidence was several hundred pages and I didn't bring it.

Q. All right. Does the Tribunal have a copy it can give him? Because I have a spare copy that I can provide if the Tribunal is comfortable with that.

JUDGE WAINWRIGHT:

Which of the document numbers did you want him to have?

KAREN FEINT:

Just P60. WAI 814.

JUDGE WAINWRIGHT:

Can you repeat the question please, Ms Feint?

KAREN FEINT:

I haven't asked one yet.

JUDGE WAINWRIGHT:

I think you did. You started at least with the proposition of putting to Dr Coleman what he said yesterday. You said, "You said yesterday that it's difficult to see that the losses could be compensated in the absence of the return of the land". I think that's what you said.

KAREN FEINT TO DR ANDREW COLEMAN: : (CONTINUES)

Q. "Can be fully redressed unless the land is returned." And that was on the basis because iwi had an ethic of stewardship. They –

A. Yes. There was. I did put a condition in that that if iwi have a condition of stewardship, it's difficult to understand how losses could be fully compensated without the return of the land. Or words to that effect.

Q. Or to put it another way, to put it the way that Māori would put it, they say that they're tangata whenua because they are literally of the land, they have an ancestral connection to that land, and therefore they say that they belong to the land and they cannot give the land away. They need to keep it for future generations. Do you understand that that is essentially the cultural significance of the land?

A. That would be consistent with what I mean by stewardship, yes.

Q. Yes. All right. So, if you turn to Dr Meade's evidence, P60, and turn to page 4, it's table 1.1 there.

0930

And if I understood you correctly, you said yesterday the appropriate way of valuing how you return the land is either to physically return the land or else return compensation to the value of that land. Is that correct? So, that that land can be purchased in due course?

A. I hope yesterday I was fairly clear that I made a distinction between what compensation should be offered and what people may value land, right,

because I have no role in arguing what compensation should be offered. And I am quite happy to talk about the value of things, but it is not my role here at all to talk about what appropriate compensation is.

Q. No, but my question is: if we say that Māhaki's losses cannot be fully redressed unless the land is returned to them, then it follows, doesn't it – so say the Tribunal accepts that proposition, then it follows that the Tribunal either has to return Māhaki's ancestral land to the extent that they can and provide compensation to the value of the remainder of the land that's been unlawfully taken so that they're able to purchase that, if and when it becomes available.

A. Actually, the Tribunal doesn't have to do either of those options. It can choose not to compensate fully for the losses.

Q. Yes, I understand –

A. And I don't want to be asked to advise what I think the Tribunal should be doing. I mean, you may ask me but I don't want to comment on –

Q. No. So, my proposition was let's start on the presumption that the Tribunal decides that it wants to – it agrees with you that to fully redress Māhaki's losses it needs to return their ancestral land to them. So, I'm putting the proposition to you that that's what the Tribunal thinks ought to happen, and then the question is how you value that.

A. Right. If they were to decide that, then what I said yesterday, that a group for which stewardship is an important concept, and Māhaki iwi seem in that category, full compensation would include the restoration of the land. Or a provision, if that's not politically feasible, to purchase land. Again, there is a distinction between what is politically feasible and what the Tribunal is allowed to do, and those are two completely different things, and what the value of the land is. And I stress I don't want to be in the position of exceeding my brief, which is not to advise, not to act as the Tribunal.

Q. No, I understand that. So, the matter of judgment is not yours, but your role is to advise the Tribunal on how to value the approach that it might take.

A. Right, and so I am quite happy with what I have written, which is that in these circumstances full recompense would include the restoration of the

land or a – well, I mean, if people are dedicated to a particular piece of land, then if that's not being able to be returned, it's not clear what a substitute is. But, yes, the value of the land would be – the current value of the land would be full recompense for the removal of the land at a prior date but not necessarily full recompense if you include restoration of past sufferings or compensations for past sufferings as well.

Q. So, it's only one head but let's just stick with the land for –

A. No, I understand. Just trying to be specific here.

Q. So, if you look at table 1.1 and you look at the second head, Dr Meade has assessed land-based losses using only current improved land values. So, with no compounding. And the assessed range he's come up with is $582 million to $1.544 billion.

A. Great. I can read that, yes.

Q. So, you would agree that if you take the lower end of that range, that's three times the amount of compensation available under the Crown forest regime?

A. Yes. Yes.

Q. Did you assess Dr Meade's figures?

A. Not in detail, but in – not all of them in detail, but many of them in detail.

Q. Well, I'm asking you about these figures. Are you able to advise the Tribunal on whether that range of $582 million to $1.544 billion is robust?

A. No, I'm not actually. I have no experience in forest valuation. I just merely took that the values that had been used have done their job properly and that that is the correct range.

Q. All right. So, if you then turn to page 83, and I'm looking at the top graph of figure 2.8. So, you can see here Dr Meade has added to his figures, so the figures in the green bar on the right are the current improved land values, and the figure in the bar in the middle is based on current unimproved land values.

A. Yes, I can see that.

Q. And if appears from that that even at current unimproved land values, there's still insufficient maximum compensation available under schedule 1 to enable full restoration of the land to Māhaki.

A. That's what that graph indicates, yes.

Q. So, in other words, the Tribunal, if it accepts the proposition put to it that it should seek to fully restore Māhaki's ancestral land to them, it can comfortably conclude, can it not, that it's fair to award maximum available compensation under schedule 1 of the Crown Forest Assets Act because it only represents a fraction of the value of the land that they have lost?

A. You keep asking me to say what I think the Tribunal should do, which I've indicated that I don't consider to be my purchase. I am completely willing to say that $582 million is much higher than $192 billion, and consequently, if full recompense was wanted, it would be appropriate to use the full cap. But I do not wish to advise the Tribunal on what other circumstances in their decision should be taken into account.

Q. No, and to repeat, I'm not asking you to give your opinion on what the –

A. Oh, I understand that you're trying not to ask me, but the questions are phrased in a way that isn't quite as clear on that point as it could be.

Q. Well, to be clear then, my question was: do you accept, on the basis of Dr Meade's evidence, that the historic losses based on the loss of ancestral land alone exceed the maximum compensation available under schedule 1 of the Crown Forest Assets Act?

A. Yes, given that I understand from that you're meaning that the current value of those lands are greater than $192 million. Yes.

Q. Thank you. So, I think you'd agree in principle – so the Tribunal might say it has sufficient information to stop there. It doesn't need to go any further in evaluating the other heads of loss.

A. They might.

Q. But if they wish to, if they wanted to make sure that the methodology is robust, they could in principle then go to assess the other heads of loss, couldn't they, and add those to the land value figures that we've just looked at?

A. They could. And – oh, I won't anticipate a question.

0940

Q. So, you said that you'd been tasked with assessing Dr Meade's methodology overall. Do you agree in principle that his methodology of taking the different heads of loss and then using a variety of

methodologies under each head to estimate those losses is a robust methodology?

A. It depends whether in doing so the other approaches or all of the approaches are done appropriate and are appropriate to do so. And in some cases it can be introducing information which may be irrelevant does not often clarify an overall setting. So, when I approached Dr Meade's brief there were a very large number of estimates of losses. I went through all or most of them and found that many of them I disagreed with the magnitude. But, as I've said, on a case by case basis, by providing many estimates, so long as the Tribunal is aware of the value or the accuracy or the methodology of each of those, they should be able to come to some assessment of which of those are the most appropriate to use. In preparing my brief I indicated those ones which I considered inappropriate to use or because I had doubts about the methodology. And as I've stressed right throughout and you're indicating, saying that some of the approaches may have difficulties does not mean all the approaches have difficulties, and there may be approaches, such as the current value of the land, which I'm quite happy with. But when you present a menu of 20 options, it seems incumbent to go through and say which of those options seem, to term it colloquially, fully cooked, and the others which are half-baked, and provide some guidance to the Tribunal on that basis, and the circumstances where it may be appropriate to use one option rather than another. And as you've indicated – as I've indicated, I have some sympathy with the view that you can use the current value of the land in circumstances where an iwi has stewardship principles, and you have chosen that one and I would agree with you that that number is higher than the $192 million and seems appropriate to use, whereas I might not agree with that on some of the other options.

Q. Right. Did you have any issue with the heads of loss themselves or did you feel that that was not something within your knowledge to comment on?

A. I don't understand what you mean by heads of loss. Sorry?

Q. So, we've started with losses based on the land value, and you've indicated you are comfortable with that. Correct?

A. Current land value, yes.

Q. Yes. And I think you said yesterday that you agreed with questions from the Tribunal that in addition to restoring the land there should be compensation for being kept out of the land for the period that Māhaki were, so lost opportunity sort of compensation.

A. I certainly said – again, not on the compensation side – that there was additional losses suffered by the iwi because of the earlier losses by iwi members in historic times, yes. That's again different from me recommending compensation.

Q. And then there's the variety of non-land-based losses and you've focused, for instance, on wrongful imprisonment, but there was also the significant loss of life at Waerenga-a-Hika. There were losses based on other heads as well.

A. Yes, and I went through those, and those are some of the ones which I found – whose value I found to be inflated much higher than I would use.

Q. Right. But just being pragmatic about it, Dr Coleman, we've already exceeded the schedule 1 cap just on the land value alone, so we could spend a lot of time debating the interesting, esoteric, theoretical issues about how you value non-land losses or welfare losses in the past, but it may not make much difference in the greater scheme of things in terms of the decision that the Tribunal actually has to make.

A. That's true if you believe that there is one of the menu options or one of the options on the menu which is clearly superior to the others or unambiguous and should be used and that one is greater than the cap. I would agree with that if you have something which is clearly above the cap and everybody agrees that that is the appropriate way to use. Then the other issues become less important, although again my understanding is that the Tribunal has to make a decision on the fraction of the cap that is to be paid in compensation, and their decision on the fraction may be determined by not just one of these measures, the land measure, but by the other measures, right? I'm not in a position to say what the Tribunal is thinking on this, and nor ought to be. So, it may well be that the Tribunal considers other losses an influence in their decision on how much of the cap to return. Again, just simply because the land value is greater than

the cap, I don't see why I should infer that the Tribunal will automatically choose a 95% fraction to return, and I don't want to be, again, pulled into making their decisions for them, and their decisions may be influenced by these other factors. So, it's important that the valuation of the other factors is done appropriately.

Q. I completely agree, Dr Coleman, and to be clear, I'm not asking you to advise the Tribunal on how to exercise their judgment.

A. I understand that you're not asking me but some of those questions are using language which points in that direction.

Q. But the Tribunal needs your advice on how to evaluate the heads of loss so that they have an understanding of the overall magnitude of –

A. No, no, and I hope I've endeavoured to provide that understanding.

Q. And again, just – well, let's cut to the chase, and being utterly pragmatic about this. So, I said just before we could spend a lot of time debating how you value welfare losses in the past, and you have one view. You were saying your preferred option is a zero rating. Dr Meade has another approach, and I think you're going to agree to disagree on that because he doesn't agree with you and has said so in his reply. So, that's what you said yesterday, wasn't it, that your personal preference is for a zero rating?

A. On land losses I would probably go for –

Q. No, on welfare losses, non-land losses.

A. My personal preference matters very little, but I would probably go for the hybrid Chichilnisky approach using a mixture of time-elapse discounting and zero. But again that's my personal approach which matters for nothing.

Q. Okay. So, –

A. I'm trying to present a range of options.

JUDGE WAINWRIGHT:

Can you say that again, what you would prefer, Dr Coleman? Can you just articulate that again for us?

DR ANDREW COLEMAN:

In my paper I gave a table with four columns. In the fourth column was an average of what I call time-elapse discounting, which produces –

JUDGE WAINWRIGHT:

An average?

DR ANDREW COLEMAN:

Yes, that was it. I made up an average of 50-50 out of want of an ability to know what else to do. So, there was a zero-based discounting which gives full value for past losses, and there was a time-elapse discounting which reduces the value of past losses the further back in time they are, and I said an average of those two would be my preferred way of valuing –

JUDGE WAINWRIGHT:

An average of time-elapse discounting and?

DR ANDREW COLEMAN:

Zero discount rate discounting, or full value, full present value.

UNIDENTIFIED SPEAKER (9:49:42):

That was the hybrid.

DR ANDREW COLEMAN:

That was the hybrid, yes, column 4.

JUDGE WAINWRIGHT:

Because of course although Ms Feint is coming from the perspective of the first schedule of the Crown Forest Assets Act and the limitation on compensation there, which is the context within which the Mangatu Inquiry is working, the Wairarapa Inquiry is working with one claim that is in relation to the Crown Forest Assets Act and another that is in relation to the section 27(b) memorials under the State-Owned Enterprises Act, which doesn't have a limit or doesn't have a schedule for compensation in the same way as the Crown Forest Assets Act, so there isn't a ceiling that is prescribed by law in the same way. So, the

arguments that she's making on the limit that the Tribunal faces that her clients are before don't apply to the situation of some other claimants.

DR ANDREW COLEMAN:

Thank you.

JUDGE WAINWRIGHT:

So, the theoretical matters which you've addressed which may or may not be relevant in that context are still relevant in another context.

DR ANDREW COLEMAN:

Thank you.

KAREN FEINT TO DR ANDREW COLEMAN: : (CONTINUES)

Q. Thank you, yes. Yes, thank you for explaining that, ma'am. I should have been clear to avoid confusion at the outset. So, if, say, you talked a lot about – you have the example of wrongful imprisonment for Māhaki, and again just being pragmatic and without accepting that we agree with say a zero preference rating or else the Chichilnisky approach, it's beyond my mathematical capability to work out what that approach would be anyway. But I looked at wrongful imprisonment, and Dr Meade's calculation was based on 172 person years, which was based on 70-odd prisoners being incarcerated on the Chathams for approximately two years. So, if you multiply 172 person years by 150,000 you get $25.8 million, which is approximately just over an eighth of $192 million. Would you agree with that?

A. Yes.

Q. So, just on that head alone and at a very conservative basis of estimating loss, you've already used up an eighth of the maximum available cap?

A. You keep wishing to draw me on – I'm quite happy to agree that $25 million is about an eighth of $192 million, yes.

Q. All right. Well, let's leave it there and we'll move on. Now, can I ask you to turn to the third page on the handout I gave you? And this is from Dr Meade's P6 report. I think I actually copied this out of his summary, so

that would be P6A for the tribunal's purposes. And this is Dr Meade's road map which shows the heads of loss that he assessed.

JUDGE WAINWRIGHT:

Sorry, Ms Feint. Can you just explain what we're looking at?

KAREN FEINT:

It's that coloured one that says "Māhaki compensation road map" at the top.

JUDGE WAINWRIGHT:

Yes, I can't see it in there. It's in the handout?

KAREN FEINT:

It should be. Is it not?

JUDGE WAINWRIGHT:

Oh, yes. Thank you.

KAREN FEINT TO DR ANDREW COLEMAN: : (CONTINUES)

Q. Is Danny putting it up? It's on P6A. Have you got –

A. Yes, I have a copy in front of me. Thank you.

Q. So, I just want to understand which heads of loss you evaluated in your critique. So, you said in paragraph 9 of your evidence that given the amount of time you had to prepare your evidence, you focused on four heads only, four areas.

A. That's true.

Q. And I just want to go through this so that I'm clear on what parts of Dr Meade's report you have critiqued and what parts you have not commented on at all. So, if we look at the first head, which relates to Mangatu forest block 1, and A1 has four alternatives, A.1.1 is based on his analysis of the Crown Forest regime as a specific compensatory regime. So, you didn't look at that, did you?

A. Not specifically, no. I read it but I didn't comment further.

Q. And then A1, 2, 3 and 4 are based on Mangatu Incorporation's forced sale of the 1961 land, and he's got three different methods there for assessing the adequacy of the price and what the losses were based on profit sharing, afforestation or otherwise, farming as an alternative use. Did you look at any of those –

A. I did look at those but I didn't formally comment on them. If you'd like some comments, I can provide some.

Q. Well, would you agree that because Mangatu Incorporation is a corporation and because they're living memory losses, relatively recent – we're only talking 1962 – that it's appropriate to taking a monetary approach to assessing the losses and use compounding interest to do so?

A. That would be one of the most appropriate places to do that, yes.

Q. So, you –

A. That said, I wouldn't necessarily agree with the sums that were reached by Dr Meade because his view on what a fair compensation at 1961 may have been was not something I really agreed with. So, I didn't go into that, largely from lack of time. I think I had seven days or eight days to read these reports and provide a briefing.

Q. But you accept that it's appropriate to compound in that situation, in that scenario of an incorporation with losses dating back to 1962?

A. That is the most appropriate place I think to use compounding. That would be a normal – that would be a normal commercial approach. On the other hand, normal commercial approaches over very long periods of time are sometimes changed, partly because if you have a contract between two commercial entities, two corporations, it's quite unlikely that both of them will survive 50 years, in which case normal compounding interest wouldn't apply because one or other party wouldn't exist. In the case that it's the Government, obviously the Government still exists. But then when it's the Government, normal commercial practices don't always apply.

Q. All right. Moving to A2, so this is looking at losses on Mangatu blocks 1 and 2, so A.2.1 again is looking at the Crown Forest regime as a specific compensatory scheme, and you agreed that you did not review that.

A. Right.

Q. And then A2, 3 and 4 relate to losses on both those blocks.

A. Right. I remember reading that material.

Q. And similar comments would apply as for A1, 2, 3 and 4? Would you agree?

A. My comment that I gave to you before was that I wouldn't necessarily agree with the initial value of the assessed loss, but that would be the most appropriate of the choices to be using, compounding with historic investment returns, so that would be the case. So, either on a profit base or a farming, afforestation base, or a price adequacy base, I think that there would be room for debate on the values of the loss, and of course obviously they provide a base going forward that gets compounded.

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Q. All right, but you didn't run any numbers yourself?

A. No.

Q. Okay. The next head is B1, compensation for land-based losses inside the Gisborne inquiry district but not limited to the Crown Forest land, so this is extending beyond the Mangatu Crown Forest, and it's looking at first of all B.1.1, the confiscation of land, B.1.2, excessive land sales at unduly low prices for the remainder of land that was lost, and B.1.3 is the current value of the land that's not owned by Māhaki. So, we've already talked about B.1.3, the value of the land. Did you look at B.1.1 and B.1.2?

A. Yes, I did.

Q. Would you agree that because the loss of land is a financial loss, you therefore take a financial approach to valuing that loss?

A. No, I wouldn't.

Q. Why is that?

A. The loss really – well, my understanding, and I'm not a particularly material person, but if your clients are I could understand that. But the losses that we were discussing were if you have land taken or sold, then the contemporary people have suffering caused by lack of compensation or lack of consumption or food or whatever, and that we would want to use a different approach to value the welfare losses associated with getting very low prices or zero prices for the land that was taken. I would say that my approach very much was that you would assess the welfare losses of the contemporary people who suffered by not getting the money that they

could have otherwise had, and that would be the appropriate way to value those losses, rather than say the loss is equal to the sum at the contemporary time, invested forward at whatever historic interest rates were. That to me has very little to do with the welfare loss at the time, and to me the welfare loss is the loss that I would consider to be the most appropriate loss to focus on.

Q. So, in focusing on a welfare loss you're making a distinction between the people who were alive when the land was sold and the people who are seeking compensation or the return of the land for its loss now?

A. Yes, completely. That the early people suffered a welfare loss, and the current people would get compensation for the welfare losses suffered by the early people, and that was a lot about what I talked about yesterday, how – what is the appropriate methodology for one group of people to value the losses of another group of people at a distant time.

Q. Well, I was going to go there later, but since we've raised it let's tease that out now. So, in your brief you made a distinction between individuals, and so you talked about Māhaki individuals alive today seeking compensation for losses suffered by their ancestors, and then you contrasted that with corporations and you said a different approach would have to be taken to them because they're indefinitely-lived entities.

A. Actually, a different approach is probably because corporations don't normally have welfare obligations. Yesterday I was told that the corporation – the form of Māori corporation that we're dealing with is not the normal commercial form of corporation for which that comment was most relevant.

Q. Well, in your slideshow yesterday you appeared to put up a third category which you called an indefinitely-lived entity, and you put family/iwi/hāpu, and then you gave the example of your own family as an indefinitely-lived entity.

A. Right.

Q. But all the examples you gave under that head still distinguished between the people alive today and the losses suffered by their ancestors.

A. Oh, I completely agree.

Q. I just want to test this with you because you're treating iwi and hāpu as essentially a collection of individuals rather than thinking about the iwi and hāpu as the entity itself. In other words, iwi and hāpu could be treated as being a collective entity that has indefinite life.

A. I imagine it could be, but you would normally think about the current members of an iwi and the previous members of an iwi, or at least my thinking would be, in thinking about an indefinitely-lived collective, it is useful to distinguish between current members, people who are alive currently of the iwi, and people who are future members of the iwi, people who have yet to be born, and people who are deceased members of the iwi. I come from a tradition for which the distinction between people not yet born, people currently alive and people currently deceased makes sense, and so that has underpinned my thinking.

Q. But that's, with respect, a very Euro-centric approach. Māori would conceive of their ancestors as still being present and still being in the room with them and still being part of the iwi.

A. That may be correct, in which case you might want a different valuation, slightly different valuation from the one I suggested. Yes, it's within the class of indefinitely-lived entities, and as I said, the question is how you value losses from the past to people who are no longer physically alive by people who currently are alive. That certainly underpins my thinking on these issues.

Q. But I'm putting to you that you're looking it in a completely different way to the way that Māori do. Māori look at the iwi and the hāpu as the entity, and it hasn't changed.

A. That may well be, in which case we –

Q. It's the iwi and the hāpu that suffered the losses, and the iwi and the hāpu are still here.

A. That may be, in which case you would need to come up with a valuation metric which suggested how a – the iwi currently, the current members of the iwi, can value losses of previous members of the iwi, considering that both are considered part of the iwi, and whether losses occurring a long time in the past should be valued much more highly than losses currently – losses occurring currently, which is the way Dr Meade has valued them,

or whether you would value them on a different metric, which would be that losses occurring in the past are valued equally as if they had occurred today, which would be the zero discounting approach.

Q. So, you'd accept –

A. Neither approach on – necessarily is tied to what the business returns available from unrelated businesses, in other words business rates or investment returns in the broader economy, are doing, right? So, it's not at all necessary that current members of an iwi, considering the loss of earlier members of the iwi, would even think about what the investment returns of unrelated businesses in America or Britain or other parts of the New Zealand are doing to value those losses. They may, but it's not at all obvious why they would, to me, but again that's a very Euro-centric, perhaps, view.

Q. So, you'd accept it's open to the Tribunal that if they think that an approach that's more consistent with tikanga is to think about how the iwi and hāpu today value past losses and if they consider that those losses should be valued very highly because they revere their ancestors and consider them to still be part of the iwi? That's an approach that's open for the Tribunal to take, isn't it?

A. Yes, without doubt, and I hope I made that clear yesterday. I would still say, as I have just said, it's not clear why that valuation would have any relationship to the business returns available from businesses in the United States, the rest of New Zealand or Britain, for instance. In other words, how those values are related to historic investment returns. But, yes, I think it is the role of the iwi to determine the value of past losses. That's unqualified.

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Q. Except you did say yesterday that in some circumstances it's appropriate to use interest rates as a proxy for valuing future or past losses.

A. No, I didn't – if I said that, I said we tend to measure the way that generic people treat losses in the future by interest rates. I'm pretty clear I kept my analysis towards the future as a way of estimating time preference rates, which is the way people value things in different times. So, yes, in practice, economists use interest rates to work out what time preference

rates are. They're not the same even when they do that. They have to make adjustments. And yes, by looking forward and seeing how people behave now relative to what they want to achieve in the future, we have some way of estimating what time preference rates which affect how we value things in the past are. But whether or not they're directly related – well, they're not directly related to investment returns, would be my view. They just aren't. These are separate issues.

Q. Well, I understand they're not related in theory, but in practice you have to make some judgment about how you're going to calculate the losses, don't you? That's the problem that the Tribunal has before it because it needs to know what it can rely on.

A. Right. So, there's two conceptual issues here. There's two conceptual issues here. Whether, going backwards, you increase the value of losses exponentially simply because they happened in the past, and the second one would be, if you do so, what rate at which you do that. And I would say the rate, the interest rate, is not necessarily the right rate, and I also disagree that having exponential increase in values for losses suffered in the past, welfare losses suffered in the past, is appropriate in most circumstances. If iwi members, current members of the iwi, say, "Yes, it is appropriate that we value welfare losses of past members of the iwi at exponentially high rates the further back they go", well, yes, that's how it's done. That's how it's done. I would find that very surprising from my perspective, as I've said, but my perspective is completely irrelevant here. But it does seem – you know, it seems genuinely strange to me that that would occur. The choice of the discount rate, the time preference rate used to make those valuations, is again a separate issue to whatever historic interest rates are. And that's what I should say, you know. It should not matter when you're making a value of the losses suffered in the past if, over the last 150 years, average interest rates from businesses in the United States, Australia and the rest of New Zealand were 2%, rather than 5%. It doesn't seem to me why that is a relevant consideration for how current iwi will be valuing the welfare losses of past members of the iwi. I would think that's – to me, that strikes me as an irrelevant number to the way people value losses. But it may be an important number to

some people. It just strikes me as being a very strange thing. I wouldn't – you know, I could make up lots of different compounding rates. The rate at which sheep breed. That seems to be an irrelevant number to the way people value losses, in my view. Historic investment returns from businesses in many countries around the world seem to be an irrelevant number to how people value welfare losses. I don't see the logical connection.

Q. So, you would be more comfortable if we stuck with our land values at $582 million and then we could add to it, say, the $25.8 million that we worked out before for the wrongful imprisonment and –

A. That is the process that I am comfortable with people following, and to work out a scale of losses, which my understanding of the Tribunal is that they then make a judgment on how much of the available – in this case the available – money can be paid in recompense. So, my critique of some of these things was on the way that the losses, the additional losses, were valued – that's quite clear – and how that may affect the framing of the total loss suffered by Māhaki.

Q. All right. So, can I take you to paragraph 79 of your evidence, then?

A. You'll have to wait a little, but yes.

Q. Just –

A. I have it in front of me. Page 32.

Q. Just for the sake of completeness, can we agree that, just to finish off our road map table, B.2, the compensation for the non-land losses, is what a good deal of your brief focused on?

A. You'll have to repeat that because I didn't quite understand. Just I didn't – wasn't listening properly. My apology.

Q. Well, I just wanted to finish going through the road map table before we left it completely.

A. Sure.

Q. So, B.2, compensation for non-land losses, that's loss of life, wrongful detention, pain and suffering, that's what you discussed at length in your evidence, correct?

A. Yes.

Q. Okay, and you also looked at C, the alternatives for determining the required economic base.

A. Yes.

Q. Okay. So, at paragraph 79 of your evidence you talk about in that last sentence there – you criticise Dr Meade's valuations as perhaps too high by a factor of 30 or 1,000. And I just wanted to be clear that you're referring there to the valuations of non-monetary losses, rather than monetary losses.

A. I'm referring to the valuation of non-monetary losses, but, as I made clear yesterday or I hoped to make clear yesterday, when someone is not paid in the past, that lack of payment, which is the lack of the payment of money – the reason most economists would be concerned about is the welfare losses attributed to that lack of money. It's not that you didn't get paid some pieces of paper. It's that you couldn't afford clothes or education or other things. And so the lack of payment in the past induces a welfare loss because of the lack of consumption. And in my view, whenever you have a welfare loss, you should be using a valuation metric based on non-monetary factors. So, I just want to make that clear. Yes, it's not just wrongful imprisonment, some of the examples that Dr Meade gave, but it would also be if someone is not paid appropriate in the past and that leads to less consumption, less food, then that's a welfare loss that also should be evaluated through a perspective of the way we think about valuing welfare losses, not monetary losses.

Q. But that statement doesn't apply to the value of the land loss or the losses suffered by Mangatu Incorporation, does it?

A. Well, I would say yes, it does. If someone in the past is not paid for the land appropriately – I mean, if they were willing sellers and not paid for the land appropriately, that is going to induce a consumption loss, and the proper way to value that or to think about that is to think, how would the person have spent this money? I mean, they may not have spent it. They may have saved it and put it in a trust fund to be brought out 150 years later. But under most circumstances you would have a counterfactual which would be, how would the person have spent this money? And by not being able to spend that money, what welfare losses were – occurred?

And by not being able to spend that money, you then go and value those welfare losses. So, it may not have been in the first year that you didn't get the money that you expected for your land. You may have wanted to, as I think I used the phrase, "spend it in dribs and drabs" over the rest of your life or spend it on your children, but all of these, the failure to be able to do that, induces a welfare loss, and then you want to be thinking, from current perspectives, how do we value the welfare losses in the past because these people could not obtain – use the money to obtain the things they wanted to obtain?

Q. All right, I understand the point. But in terms of that consumption, they could equally have used the money to improve their education or start a business, say, in which case they may have improved their position.

1020

A. Right, in which case they – the failure then would be to have higher consumption or their children to have higher consumption at a time in the past, and that is what would be valued. So, if, for instance, in contemporary terms, you didn't get given $100,000 in 1865 or whatever year we had, I'm not saying that you would have spent that money then and had a huge consumption loss then. If you had spent some of that on your children and they may have had an increase of income of say $2,000 or $3,000 a year for the rest of their lives, that's the loss that you would want. It's the failure of the children to then have the higher consumption. But you would want to value that as a welfare loss and say it is a shame – if they'd had that money, this is some of the scenarios that could have played out, and we then want to value that from those losses in the past from a contemporary view. And in my view we would still be – I find it difficult to believe that those losses should be inflated by large factors simply because they occurred in the past. You would want to use some sort of discounting factor, and my suggestion is the discounting factor is the same or lower than the contemporary value of those consumption losses. Now, from what I've said, it's clear that you have to make counterfactuals about how that money would be spent, and, you know, well, there's an infinite number of counterfactuals that you could use. And one of those counterfactuals is that the money would not be spent at all if

it had been gained, and it would just have been invested at compound interest and available for people in 2019. I find that a very unlikely counterfactual that these – that the earlier people would have done that. It's a possibility. That's really the only case that I would say it would be appropriate to use a historic interest rate. There's no evidence that people, when they get money like that, set it in a trust fund and never spend it for 150 years, they or their descendants. You would normally have a welfare loss because the people would spend it on food or education or whatever, which leads to lower consumption and expenditure on them and their families at later dates. And unfortunately one of the problems with this whole exercise is that you have to have a counterfactual of what those would look like. Would the people spend most of it immediately? Would the people spend it in dribs and drabs over a long period of time?

Q. In relation to the discussion about economic base yesterday, would you agree that because of the context of tūrangawaewae, Māhaki don't have an option to leave Gisborne because that's where their ancestral home is? So, because of the sub-economic performance of Gisborne, they may actually need a higher injection as an economic base in order to have a prosperous future. Would you accept in principle that that might not be the case?

A. I probably wouldn't. I would accept that there are places which are good places for performing high levels of economic activity and there are places which aren't, and it's unfortunate if you live in one that is not, but it's not clearly the responsibility of other people to improve your economic fortunes if you have the option to move and you don't want to take it. And even in the case of Māhaki I understand that 23%, the current alive members, of the iwi live in Auckland and Wellington, so there clearly is some willingness to move on some people's part.

Q. Well, it might be a necessity because they can't survive in Gisborne.

A. I mean, this is – I won't say "beyond my competence", but it's beyond really my scope to make decisions on what people say. But in general, most people in most countries have not said that regions which are not particularly good for economic activity need to be supported. So, for

instance, you know, obviously some farm soils are much worse than other farm soils, and we don't compensate people who farm on bad farm soils simply because they're choosing on bad farm soils, which is close to what you're sort of asking. It's saying, "Look, if you live in this area and the soil is lousy, do you need compensation because people who live in other areas have the ability to grow food much better?" That's close, it's a very similar parallel to what you're asking, and I would say in most cases societies don't say that people who choose to live in areas which are not particularly strong economically deserve compensation to bring them up to the levels of economic activity of other places. Mainly, what happens is that people choose not to farm very poor land. But, you know, I'm just trying to say as a general principle most people have not seen it necessary to provide transfers to people who live in areas which don't perform economically as well as others.

Q. Do you think that the Treaty of Waitangi guarantees might be relevant to the consideration of that, though, because –

A. No, I'm not sure they are at all.

Q. The Crown guaranteed to Aitanga-a-Māhaki that they could retain their land for so long as they wished to keep it, and it breached those guarantees in a way that left them destitute. And although they were prosperous before the Crown breached its Treaty guarantees, they're now unable to survive economically in Gisborne, and the Crown has some responsibility for rectifying that situation.

A. That's quite a different question than I thought you were asking. The question is, should people in Gisborne be given money simply because the Gisborne economy does not perform particularly well? That's one question, and my answer was to try to address that. No. It wasn't clear that wasn't the question to me. The question that you're actually saying is, is the loss of land – I mean, if the land were to be returned to Gisborne, that would not necessarily improve the Gisborne economy. There is no evidence that that would occur. It may improve the peoples who own the lands' incomes. That's unquestionable. Well, actually that is questionable, but it is likely to improve the incomes of the people to whom the land is returned, but it doesn't seem at all likely that it's going to lead

to a large improvement in the wider Gisborne economy at all to me. That is related to many other factors. And so, yes, returning land to people from whom it's been taken, I understand that that's covered by the Treaty of Waitangi. Whether that implies that the economic activity of those people should be brought up to the levels of economic activity in other parts of the country where they may well be doing different things for different companies, I don't see how that's related to the Treaty of Waitangi, although I have no expertise in that. But it doesn't seem that there's an obvious connection there.

Q. Well –

JUDGE WAINWRIGHT:

Ms Feint, I think you need to be careful that you're not asking Dr Coleman to opine on the application of the principles of the Treaty in a general way because that is beyond his brief and beyond his expertise.

KAREN FEINT:

Yes, that's evidently so, but the next question I was going to ask him was he did talk about the moral hazard problem in his brief, and it seemed to me that the Treaty and the honour of the Crown is relevant to that issue because –

JUDGE WAINWRIGHT:

Isn't that a matter for submission rather than a matter for questioning? I'm not sure how far he's going to be able to go with you on that.

KAREN FEINT:

Well, let me put the question like this, and if you don't want to take it any further you can say so.

JUDGE WAINWRIGHT:

Sure.

KAREN FEINT TO DR ANDREW COLEMAN: (CONTINUES)

Q. You allude to the moral hazard arguments as having some merit, but you don't develop that any further in thinking about the problem that the Tribunal has before it, and I wanted to ask you why not?

A. In discussions with Dr Wainwright, Ms Wainwright – Judge Wainwright, I beg your pardon – when obtaining my brief, I understood her to say that the Treaty, the Waitangi Tribunal, was not about punishment, it was about valuing losses.

1030

The moral hazard problem is all about having an incentive system which punishes transgressors rather than which leads to valuation of those to who are transgressed. And so that's why I did not discuss it further than alluding to that oftentimes punishing the transgressor to ensure that the transgressor does not do something again is part of the moral hazard issue, but I did not see that as called of this brief, that the brief was all about valuing the losses, finding the value of the land or the value of the losses, and that seems independent of imposing a punishment regime on the transgressor. So, that's why I did not go down there. And if you – I mean, for instance, Mr Mellsop's or Dr Meade's briefs are largely about valuing losses, not about moral hazard and punishing and calculating a punishment on the transgressor party. It's about the valuing the loss, and so I followed that lead.

KAREN FEINT:

All right. I just have three specific matters to finish off, but I see we're already at time for morning tea.

JUDGE WAINWRIGHT:

It's in the nature of these things, Ms Feint, that three questions are unlikely to be as brief as one might imagine in prospect.

KAREN FEINT:

Yes, that's what I was worried about.

JUDGE WAINWRIGHT:

I think it's probably judicious for us to take the adjournment now and return to you at 11.00 am.

HEARING ADJOURNS: 10.32 AM
HEARING RESUMES: 10.58 AM

JUDGE WAINWRIGHT:
Haere.

(10:58) KAREN FEINT TO DR ANDREW COLEMAN : (CONTINUES)

Q. Tēnā koe anō, Dr Coleman. I'm almost done. Well, I hope I'm almost done. Just to pick up on a point that you raised before the adjournment, if we're thinking about welfare losses, in principle we have two ways of valuing them, don't we? The first is, you could say, well, the people stick the money in an investment and there's a rate of return on that and then you calculate that. But the second way is – sorry?

A. May I interrupt? I don't think I ever said that that was the appropriate way to value welfare losses.

Q. No, I was putting to you that there were two options.

A. Right.

Q. So, the first is an investment based on rate of return and the second option is that people may, if it's better for them, decide to take some of that money and spend it on their welfare. So, they might spend it on food for their children, on their health, on their education and so on. And if they do the latter, then that gives them higher wellbeing, does it not?

1100

A. Yes. That's normally why people earn money.

Q. So, doesn't that mean that if you only value the investment return, then in principle the actual losses may be higher because you haven't had the benefit to your welfare in terms of being able to care for your whānau in the meantime?

A. Economists, as I stressed yesterday, don't normally evaluate welfare using investment returns. They just don't. When individuals evaluate welfare, they think in terms of the benefits that some expenditure gives

them or, if it's not expenditure, the pain involved with an industry. And then they also think about when it occurred and whether or not that intensifies or reduces the welfare that they expect to get over their lifetimes from those events. Right? And that typically is completely independent of interest rates. They look at the spending that they do, they look at the injuries they get and they evaluate those in terms of the benefits or pain it gives them and, as I say, they make an adjustment based on when these expenditures or events are occurring. Now, the interest rates can affect this. So, if we had some money and we invested it, the rate of return on the investment determines the amount of consumption that's possible sometime in the future. Right? So, if you've got a high interest rate and you didn't consume it now, that would mean that you have more to spend in the future and that would adjust the amount of welfare that you get from that because there would be more spending rather than less spending. So, if you were given some money, yes, the amount of future welfare will depend on the interest rate simply because it affects the amount of consumption or other activity you can do in the future. So, that's where the interest rate would come in. It affects the amount of spending you can do in the future, but it doesn't affect how we value the welfare. In this case, we might say, well, that extra spending leads to some extra consumption in the future and that leads to more welfare in the future, but the way that we value that is essentially independent from the interest rate. Right?

Q. Yes, but my question was that, if you only value on investment rates –

A. I've said already that you don't use investment rates to value welfare or economists don't.

Q. But the actual welfare losses could be higher if you don't have that money available to spend on your wellbeing. That's correct as a matter of principle, isn't it?

A. I don't think what you've said is completely correct, so I'd like you to try and say it again –

JUDGE WAINWRIGHT:

I don't understand the question, Ms Feint.

KAREN FEINT:

So, the principle is that if you have a sum available to you and you're able to spend it on your welfare, then you're going to be better off than if you had just put it in a bank and it had earned a rate of return. And that means that if you don't have that money available to spend on your welfare, then that's part of the loss that you and your whānau suffer because you benefit from lesser education, health –

JUDGE WAINWRIGHT:

I think, possibly, though I don't want to speak for Dr Coleman, but perhaps he's struggling in the same way that I am with the logic of that proposition because you're making a choice at the point where you decide whether to put the money in the bank or spend it now and you only make the choice to put it in the bank if you think that your utility will be greater in the future than your utility is now to spend it.

KAREN FEINT:

Yes, but if you're compensating for a past loss and the person never had that choice to spend that money in the first place –

JUDGE WAINWRIGHT:

Yes?

KAREN FEINT:

– then they won't have had the benefit of having improved welfare, improved health, improved education, improved housing –

JUDGE WAINWRIGHT:

Yes?

KAREN FEINT:

– and so –

JUDGE WAINWRIGHT:

But that's the welfare loss, isn't it?

KAREN FEINT:

Yes.

JUDGE WAINWRIGHT:

That's the welfare loss that we're talking about.

KAREN FEINT:

Yes, and the proposition was that that loss is going to be higher than the investment loss, if you'd simply put that money in a bank.

DR ANDREW COLEMAN:

I'm starting to see the question, but I must agree that it's not particularly well phrased, in my view, or it's certainly not the way I would have phrased it.

JUDGE WAINWRIGHT:

I still don't understand it as a logical proposition, Ms Feint. They just don't follow for me logically. I think you'll have to explain it some more in order for me to grasp what you're talking about.

KAREN FEINT TO DR ANDREW COLEMAN : (CONTINUES)

Q. All right. Let me put it this way. Paragraph 62 of your evidence, Dr Coleman?

A. Yes. I'm not quite there yet. I'm sorry. Yes.

Q. So, in about five lines up from the bottom, you say, "In general, the discounted value of their own spending at a future time should be assumed to be at least as large as if they had spent the money immediately". So, you're talking there about future welfare losses, correct? And my question is: should that apply by analogy to the past as well?

A. It may help, if you don't mind – when economists talk about these things, they actually use a word called "felicity", which means the instantaneous welfare that you get from spending, so that would be the welfare you get

from a meal today, and they'll talk about lifetime welfare. Okay? So, oftentimes I'd be using the felicity or instantaneous welfare that you would get form the expenditure on one day and then there's the lifetime welfare that you would get by expending money on a sequence of days. And so the choice that you're really suggesting to me or my understanding of the question is that if you were given some money on a day at the beginning, you would have the choice of spending it all then, which would give you a lot of felicity then, a lot of spending then, and then nothing for the rest of your life; or you could invest some of that money and so have a sequence of spending throughout the rest of your life, and then so you would have felicity today and felicity tomorrow, so to speak, and that leads to your lifetime welfare. Now, in general, most economists would say most people prefer to spend their money in – and I use the words – dribs and drabs over a period of time as that raises their lifetime welfare, so that's the concept that we're looking at, which is, if you're given a pot of money at the beginning, what is the way to maximise the overall welfare over the rest of your life? And within that, you get little bits of felicity or daily utility every day. Now, the economists then look at the response to the daily utility that you get at different days if you indeed to choose to smooth it over time and there's relationships that we say. A rational individual – so this is rational individuals – would try and smooth consumption so that the extra benefit of their consumption is somewhat equivalent at different times, but in doing that they also make an allowance that most people value utility less in the future than they do now. So, where this theory is going to, which I'm referring to in my sixty second paragraph, is to say that if someone's rational, they are trying to smooth the utility that they get day by day by day and using investments to do so. Then the question that comes is: how does the rate of interest, if it's high or low, affect your lifetime utility? The answer to that would be, in general, if the rate of interest is high and you are lending money, you would do better. Right? If you've got a pot of money and the rate of interest is high and then you're going to have more at every future date than otherwise and that will raise your lifetime utility, and if the rate of interest is low, you will get less lifetime utility. So, there is a link then between the lifetime utility that you get and

the interest rate. That seems reasonable. That's if you lend. If you borrow, well, you're in the other camp, right? The higher the interest rate, the worse it is for you.

1110

Q. And so my question was, by analogy, can that be applied to the past as well?

A. Yes, you can certainly say that if these people were acting as individuals and smoothing their consumption through time, they would borrow or lend. They would invest some of this money and that would allow higher amounts of money in the subsequent stages of their lives. But that's not directly related to the way that they value the utility. It says, if the interest rates had been higher, they would've had the ability to save the money and get even more money later in their lives, and that could've been consumed, but you still then have to go and value the consumption at every point. So, yes, a higher interest rate would've raised the lifetime utility of this person – (break in recording 11:11:18 – 11:11:31) – value the utility that they would have got from this. And one of the difficulties is we still need to know their intertemporal discount rate, the way that they are valuing things in the future. If someone doesn't value the future very much, being offered a large amount of money means that – well, you know, if you don't value the future very much and you were offered $10,000 now or $20,000 in ten years' time, you might not take the $20,000 in ten years' time even though it's a bigger sum because you don't value the future very much. And so to work out the value of different sums for someone, you need to know their discount rate, and that has nothing to do with interest rates. So, I'm sort of struggling to find out how –I understand that an interest rate, if it's positive, will raise the amount of your consumption in the rest of your life. But I'm struggling to find out why that is directly relevant to the way that you were valuing the events other than – well, if it's a high interest rate, you will get more consumption at the rest of your life and that would raise some of that value, but there's not a direct relationship there.

Q. Okay. Let's move on, Dr Coleman. Page 46 of Dr Meade's evidence ...

A. Page 46 of Dr Meade's evidence?

Q. Yes. He's got a table there, 2.1.

A. Yes.

Q. I just want to put to you. So, you have said in your evidence at 66 that Dr Meade has argued that monetary losses in the past should be valued at current investment value, and Dr Meade has put the –

A. Sorry, in some circumstances, I would have said that.

Q. Yes, in relation to past monetary payments or, more particularly, past monetary non-payments. And what I want to put to you is that if you look at the range of rates that he's got there, the PTRF rates and the DGDP rates that he has relied on are at the lower end of the scale, aren't they?

A. Well, of the numbers that are put there, yes. That's quite obvious.

Q. Well, if you look in the footnote 48, Treasury's got –

JUDGE WAINWRIGHT:

Sorry, Ms Feint. We're having difficulty getting the thing to which you're referring. It's just come up now. Can you point us to what we're focusing on, please?

KAREN FEINT TO DR ANDREW COLEMAN : (CONTINUES)

Q. Right. So, the table has a range of rates and Dr Meade relied on the post-tax risk-free rates and the discounted GDP rates, which are the 5.1% and 5.6% at the top of the table. And the proposition that I put to Dr Coleman was that the rates that he is using are at the lower end of the scale in terms of investment rates. I think you agreed that they were –

A. I agree. I'm not agreeing that he's using them in the right way, however.

Q. All right. So, look at footnote 48. It's got the "Treasury ... discount rates ... in real, pre-tax terms ... nominal pre-tax rates of 6.8% to 9.9% per annum, assuming an average inflation rate of 2.7%". Sorry, it's down in the footnote, footnote 48.

A. Yes, I can see that.

Q. Yes, so what –

A. Do you have a question?

Q. Yes, so the question is – so, compared to the Treasury rates of 6.8% to 9.9%, the rates that Dr Meade is relying on are inherently conservative, are they not?

A. Well, they're not comparable, actually, at all. So, when the Government borrows money, it borrows at 1% or 2%. That would be the rate that it pays out to people who are lending to it. These discount rates are used when it's evaluating what investments it should do and they reflect both a fundamental risk and a liquidity risk term, which really aren't relevant to the above rates. And by the way, the New Zealand Treasury has more or less the highest – what it calls – discount rates or real rates, required real rates of return in the world. Most countries use 1% to 2%. The Treasury uses 6% to 8% for reasons which they find very difficult to explain and which no other countries do, and which may be the reason why we have such little investment in this country in major infrastructure. So, the Treasury rate is by no means a standard rate around the world. It's one of the highest rates used by any Government in the world and it's used for evaluating investment projects, not for paying interest on the sorts of returns that – if you lent money to the Government, you would not be getting 7% or 8%. You would be getting 1% or 2% at the moment.

Q. All right. Now, so ...

A. Do you – I mean, your point is there'll be rates used by Dr Meade, 5.1%, 5.6%. Are they lower than average investment returns not on Government stock but on investments available from businesses over the past 150 years? Internationally, in successful countries, rates of return in business have been in the probable range of around 7% for a long period of time, and the 5% number there is less than the return to share market returns over a long period of time in wealthy OECD countries. I completely agree with that. I won't say that these are the rates that you should be using to discount welfare, though.

Q. No, my question was are they sub investment rates and I think you've just said, well, they're below the 7%.

A. They're higher than normal Government safe investment rates. The rates that you would get if you lent to Government would be significantly lower – would be lower than those. That's in real terms. It doesn't say whether

it's in real terms but I think that's in real terms. But it's lower than the rates of return that you could expect on a diversified set of investments. A diversified set of investments would not necessarily include investing on your own farm. That wouldn't be diversified. But, yes, I hadn't – you know, those rates aren't high by international investment returns.

Q. Okay. Thank you. So, next question: you criticise Dr Meade for not using alternatives to exponential compounding. And I just wanted to put to you a graph that is available in his #P6 report. Can the registrar please distribute these graphs? So, are you familiar with the Weitzman/Gollier –

A. Yes, I am.

Q. – approach? So, is it accurate to say that's a hyperbolic rate?

1120

A. It's related. It's not entirely related. Weitzman was the person. I was struggling with their name yesterday. So, he's the guy who suggested that over long periods of time you should use the minimum interest rate available when discounting very long-term future aspects.

Q. But this graph shows, does it not, that in relation to only Mangatū Blocks 1 and 2, Dr Meade has used the Weitzman/Gollier hyperbolic rates for assessing the historical losses under a number of heads. Do you agree with that?

A. Again, they may use the interest rate. The question is whether it's being used in the appropriate way. And again, if you are valuing welfare and you use a positive interest rate, even if it's the Weitzman/Gollier rate, it is going to value welfare losses in the past much more highly than welfare losses in the present. It doesn't value them as highly as if you use much higher interest rates, but it's still saying that welfare losses in the past are much worse than welfare losses in the present. Methodologically, I'm still not sure that that is the appropriate way to be doing it. Again, you're using a rate of interest or investment return to multiply the value of losses in the past rather than a valuation metric of how much do we value these losses in the past in terms of welfare losses. So, methodologically, this sort of represents the use of a lower interest rate but still multiplying losses in the past by compounding them upwards simply because they occurred in the past if they are used to evaluate welfare losses. And that's the issue. It

seems methodologically you don't have to use a large positive number even though this represents the use of a smaller positive number.

Q. All right. I understand the point. So, a final set of questions. Let's do this as quickly as we can, so thinking about approaching the problem of historical losses by analogy with how you value future losses according to discount rates. And I just wanted to ask you to turn to the final paper in that handout that I gave you earlier, which is a report by Treasury on public sector discount rate.

A. Right.

Q. So, in this report, they're thinking about alternative approaches to public sector discount rate as a means of evaluating public investments. And if you turn to the final page, they have a table which represents international approaches to discount rates. So, this shows the actual practice of 11 different countries. Correct?

A. Yes, it appears to.

Q. And Dr Meade has helpfully annotated the table so that it's easy to read. So, he has ringed in blue the countries that use exponential discount rates, which he counts up as being seven countries out of the 11. We've got Canada, Germany, Japan, Netherlands, Sweden, United States and New Zealand. Can you see that?

A. Yes, I can.

Q. And the countries that use hyperbolic rates, by contrast, are Denmark, France, Norway and the United Kingdom.

A. By which you mean they use much lower rates for investment projects which have very long maturities, yes.

Q. So, they use a declining rate for an increasingly distant future?

A. Yes, that's correct.

Q. Right. And Dr Meade makes a note in red at the top of the table that, to make his PTRF and DGDP rates comparable, he needs to deduct inflation, so his rates for comparison purposes are 2.3% for PTRF and 2.8% for DGDP. Do you see that?

A. Yes, I see that.

Q. Do you accept that you need to deduct inflation?

A. Yes, you add an inflation premium to a real rate to get a nominal interest rate. That's correct.

Q. So, if you scan those rates that are used internationally, it appears that Dr Meade's rates are at the lower end of the scale, does it not?

A. Again, these rates aren't necessarily comparable at all to the rates that Dr Meade is using. They are discussing a completely different thing. So, these are the rates that Governments use to evaluate investment projects in the distant future and, as you can see, many of these are much lower than the New Zealand rate. The New Zealand rate here is now 6%. Three years ago it was 8% and it was the highest in the world. But these are the rates that are used like firms use hurdle rates to evaluate whether or not an investment project should go ahead. They are unrelated to Government stock rates or the investment rates that ordinary people would have available to them by lending to the Government. They are rates – so firms when they use hurdle rates, which these really are, would have numbers like 12% or 15% and they say, "We would only make an investment – we will only contemplate an investment if we think it will return 12% or 13% on average because there are other risks involved with making investments. So, these are really unrelated to the average returns available to diversity a portfolio of investments to ordinary people or to businesses. They're just a completely different beast. And they're completely unrelated to rates of time discount and they're completely unrelated, as far as I can see, to rates at which you would evaluate welfare losses. So, it's a specific case. Yes, it relates to your footnote 48 in the sense that it shows that the New Zealand Government discount rate is much, much higher than those used in most countries overseas, but it's unrelated to the interest rate that's available on Government stock and it really ... it's not clear how it relates to the question of how you value welfare at all.

Q. Well, there's no country that prefers a zero rate of return for time adjusting discount rates for the future, is there, as a matter of practice?

A. As a matter of practice, no. Most countries do not make investments – and these are the rates for evaluating financial infrastructure investments – based on a zero rate of return. And that's one of the aspects that

Chichilnisky said. She said you don't want to evaluate using a 0% return for finances because it leads to the dictatorship of the future by the present. If we had a 0% rate of evaluation, it says, "The future is really, really important. We should sacrifice ourselves to raise the value of consumption and welfare in the future". And from an ethical perspective, indefinitely we should be doing that. From an ethical perspective, we don't normally consider that, yes, we should put aside $1 million so that everyone in the future will have an extra $50,000 – that's the interest rate return on $1 million – in perpetuity. We sort of say, well, yes, we could value that and then we would value the $50,000 in perpetuity for everybody at a really high rate. There's billions of years out there. Why should we not sacrifice $1 million so that billions of people in the future should have $50,000 each? And Chichilnisky said says, well, that's the dictatorship of the future over the present and that's the way you shouldn't just use a zero discount rate but you should average it with another term.

Q. Right, I think we've covered that yesterday again. All right –

A. We have, but you're bringing it up again and you're trying to say that these numbers aren't zero. Well, of course they're not zero. These are the numbers that are used for Governments to evaluate projects and you would hope that the projects that Governments are investing in are going to have a positive rate of return because they involve the sacrifice of taxes paid now in order to give benefits paid later. One generation is sacrificing its consumption possibilities now in order to provide consumption possibilities in the future, and you would hope that you're going to have a positive rate of return on that.

1130

Q. Thank you very much for your evidence. I have no further questions, Dr Coleman.

A. Thank you.

JUDGE WAINWRIGHT:

Thank you, Ms Feint. All right. Moving on, Dr Coleman, it's now Mr Bennion who's going to put questions to you.

(11:30) THOMAS BENNION TO DR ANDREW COLEMAN:

Q. Thank you, Dr Coleman, for your evidence. And I'm representing a group called Ngā Ariki Kaipūtahi out of the Mangatū hearing. And you'll be hearing some questions, I think, later from another lawyer acting for another Ngā Ariki group. This is not uncommon sometimes in these situations. But I hope I can clear out a couple of points with you. I'm just going to cover off under three headings. The first is just a question about schedule 1 of the Crown Forests Assets Act, which you should have in front of you. Ms Feint gave it to you. The second area is just to look at monetary losses and then non-monetary losses. Those are pretty broad headings, but I'll hope to just stick to questions that haven't already been covered. So, on the first schedule of the Crown Forests Assets Act – and I'm looking at clause 6 on the second page there – you see that talks about a four-year period being extended in some situations.

A. Yes.

Q. So, my question is this. As an economist, why do you think that constraint exists only on the 3(c) calculation?

A. And not on the other one?

Q. Yes, from an economic – I'm not asking you about Parliament's logic. I'm talking as an economist. What would you think economically would be a reason to put a constraint on the 3(c) calculation?

A. Again, it is to try and ensure that if a settlement is not made in a timely fashion, that people currently alive are compensated for the opportunity costs they'd have to invest that money or spend that money. That's why that's there. So, that, again, if it takes 14 years longer than you might expect to settle the claim, then the people alive in 2004 are being deprived of the opportunity to either spend that money or invest that money.

Q. All right. Thank you. Now, just looking at monetary losses, Judge Milroy yesterday – you may remember – early in the hearing made a comment that the courts up till now have dealt with simple interest and that's been replaced by compound interest recently. Now, are you aware of something called the Interest on Money Claims Act of 2016?

A. No, I'm not.

Q. All right. Now, that Act provides that compound interest is to be charged for successful litigants or to be applied for successful litigants. You wouldn't be aware, then, of the background and the reasoning for that?

A. No.

Q. All right. Historically, compound interest has been applied in situations of fiduciary duty. Do you know what a fiduciary duty is?

A. I'd like to know, thank you.

Q. Well, let me –

A. I'm not confident that I know what that phrase means, no.

Q. Okay –

JUDGE WAINWRIGHT:

Mr Bennion, you have given most of the evidence on this question so far.

THOMAS BENNION:

All right.

JUDGE WAINWRIGHT:

Are you sure that you're leading Dr Coleman into areas of his own expertise?

THOMAS BENNION:

Yes, I'm just checking if he knew about those matters, but they're obviously matters we can come back to in submission.

JUDGE WAINWRIGHT:

All right.

THOMAS BENNION TO DR ANDREW COLEMAN (CONTINUED):

Q. Thank you. Finally, on the issue of monetary losses, you're familiar with or you looked at Gareth Kiernan's evidence?

A. Yes, I have.

Q. And you accept his comment that – that's Wai 814, #P63. He says he didn't look at non-monetary losses. He simply looked at the loss of the

land base and then the returns to that land base. You understand that's the nature of his assessment?

A. I did understand that, yes. I don't actually agree with that as the appropriate metric to be using in all cases and probably not in this case.

Q. And why?

A. Again, if it's an act – if there's losses involved to people some time ago, we want to think about the welfare losses of those people. And yes, the failure to be paid is not bad because you don't get green pieces of paper. The failure is that you don't have the ability to purchase food or do whatever you want at the time.

Q. Right. So, –

A. And so the monetary loss is then converted into the welfare loss and it's that welfare loss that we should be concerned with.

Q. If I take you to your evidence at paragraph 57, so I think we're shading between monetary and non-monetary losses here. In paragraphs 56 and 57 and 58 you discuss losses to corporations and you say that "If a corporation" – I'm looking at 57 – "should have been paid an amount of money a certain number of years in the past it seems reasonable to calculate the current value of the payment using a compounding investment approach, because it is the same legal entity. An indefinitely lived corporation owed £1,276 150 years ago might well value that payment at $5.1 million today. This money, when paid, would be a bonus to the current owners of the corporation". Now, you answered some questions today saying that you understood now that Māori land incorporations might be different from ordinary incorporations because of the whakapapa basis of the ownership in that incorporation?

A. That's correct.

Q. So, when I look at the last line of paragraph 57, you say, "This money, when paid, would be a bonus to the current owners of the corporation". That's talking about just a – not a Māori land incorporation. If we were talking about a Māori land incorporation, that bonus that you talk about there might be seen by the owners in a Māori land incorporation as, say, the fruit of their ancestors' foresight in setting up the corporation. It might be seen in that way.

A. Yes, you could see that, but I'd like to say the external circumstances. It is true that if the money had been paid 150 years ago – for want of a better phrase – and then put in a trust fund with strict instructions not to spend any of the proceeds but to compound them for 150 years, then the failure to have been paid at that time is not going to change anybody in the intervening period's consumption. They will have had welfare losses, except this time it's considered voluntarily, "We actually don't like our welfare at all. We think it's really important that the money should be paid out in 150 years' time to descendants then, not 148 years' but 150 years' time, and they can do with the money what they want in these circumstances". So, that is right. I just find that it's completely implausible that the people would have done that at the time. I find it implausible that they may have invested the money and then used the ongoing interest to pay out to subsequent generations, but not that they would have invested the money with a strict instruction not to touch it for 150 years but to leave it to compound. And for that reason I would say, even if you believe they may have used the money to set up a trust fund, you then would need to go and say, "What is the consumption loss every single year between 1870 and now by not having the interest on that sum paid out?" Then you would want to go back and value each of those 150 years' worth of consumption losses. So, again, it's coming back to how do we value the consumption losses of the past and that's quite a different calculation than what is the value of £1 invested at compounding interest returns over 150 years? In the circumstances that there's reasonable grounds to believe they would've stuck the money into a trust and not touched it for 150 years, I can imagine that, you know, it would be worth whatever it is, 30 times as much, and payable. But I just don't really think that that's a plausible scenario. Now, when it comes to a corporation, what's happening is that a corporation, a normal one, doesn't have values. It has owners. If it wasn't paid out 150 years ago, the contemporary owners would not have got any money. If we now say that, "Well, it's a corporation for legal reasons. We have to pay it with compound interest", the current owners get the money and that's where the bonus comes from. The cost has been from the previous owners that didn't get the money. But in this use

of "corporation", I'm saying corporations actually don't have values. Yes, their owners have values but the corporation itself would be indifferent between those two. But clearly, in this case, there are winners and losers, the losers being the people who didn't get paid at the start and the winners being the people who get paid now.

1140

Q. What do you mean by the word "owed" in that second-to-last sentence, "An indefinitely lived corporation owed £1,276 150 years ago"?

A. I was probably using that loosely, but if someone had been owed – suppose a corporation 150 years ago had sold some land and had not been paid, then it would be owed money.

Q. And it would be entitled to recover that on a compound interest basis?

A. In normal commercial circumstances, that's true but, again, over 150 years ago. Over 150 years, it is actually highly unlikely that both corporations will still exist, in which case, you know –

Q. Well, legal obligations quite often span 100 years, don't they?

A. Yes, but if one party goes bankrupt, then there's a different set of legal obligations, right?

Q. Yes, but, for example, leases often span 99 years. They often have clauses making them perpetually renewable. Those sorts of arrangements exist, don't they?

A. That's true, although corporations aren't normally the people leasing out land for 99 years.

Q. Are you aware of the age of the Mangatū incorporation?

A. Ordinary corporations aren't normally the agencies leasing out land for 99 years. They're normally the people who lease the land for 99 years and put hotels and things on them.

Q. I just want to come back to paragraph 18 where you talk about discounting of non-monetary losses and you say, "I think that gets ridiculous if you go back 900 years".

A. Right.

Q. In this situation, we know that no one's going to be valuing losses before 1840. That's a legal limit on this process. Did you account for that?

A. Obviously I'm aware that money didn't exist in New Zealand probably prior to 1769, so, yes, I was aware of that. I'm obviously using this as an example of the difficulties that are involved in principle if you are using exponential discounting or historic interest rates compounded over long periods of time to value losses. You get nonsensical results over a long period of time and that suggests to me that the methodology has some difficulties.

Q. Although you say, "Over long periods of time", but you accept that it is a legally fixed shorter period of time in this case?

A. I do. The question is: is the methodology appropriate? And the example is used to say, if this methodology were appropriate and extended over lengths of time, then it would become patently ridiculous. And that is used to question whether the methodology is appropriate since it can't be extended into very long periods of time. Well, it can be extended, but it leads to patently ridiculous results. And again, the question is how we value non-monetary losses, right?

Q. Yes, okay. No, I understand what you're saying. I'm just curious that you didn't qualify that in-principle approach, knowing that there was a time limit on it in this case.

A. I do refer somewhere in my paper, from memory, saying that in the 150 years that we are considering, these numbers aren't patently stupid. Right? It is appropriate in this period that it is actually plausible that you could make an investment back in 1865 and the compound return number available now is in, you know, a reasonable bounds of what an economy could pay. It's the principle that if you go back further and further and further and say, "Losses in the distant past are much worse than losses in the near past", then you get to what I call patently ridiculous results.

Q. Right. I think we understand the point. Thank you. Just this question. In paragraph 70 when you're talking about moral hazard, you said, "Look, the Tribunal jurisdiction as you understand it is not about punishment. It's about prejudice and overcoming prejudice". I just wondered if there's a possibility of looking at the moral hazard issue – well, looking at the situation in another way that for some groups they perhaps made an overpayment in the past. They were required to make an overly generous

– to put it one way – contribution economically through confiscation or land processes that essentially extracted land from them in an unfair way, so that what's happening here is that that overpayment is being recompensed or remedied now, kind of like overpaying tax and then getting your tax back but with interest.

A. Again, I don't see the relevance of that to the moral hazard argument. The moral hazard argument would be: the losses that occurred to Mahaki and other iwi in the 1860s and subsequently are sufficiently bad that we do not want them to occur again and so we are going to force the Government to pay a very large sum now so that current people will ensure current Government does not make another mistake of that order because current people are scared that they will have even bigger losses in the future should the Government do it. So, the moral hazard argument is trying to put pressure now on current Governments not to do these things again in the future by making current New Zealand citizens particularly concerned that their Governments won't do things now so that they don't get an even bigger bill in the future. That's the moral hazard argument and, as I say, I didn't go there.

Q. Is the moral hazard argument about punishment or is it about something else? When I look at, for example, the reasons for compound interest today, they are that we don't want to encourage people to – if they don't pay their debts and a court requires them to pay simple interest but, over that period, the person who's recovering the debt is paying compound interest.

A. Right.

Q. So, is that about punishment or is that about fairness?

A. I'm going to ask you to explain the example a little better because I don't know this example where a court requires people to pay simple interest.

Q. Well, if someone is wronged so that their debt isn't paid, a court in the past might have ordered that the debt be repaid with interest –

A. Right.

Q. – at a simple interest rate. But while the person is seeking to recover the debt and is having to borrow, they'll be borrowing at compound interest rates.

A. Right, that's correct, if they borrowed to do that rather than used other sources of funds to make up the loss.

1150

Q. Yes. So, it's a matter of fairness, then, isn't it, to require the defendant to repay at compound interest rates?

A. It's always difficult to ask an economist to talk about fairness because it's not clear what is fair. I always say a fair is where you go for a carnival ride. Fairness of compound interest or otherwise is really talking about the opportunity cost and saying that we respect the ability of these people to have the opportunity to spend that money at the time in this way, but its relationship to fairness is – well, I don't know.

Q. A person might delay repaying a debt, knowing that they're getting away with a lower interest rate.

A. Right, so that's the moral hazard problem. So, there's –

Q. But that's not punishment, is it?

A. There would be two reasons to have a compound interest rate: one to the person owed the money so that they are recompensed in a way that reflects some of the opportunities that they had to make other financial investments, and the other is to provide incentives to the person owing the money to pay in a timely manner, which is a moral hazard issue. So, even in the example that you give, the high interest rate or the choice of compounding versus simple interest rate has two sides. On the person owing the money it has a moral hazard aspect. It provides an appropriate incentive to pay the debt in a timely fashion. On the other side, it has an opportunity cost aspect which says the person then is recompensed in a way that gives them available investment options should they wish to use those.

Q. All right. I'm just going to move on to something else and this is just the last area. At paragraph 29, you're talking about individuals and discounting and you say that people generally discount the future. "People value future events less than current events."

A. Right.

Q. And I'm interested in the other side of your paper at part 4 where you say that one necessary condition of economic development is good

institutions and belief in them and I think you expanded on that in your slides. In terms of valuing the future, isn't it the case that people often put themselves or are prepared to reduce their current economic wellbeing in order to meet what they see as a potential threat to those good institutions for the future: that those good institutions might come to an end? And I'm thinking here of, say, the Hong Kong situation. I'm thinking here of, say, the people who voted for Brexit and want no deal. Aren't they saying, "The value of institutions and our belief in them is more important than my current wellbeing"?

A. Yes, people have often fought in civil wars for these cases, right? So, the American Civil War was fought and there were half a million people – well, two thirds of half a million people died on the North side because they believed the institutions were worth fighting for. And in some sense, New Zealand's participation in the two World Wars this year and the Korean Emergency were also based on that.

Q. And is that somewhat similar to your concept of stewardship at paragraph 51, "A group may perceive value in bequeathing to subsequent generations what it received from previous", and it wants to pass on "a set of natural and cultural 'resources'", but that could include the good institutions which they believe are under threat now.

A. Yes, and there are definite people who appreciate the good institutions that their country has provided for them in many circumstances and are prepared to take enormous sacrifice to perpetuate those, either for themselves or for their children or for other people that they believe in. There's quite a lot of evidence that people will take to the streets, etc, to ensure Governments don't torture unrelated people to them because they believe in that sanctity.

Q. And that would be true historically, too, wouldn't it, people making those choices?

A. The Civil War in England was fought in the 1640s on those principles.

Q. So, take a society where the good institutions that you have are embodied perhaps in one or two people such as chiefs.

A. Can I just interrupt there? An institution in the way that economists use it is normally a habit or a rule that a society adopts and a set of enforcement

mechanisms that a society adopts. So, I don't know what you mean "embodied in one or two people". That sounds more like a monarchy or a dictatorship rather than a set of rules and habits and enforcement mechanisms that guides how a society behaves.

Q. Well, let me put it to you simply this way. If we think about imprisonment in the past, if I imprisoned an individual of your family 100 years ago, that's one thing. But if I imprisoned perhaps the leader of an entire group or a person representing perhaps a link to the gods for those people and their entire belief system, that would be quite a different level of effect, wouldn't it, for that group?

A. Yes. People – you're essentially saying societies have leaders and what those leaders do and what happens to those leaders is more important than what happens to common people in those societies, and that seems to be true in most societies. So, yes, imprisoning a leader of a society is in many ways more symbolic and has bigger effects that imprisoning a common person in that society. That says an awful lot about us, that we don't value people equally, but that seems to be true.

Q. Okay. And just lastly, on the issue of regional development, I couldn't help thinking of Rocket Lab in Mahia in terms of your discussion about firms. Is that an example of geographic location being a key factor or an important factor in regional development or viable economic development?

A. Well, you have some firms for very specialist activities can do some things in those areas. You could take that as saying there was a gold mine in the region and, yes, that gold mine does very well, but it doesn't mean to say that ordinary economic activity – it's a very good place to locate ordinary economic activity, right? So, in that sense, yes, you have isolated spots of specialist activity which do well in specific locations, but it doesn't mean that ordinary economic activity does well in those locations. And that seems to be the problem in large swathes of regional, well, not just New Zealand but regional countries worldwide is that it's difficult to run ordinary businesses as well in these locations as in other locations.

THOMAS BENNION:

That was all I had. Thank you very much.

JUDGE MILROY:

Sorry. I just wanted to ask something before we pass on to the next counsel about this moral hazard question. Personally, I don't like the idea of moral hazard, but if we can come back to what our Treaty of Waitangi Act 1975 says, at section 6(3) – I'll read it out to you because I'm sure you haven't got it there. But anyway, it says that, "If the Tribunal finds that any claim submitted to it under this section is well-founded it may, if it thinks fit having regard to all the circumstances of the case, recommend to the Crown that action be taken to compensate for or remove the prejudice" – so that's what we've largely been talking about – "or to prevent other persons from being similarly affected in the future". So, that is the jurisdiction that we are using. I'm not asking you to interpret this statute, but the moral hazard argument is different from that, isn't it, because the moral hazard argument is talking about the people involved in the original breach and punishing or otherwise incentivising them not to do something or to do something?

1200

DR ANDREW COLEMAN:

Not necessarily. So, to take the example I used with Mr Bennion, the moral hazard argument could be to say that a court or tribunal could send a signal to the current Government that the behaviour of the previous Government was so abhorrent that they will fine the current Government to ensure the current Government or future current Governments are very aware that they will be similarly punished in the future. And then that would provide an incentive for current citizens to ensure that their Governments do not repeat the obnoxious behaviour of the past because they would then be fearing higher tax bills for compensation or otherwise. So, that would be an example of a moral hazard situation where a court – I didn't say "you" – a court or tribunal might consider giving a large sum of recompense, which is paid by the current Government and its citizens because of behaviour of a previous Government, in order to induce better behaviour going forward. So, it's certainly consistent with a

penalty applied to current behaviour – to current actors to prevent – to induce better behaviour by the current Government and future Governments. Did I make that clear? I am not sure I did in the end.

JUDGE MILROY:

Yes, you did.

DR ANDREW COLEMAN:

Okay, thank you.

JUDGE MILROY:

And I think I better not ask you any further questions because it is really over to counsel to make something of that.

DR ANDREW COLEMAN:

Okay.

JUDGE WAINWRIGHT:

Thank you, Dr Coleman. I think the counsel for Wai 499 and Wai 874 must have sprung to his feet.

BRYCE LYALL:

Correct, my name is Bryce Lyall and, as foreshadowed, I represent Wai 874 and 499, which are both claims on behalf of Ngā Ariki Kaipūtahi and the Mangatū inquiry.

JUDGE WAINWRIGHT:

Mr Lyall, you are too far away from your microphone.

JUDGE MILROY:

Do you want to come forward and use that microphone?

BRYCE LYALL:

I think as long as people can hear me, I'm quite happy here if that's addressed the problem or we could use the lectern there.

JUDGE WAINWRIGHT:

A lectern would be good. You do sound a bit like you're in the bottom of a well. Thank you, Steve. Alan? Steve?

(12.03) BRYCE LYALL TO DR ANDREW COLEMAN:

Q. Too many names perhaps there. Kia ora, Doctor. Hopefully everyone can hear me now. You've been asked about the concept of Tūrangawaewae by a few parties now, are you able to give me a run down of your understanding of that concept, that term?

A. Actually I'm afraid I speak very little Māori and I don't know the phrase in Māori.

Q. Now you placed a lot of emphasis on the choices that are available to people, as I suppose most economists do, is that right?

A. Yes, economists often are investigating the choices available to people and societies.

Q. And in line with that you say at your paragraph 125 that the applicants here have disproportionately made the choice to live in places where average incomes are low. And you've discussed that over the course of your evidence yesterday and today as well, haven't you?

A. Yes, they weren't always low but they are now.

Q. Yes, and I think there was that nice phrase, "And then the jobs went away". Thinking about a legacy of land loss, of violence, of colonisation, do you accept that for Māori the choices that they face are more constrained than they might be for others?

A. I'm not sure I do accept that. There's a lot of people in the world who have very constrained choices and if you have a belief structure which suggests that you do one thing and not another thing, there's a lot of people with belief structures like that. So, if you're saying, if you are very tied to your land for your belief structure I have great respect for that but I am not sure that that means you are more constrained in your choices. You have the choice to move but you are making a choice not to move for that reason.

Now, yes, oftentimes people who are subject to violence and such forth are constrained in some of the things that they do. You know, they may lose limbs or such things, which does provide a constraint but there's an awful lot of evil in this world and there's a lot of people who would have constraints of, you know, similar ilk. Sorry, I'm not really sure where your question's leading but it doesn't strike me as immediately obviously.

Q. Well, we've been speaking a lot about theory over the course of the last day and a half but the people here have the lived experience of the prejudice that they've suffered because of the Crown's actions, so I am suggesting that where parties have lost almost all of their traditional land holdings, for a culture that cherishes their land, it's the treasure for them, their choices about moving away are constrained by the need to protect that little bit of whenua that they have left, wouldn't you agree?

A. Many people – I'm not sure, I can – let me – can I consider this for 30 seconds or so. It seems reasonable to say that if you're the last representatives of a group that has a very strong attachment to an area that you will are not wanting to move away, yes, that seems reasonable.

Q. Now, constraint on choices concerning location obviously doesn't constrain how any compensation might be used. It's not location based, is it? I mean, for instance, Dr Nana suggested the iwi could use money to promote education and you wouldn't need to live in this locality to benefit from that, would you?

A. No, that's true. No, no, clearly true and my understanding is many of the iwi do not live in these localities.

Q. Now, I felt a bit like we were all doom and gloom about the regions yesterday and, like Mr Bennion, I wanted to suggest that perhaps that's not entirely the case. There are examples of profitable firms, as is your term, within the regions, like Mangatū Incorporation, for instance, the people here. There would be nothing to stop any compensation that parties might receive being used to establish another firm like that, and perhaps even copying some of their structures as you were describing yesterday, would there?

A. No, there's no reason at all. I mean, I'm not completely doom and gloom on regions either. It is statistically proven very difficult for some regions

to emulate other regions because some businesses do not perform in these regions very well. And that's increasingly true. It is also statistically very difficult to copy the best performing practices of good firms. We don't really understand why that is so difficult but it just is difficult. I mean, it's not impossible, it is just on average difficult. Yes, sure, it is possible that you could set up a really well-behaving, well-performing firm in Gisborne. There's no reasons why that is not true. It's just statistically when you look over a lot of cases it happens that it's difficult and that's why average incomes in many regions are much lower than in big cities. And that's a statistical regularity from around the world, which is sort of supported by the enormous growth of big cities, which is why people flood to them and have been doing so for the last 70 years. So, of course, it's not impossible, it is just statistically difficult.

Q. And there are things that done well in the regions, obviously, like agriculture, viticulture and things along those lines?

A. That's true, although it's not always the case that average incomes in these industries, even though they are done well in these areas, are as high as the average incomes that you could earn in other industries which are located in big cities.

1210

Q. And for Māori, who might be suffering from generations of prejudice, being even a low rated firm is better than no firm at all, isn't it?

A. Well, in general, yes. You know, you'd want to be in a well-performing firm. I think, you know, as I said yesterday, this is the advice I give to all my students, really be careful who you work for because all employers are quite different. And the biggest increase in inequality in countries like America and Germany is coming from the firms people work for. Otherwise identical people work for well performing firms or badly performing firms has been the major reason for the increase in inequality in many rich countries in the last 30 years.

Q. And I am suggesting that if you are coming from a place of intergenerational poverty, even a low performing firm, any firm at all, is better than nothing, quite apart from having –

A. Well, yes –

Q. – the ability to go to university and do things like that.

A. – there's a lot of reasons why working for – you know, why work is valued for non-financial reasons. So, yes, I don't disagree with that.

Q. Ka pai. I'd like to ask you about your awareness of the tribal landscape within the Mangatū inquiry in particular. So, you've heard from Ms Feint this morning, so *Te Aitanga-a-Māhaki* is one group that you would be aware of?

JUDGE WAINWRIGHT:

Mr Lyall, I'm just going to ask you, where are your questions heading with regard to Mr Coleman's appreciation of the tribal landscape? It doesn't seem to me that these questions are taking us anywhere very useful in terms of the Tribunal's jurisdiction, but perhaps you can help me with that?

BRYCE LYALL:

His report as regards the Mangatū inquiry at least, focuses almost completely on the evidence brought by Māhaki. There was other evidence advanced and I don't want my client's voice to be lost in this proceeding.

JUDGE WAINWRIGHT:

A voice about what?

BRYCE LYALL:

A voice about the economic evidence and the purpose of that evidence within this proceeding.

JUDGE WAINWRIGHT:

Which was? What in particular are you speaking about?

BRYCE LYALL:

As Ms Feint described the evidence brought by Māhaki was to justify an award for Māhaki on that 95%.

JUDGE WAINWRIGHT:

Sorry, I can't hear you.

BRYCE LYALL:

So, their 95% of available compensation, which is what the Tribunal's discretion lives in, now Ms Feint said that that was – her evidence was brought to justify an award of the full 100%. Now, there's another reason that that evidence could have been brought, and indeed was, and that is to assist our Tribunal with a division between groups. We have five separate applications for resumption in the Mangatū inquiry.

JUDGE WAINWRIGHT:

All right, well, look, continue. I am just not sure that this is an area that Dr Coleman is really well versed in or is likely to be able to help us with. But *haere tonu.*

BRYCE LYALL:

I'm happy to come back to that in submission rather than going through it at this point.

JUDGE WAINWRIGHT:

Kia ora. All right, I think, Mr Tapsell, we turn to you now.

BRYCE LYALL:

That is not to say that I have no further questions.

JUDGE WAINWRIGHT:

Oh, you are not finished?

BRYCE LYALL:

No.

BRYCE LYALL TO DR ANDREW COLEMAN : (CONTINUES)

Q. Now, have you read any of the five applications for resumption brought by parties within the Mangatū inquiry?

A. You'd have to describe them more tightly than that. I read about 1,500 pages of briefing material that I was given, so if they were included in that I would have read them, otherwise –

JUDGE WAINWRIGHT:

Dr Coleman didn't have the pleadings before him.

BRYCE LYALL TO DR ANDREW COLEMAN : (CONTINUES)

Q. Kia ora. Yesterday you said a few times that it's up to the iwi to tell the Tribunal and all of us how they value the prejudice that they've suffered in the past. Wouldn't you agree that they have done so by filing the applications for resumption by appearing here and by filing all of the evidence that you have read or may not have read in the course of your limited time available to prepare your evidence?

A. They have indicated overwhelming interest in this. If you wanted to have a numeric value the numeric values that I've seen thrown out, which is what I was sort of asked to think about, I haven't seen those but I certainly – and I hope I made this clear – think that the way iwi members value the past welfare losses is a central component of the way that we should think about these past welfare losses, even if it's not the central component of the way the case is to be settled.

Q. Now, ultimately in this case the compensation will be determined under the scheme under the Crown Forest Assets Act and you said that you didn't consider yourself competent to provide guidance on those issues yesterday. To be fair, your commission precluded you from addressing schedule compensation but you did offer an opinion yesterday and again this morning and I wonder, was that based on any writing that you have done or was that –

A. An opinion on what precisely?

Q. The election that you would make under the schedule and the compensation that would flow after that?

A. I hope I didn't make an opinion. Could you tell me what my opinion was? I have tried to keep out that.

Q. Well, that you would elect the option that –

A. Oh, yes, yes, I am quite happy to defend – I'm quite happy to say that from an ex-post position of now looking at those three, 3(c) looks like the compensation scheme with the highest value. I am quite happy to say that.

Q. Now, the fact that that area has the highest value now, that is just because of the function of time more than anything else, isn't it?

A. Time and a very high rate of return, yes.

Q. Right, but the people that made the agreement back in the late 1980s, I guess other than being surprised by the amount of time that has elapsed, the figures today would not come as any surprise based on what they agreed to, would they? I mean, they laid down a formula and –

A. Right, and if they had read that formula and been told the initial sum and the length of time – actually they'd probably be surprised downwards because interest rates in the last ten years have been much lower than historic averages.

Q. So, even though the number might seem large, and it could have been much bigger, as you have just said, it still pales in comparison to what the Crown received on their end of the bargain, approximately 2 billion by 1996, doesn't it?

JUDGE WAINWRIGHT:

Mr Lyall, this is not something that Dr Coleman knows about or has been briefed on, or has been asked to critique. The whole regime for compensation under the Crown Forest Assets Act is something he only knows about because he's had read other witnesses' statements about it.

BRYCE LYALL:

Kia ora, and I felt he would be able to tell me that if he was unaware.

DR ANDREW COLEMAN:

Was the 2 billion that you refer to the compensation for the forests in the Gisborne region or was it for the forests in the whole of New Zealand.

BRYCE LYALL:

I believe that figure was nationally as given by Paul Quinn.

DR ANDREW COLEMAN:

Well, they're not really comparable then, are they?

JUDGE WAINWRIGHT:

You're asking the witness to comment on evidence that you are giving. I would just like to you to confine your questions to his evidence, please.

BRYCE LYALL:

Kia ora, I have come to the end of my questions. Thank you for your evidence.

JUDGE WAINWRIGHT:

Thanks. Thank you. Mr Tapsell.

ADAM TAPSELL:

Ma'am, I think most of the points I wanted to cover today have already been covered. So, at the risk of repeating what's already been said, I have no further questions.

JUDGE WAINWRIGHT:

Kia ora. Mr Mahuika?

MATANUKU MAHUIKA:

Sorry, Ma'am, I wasn't expecting to be on before lunch so I wasn't really –

JUDGE WAINWRIGHT:

Well, that's when you are on in the timetable.

MATANUKU MAHUIKA:

Yes, yes, I thought my friends would be much more longwinded than they were.

(12:19) MATANUKU MAHUIKA TO DR ANDREW COLEMAN:

Q. Actually I was going to ask you a question to start off what you have got against Gisborne but we have talked about that and I accept that it's not something that's about Gisborne specifically. Look, if I just pick up on the comments that you do make, however, about the idea of welfare and about this notion that if what you trying to do is you're trying to take into account the circumstances of the Māori population. You say in your evidence at various stages that there are choices that are made and place of residence is one of the choices that might affect your personal circumstance. Is that a fair summary of what you say?

1220

A. That's part of what I say. Certainly in the later parts of my evidence I state somewhat vigorously that regions differ in their suitability to generate high incomes and so if you choose to live in a region which does not generate high incomes, you are unlikely to earn as high incomes as if you chose to move somewhere else. Yes, definitely.

Q. But I didn't take it from your evidence that you were saying that the circumstances of say the Māhaki population or the Wairarapa Moana Māori population is entirely a function of choices that have been made. I don't think that is what you are saying, is it?

A. No, it's not what I'm saying at all. I'm saying, however, that if you try and, say, measure an income gap you should take into account that other people in these areas are also earning low incomes, not necessarily through any fault of their own but simply because these regions are not particularly productive. Again, if you think about my gold mine or a farming example, if you farm in a region that has poor quality soils you will do worse than if you farm in region which has high quality soils and that's got nothing to do really with your ability as a farmer or anything else. That's all I was trying to say. I am not trying to deny that there may have been reasons caused by unlawful activity in the past which are behind some of the losses or some of the low average incomes earnt by Māhaki, I'm saying that part of that is also due to the regions in which they choose to live simply being not highly productive regions in the modern world.

Q. Yes, so essentially what you're suggesting is that there needs to be a more nuanced assessment of the harm that's been suffered –

A. Yes.

Q. – in making a determination about what you need to do in order to cater for past welfare deprivation, if you want to call it that?

JUDGE WAINWRIGHT:

Can everybody hear Mr Mahuika? I think you are being a little bit sotto voce, Mr Mahuika.

MATANUKU MAHUIKA:

Am I? It might be because I haven't eaten.

MATANUKU MAHUIKA TO DR ADAM COLEMAN: (CONTINUES)

Q. The question I asked is, so it is a more nuanced thing, that is all you are saying. You're not expressing an absolute, you're saying that this is a more nuanced situation and you need to take into account perhaps choices that people have made but it's not an absolute?

A. Yes, in my evidence yesterday I hope I conveyed that living in a region may lead to lower incomes because well-performing firms don't live in these – don't choose to operate in these places. But I also suggested that just identifying the size of an income gap does not indicate the reasons why that income gap actually occurs and therefore makes – doesn't really help understand what can be done to reduce the size of that income gap in the future.

Q. See one of the things I was interested about though in looking at is that if you – you don't give the Wairarapa numbers but you do a Gisborne comparison at page 72 of your presentation. I wonder if we could pull that up, or slide 72 of your presentation.

A. Yes, those numbers were directly taken from my briefing around the paragraph so it was just a selection process.

Q. Yes, that is not a criticism, it is just I am here representing Wairarapa Moana but you have the Gisborne numbers so they're useful for the purposes of the analysis.

A. It's also not always possible to get the numbers from the Wairarapa, they don't exist as a separate area.

Q. So, one of the things that interested me, however, when you did look at is that if you look at your Gisborne region, your Gisborne region median income is 24,400 so your Gisborne Māori income is 19,900. Now, appreciating that you said there were other factors that might contribute to income beyond location, that is still a significant disparity between the Māori and non-Māori population in Gisborne?

A. That's very true, yes.

Q. And so that suggests that that disparity is about more than location?

A. Yes, if you look at the Māhaki numbers they are much closer to the Gisborne region. But, yes, so one of the things which it is possible to discern from the briefing papers, and I think they were produced by Dr Mead in this, one of the statistics irregularities in income is the number of people who are solo parents. That is much higher amongst Gisborne Māori than nationally average or amongst other people and that leads to low income statistically for instance. So, that would be one of the factors.

Q. Yes, but what it does –

A. Not causal necessarily but it is an associated factor.

Q. Yes, but I think the point that I am making is that that suggests, as your answer indicates, that it is more than region that is determining the discrepancy in incomes.

A. Oh, it is definitely more than region.

Q. Yes, because if it was just incomes those numbers wouldn't be different?

A. No, that's true. There's a lot of choices that people make when that earn income. That's partly why I threw in those Australian numbers in my briefing report because it sort of shows what is possible if people move to other regions and even in those New Zealand Māori earned slightly less than New Zealand Pākehā in Australia when both groups choose to move over there. And that reflects occupational choices. That has been well studied.

Q. Yes, but even then some of the choices you make might depend on the opportunities that you have had. So, there can be historical circumstances

affecting a population which then affect education, overall welfare of a population and therefore the chances available to you?

A. Certainly, without doubt.

Q. So, you may not want to go this far but it is possible to draw that comparison, isn't it, between historical circumstance and the effect of those circumstance and current circumstance?

A. Yes, and people – economists do that all the time. They look at economic history. If I can give you a simple example. There is something called the Dutch birth problem stemming from, I'd say, a famine in 1944 under the Nazi Germans, and the low birth weight of those children has not only caused low achievement of those children born in 1944 and not in 1943, say, but in even their descendants. You can still see the effects of the famine in the Netherlands in 1944 in second generation people going through. I only use that example because it is has been easy to well document that, but clearly historic losses and occurrences permeate throughout history.

Q. If I can just then go on to the content of the evidence itself. I am really wanting to understand the extent to which your evidence applies to the Wairarapa Moana situation because as I read your evidence a lot of really focuses on these non-financial losses in the distant past and the challenges that you have as an economist in trying to then quantify those for the purposes of making your compensation calculation?

A. That's correct.

Q. So, in the case of Wairarapa Moana, to the extent that you know about it, things such as unlawful imprisonment, torture, killing of people as a result of armed conflicts, they don't apply.

A. Right.

Q. The part of your evidence that I thought was most relevant therefore is the part which is at section 2.

A. Right, which is concerning the value of the Maraetai power scheme?

Q. Yes.

A. Right. Having said that, I would like to say that monetary losses in the past in my view need to be translated into welfare losses and valued that way. It is at that point which some of that discussion is still relevant to the

people in the Wairarapa who may have lost land or had land purchased at very low prices. I am very happy to move to section 2.

Q. No, well if I just pick up on that. I got the impression from the exchange that you had with my friend, Ms Feint, that there is a point at which you maybe make a transition. I am not sure where that point is. So, for example, if I lost 1,000 hectares of land today and I recovered it in two or three years' time, would you have a problem with me getting compounding interest return on the debt that's created by that loss?

A. I probably wouldn't.

Q. So, what that suggests is if you go back the 70-odd years then what you're saying is that we should then assess that loss based on the welfare impact that it would have on me. Is there a point that you make that transition from compounding to looking at the loss in welfare terms?

1230

A. I wouldn't say there is a point. If we – but there is an issue. So, if we took your loss of land 20 years hence, it would be feasible to compensate you with compound historic interest but it would also be feasible in 20 years hence to say, "What were the welfare losses that you actually had in each of those intervening years?" It is quite likely, as an individual, you could say, "Well, this was my welfare loss in that year but that was a long time ago, I don't value that very highly as of 20 years' time". If you valued your welfare losses in that way, you would probably come up with a very, very different number than the historic compounding interest. Then it becomes a question of – you have got two ways of valuing this, one values the losses that you have had and the other is the historic compounding interest number. One will be larger than the other because they are two numbers and which one you would choose under those circumstances, I think that is the point at where you say, "This is the most appropriate way to value these losses", method one. Or, "This is the most appropriate way to value those losses", method two. That becomes flexible and I don't know the answer to that, but you have still got those two streams happening.

Q. Yes. Would they necessarily end up in a different place?

A. Not necessarily but it would be a fluke.

Q. Right, okay. Just because they are quite different methodologies, so it would be entirely by chance if they ended up on a different – or it would be entirely by chance if they to end up as the same number? You would expect because of the difference in the methodologies that you would end up with different numbers based on the two –

A. Yes, I would expect to get different numbers. Again, a way of thinking about that is that the losses over that 20 year period do depend on the interest rates because that is the size of the lost opportunity but the way you value those losses depends on your intertemporal preference rates and you can imagine for very different interest rates, yes, it affects the size of the losses but it depends very much on your intertemporal discount rates on how you value those different sizes of losses so that, in general circumstances, you would come to different numbers.

MATANUKU MAHUIKA:

Ma'am, I was just wondering if that would be a good place.

JUDGE WAINWRIGHT:

Māku pea, āe, i te mea e hiakai ana koe. Ka hiki tā tātou hui ināia tonu nei, tae atu ki te – āe, tekau mā rima meneti i te kotahi karaka, 1.15, kia ora.

HEARING ADJOURNS 12:33 PM

HEARING RESUMES 1:19 PM

JUDGE WAINWRIGHT:

Kia ora, Mr Mahuika.

MATANUKU MAHUIKA

Kia ora, tena koe

(13:19) MATANUKU MAHAIKU TO DR ANDREW COLEMAN: : (CONTINUES)

Q. So, Dr Coleman, when we finished for the lunch break we were talking about the point at which you move, if you like, from taking a compound interest approach to taking an approach which is based on welfare considerations?

A. Right.

Q. I was really wanting to explore with you the – so obviously there is a judgement that is made as to when you make that transition, is that fair or is it more complex than that?

1320

A. I haven't often thought about this because it is much more to do with compensation for past rather than looking in the future. But, yes, there would be a judgement to be made and it may be the judgement comes when the two start to diverge quite considerably that people might say actually the use of historic investment rates is no longer a particularly good measure of welfare losses. So, it may be that they are not bad approximations over a short period of time and then over a longer period of time the divergence comes and it may be that a historic interest rate is, as I say, not a particularly good way of valuing the losses that people have. There is also another issue, is that people tend to be somewhat inconsistent in the way that they value events at different times so that they may look forward and say, "I would like to do this" and then once they get 20 years down the track they look back and say, "Actually, not just because of how it came out but my preferences are no longer the same and I don't think about that in these terms any longer. So, you can see that if you think of a person as changing through time that the valuations that they have at one period and the valuations that they have at another time may be quite different. When these two periods of time are quite close you are not getting the issue of divergent valuations.

Q. You have said it before, so preferences would be one thing that you would potentially look at in making that judgement as to when you make that transition?

A. Yes, I think so. But I have not given an enormous amount of thought to when you would use one and when you would use the other. To me certainly over long periods of time when one person is dead and another person isn't then I would be looking at the way a current person values the welfare of an earlier person.

Q. Yes.

A. As a metric that makes sense to me.

Q. So, time would be a factor?

A. Yes. When looking forward, when an economist looks forward, they almost always write down an equation which is just expressed in welfare terms.

Q. Right. Coming to the looking back, which you say is more complex, so preferences one time might be another that you would consider?

A. Preference?

Q. Preference might be one thing, so you are saying time is another because –

A. Yes.

Q. – because time can affect preference?

A. Right.

Q. What about whether the actors involved are the same? Would that be a consideration?

A. I think that's a huge consideration and, as I said, yesterday, people typically value the welfare of distant people much less than the welfare of family members, for instance. So, that is a huge consideration.

Q. What I would like to do now is take you to – can I go to paragraph 51 of your evidence? I am really just using that as a reference point because this is where you talk about the concept of stewardship. I would just like to understand how you think that applies, at least in the case of Wairarapa Moana. As I understand the way that the concept of stewardship is being approached here, and please correct me if I have this wrong, stewardship is important because your land is lost so in order to rectify that loss what you are saying is that consistent with the concept of stewardship what you should do is, at the very least, return that land to maintain that connection

for the group or for the people that are concerned with the loss that's occurred?

A. That is very close to what I mean but it is slightly different. For me the concept of stewardship is important because it says that you place a very high value on your descendants getting some asset and, in fact, I have been using it in the way of saying zero discounting. You want the people to keep having that asset in the future. Those people have a very high – should have a high expectation of having that asset passed down to them. A completely different case historically in Britain is that nobles used to be pass an estate to their first son. Not to the second or the third son, they were thrown out, they went to the colonies and caused all sorts of problems there I am hearing. But that would be – there is a real expectation that a first son would inherit the whole estate. That expectation means that if the estate is taken then it seems perfectly reasonable that the first son in the next generation would say, "Well, yes, I could have expected that to have been bequeathed to me". That is another aspect of the stewardship concept. It is not just that the people who are the current users of the asset are using it in a way in which they hope to pass it down fully but subsequent descendants have a reasonable expectation of having that asset passed down to them. I would then – and I tried to make a distinction on some other welfare things if a member of an iwi won a large raffle prize there may not be the expectation that that whole prize was passed down to a descendant. Yet there would still be the expectation that the land would be passed down to the descendant. There is an aspect to which those expectations seem to be part of the stewardship and should be about the way that we consider losses. A land loss would then be considered differently to a different type of loss.

Q. If there is a society, such as Māori society – if you place a high value on the notion of stewardship and leaving a legacy then that is something that you would need to take into account in assessing loss and compensation?

A. Certainly, which is why I hopefully – that is why I raise that whole issue in my briefing because that is not normally taken into account when you just consider individual discounting and yet, in this case, it seems to be a very – in fact potentially the – most relevant consideration, which is why I

wanted to extend the brief from ordinary notions of historic interest rates and discount rates to groups that have this.

Q. I think you also say in paragraph 51 that it is consistent with the notion of stewardship that you wouldn't expect 100% consumption to occur. So, if it is during my generation, my generation will not consume 100% because we will pass something on to the generation that follows?

A. Certainly when that comes to land but it may not be the case with other assets.

Q. Yes. If – and, forgive me, I am just trying to flesh this out – we use the example that you used of the olive tree, so you have the olive tree, you get olives from it, you make olive oil or whatever you make from the olives, it would be consistent with the stewardship notion that you would not necessarily consume all of that but you might want to invest it and grow what you have for the future.

A. Or it would be consistent with just passing the olive tree and not chopping it down or selling it. So, you could have a stewardship is that we have this olive grove and this will be inherited by the next generation and they can do whatever they like with the olives. It is not my choice to determine what they want to do with the olives but we do expect them to use the proceeds, the olives, in their time but to pass the olive grove further through time. I am not saying that – you were sort of intonating that you were trying to get us to actually save a few of the olives for the next generation as well so they are actually doing better than us because they get the olive tree plus the additional investment. I would not see that as being necessary at all.

Q. It doesn't necessary follow. So, what you are saying is at the very least you would leave the olive tree?

1330

A. Or whatever is the treasured asset under consideration.

Q. Well, the olive tree for the sake of the analogy?

A. In New Zealand it may be that there are kiwis left alive.

Q. But what you're not precluding, however, is that – and it does depend on the mindset of the people that have it in their preferences – you're not precluding the possibility that you would do more than leave the olive tree in order to provide for the generation that follows?

A. That if you – yes, it doesn't preclude that. That they may want to have a continually growing standard of living for subsequent generations and that each generation would be expected to pass on more than they got themselves to a subsequent generation. If a group or society had that ethic then, you know, that is a different ethic and that, in some senses, is to be respected. But there really is – if one group, one set of members of a collective or iwi have had losses, it is not an automatic expectation that their descendants would have been able to have all of those losses passed on to them. That is sort of part of that stewardship is that there are some assets which can be passed on or which are expected to be passed on and others which aren't.

Q. But I think that the thing about it is that if you own a piece of land, it's not just that land that you own, but you also have the opportunity that comes with that land. That's perhaps the point.

A. That's true.

Q. So, it's when you're deprived of the land, you're also losing the opportunity that potentially went with that land.

A. You're already(?) losing some of those opportunities, yes.

Q. Yes, and –

A. And you would have spent some of that and you may have passed some of that on.

Q. That's right and that's where the judgement comes in around: what approach do you take in terms of calculating the compensation?

A. That would be partly it and I've said that before. If you had chosen that – if you would have passed it all on to skip 150 generations, no payments and then pay it – start paying out the whole thing, yes, that would be consistent with using a historic compounding interest approach. As I say, I find that very implausible as a – as an approach, relative to one, say, of spending some of it or putting some of it as an aside, which is used for subsequent generations and paid out bit by bit so that each subsequent generation gets to enjoy some of that bounty, so to speak, which is different from just the land.

Q. And correct me if I've got this wrong, but would you have to preserve 100% of the bounty in order to have a compounding situation?

A. Well, from the way I just described it, yes, and I mean, that –

Q. But you –

A. And it would never be paid out –

Q. No, but –

A. – in the intervening – never paid out and consumed in the intervening – by intervening generations. It's – those people would have welfare gains from the money that they had. But by the act of consumption, it would mean that the pot is deprived and so it stops growing at such a big rate, yes.

Q. Yeah. Well, I think that's the point of my question; is that if I spend 50% of the bounty but I don't – but only 50%, that means it's accumulating by that 50% over time. So, –

A. So, long as no one else spends it in the intervening time.

Q. Yeah. I understand, but what it means is that I don't have to spend 100% in order for there to be growth. I can spend less than 100% and there would still be growth, depending on how much I spend.

A. Yes, but also depending on how much subsequent people spent.

Q. Yes.

A. Then you get the compounding so long as no one in the intervening period actually uses that money. Otherwise, we're back to the simple interest. So, –

Q. Yeah, and I accept that. So, you do have – but so – the point is you have to make an assumption about the rate of consumption over time.

A. Yes. No, that's exactly the point, and so that's a counterfactual and there's – and when you start going into counterfactuals, you – well, it's a minefield because in the counterfactuals you would say, "Well, some people who were born wouldn't have been born" and you end up with –

Q. But –

A. There's an infinite number of counterfactuals in the in-between timeframe(?), is the problem.

Q. Yes, although –

A. There's reasonable ones and there's unreasonable ones.

Q. Yes, that's what I was going to say. So, although there's an infinite range of possibilities, actually there's probably a narrower range of possibilities

based on – so what we know about a community and their behaviours, for example.

A. Yes.

Q. So, if there is a stewardship preference, we can assume that there would be a continuation. So, it wouldn't be 100% consumption necessarily. There may be an attitude which is about leaving a legacy for future generations and that is a preference we might take into account?

A. I –

Q. I appreciate it's hypothetical though(?).

A. No, that's completely true, but I would – again, that could be completely different for one class of asset, land, which is expected to be passed on each – from generation to generation, and another class of asset where the expectation, to me, is unlikely that even if you put, say 50% of the money in a trust fund that you would then say, "And the trust fund won't be spent for 150 years". It's much more likely to say, "And the earnings from the trust fund [the olives from the olive tree] go to be – to each cohort or each generation each year to be spent as they like". Now they may then take a small fraction of that and add it to the trust fund so the trust fund grows over time. That's a possibility. But it seems to me very unlikely that you would specify a date some time in the future and that the trust fund grows at historic interest rates until that date so no one between now and then gets any use of it but then suddenly at some point in time it kicks in and a lump sum is left to someone else.

Q. Yeah. So, we – but we could look at it like an endowment, for example. So, the way that an endowment fund works is that you have a capital sum that you invest. You expect to make a return on that endowment over time. And typically what happens with an endowment is that you take into account inflation, you take into account the desire to grow the endowment fund and you also take into account spending. So, you have a balance of those things that you might take into account. Not saying that's the formal process that was gone through, but you can do that with an endowment.

A. Yes, and I mean, in some circumstances that would be completely sensible. So, a grandparent putting $10,000 at the birth of a grandchild for their university education in 20 years' time may specify the – "This will

compound at interest returns and it won't be spent for 20 years and a lump sum will be available to that person at that time". So, that would be a very – you know, I mean, that – it's very easy to imagine that. It's much less likely that you would say – it's not impossible that you would put money aside for an unknown person in the family that could be born in 150 years' time. That – you know, it's not impossible. You could say, "Here is an endowment for the first grandchild" or the first great grandchild. You know, that's not unbelievable, but it's also much less likely.

Q. Yes, although, I mean, if you take the grandparent and grandchild example, another way you could look at it is a tribal people that value the opportunity and the idea of passing a benefit to their descendants.

A. No, without doubt. The issue here is compounding and whether or not you're specifying it with a big gap, which says, "None of that money will be spent during the intervening period" because that's actually what's necessary to get the compound historic interest rates; is that none of that money gets spent. Suppose you said – you know, here's just a – you said, "We have a trust fund and we will spend half of the earnings each year and reinvest half". Then the trust fund would grow at half the interest rate compounding, right, and the half would be paid out. So, that would be a way of compounding, but it wouldn't be compounding at the full interest rate. It would be compounding at a much lower interest rate in order to ensure that each generation was actually a beneficiary of the trust.

Q. Yes. So, just using that sort of mathematical formula, what you would be doing is you would be making some assumptions around the rate of consumption and you would be adjusting your interest rate accordingly. So, for example, if I am investing and I have a real rate of return at, say, 7% over time, but I'm going to spend 3½% of that, then my actual real rate of appreciation in the growth of that fund is 3½%?

A. Yes, right(?). No, that's exactly it and, you know, I find that's somewhat plausible. But that's the sort of thing that you would need to be saying, "What is a plausible use of this money?" and then you would work out the welfare losses.

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Now in this case, the consumption losses by not spending it from the first people: well, it's hard to work out what those losses are because they are voluntarily choosing not to consume and so that's not really a loss. But you would say, "Yes, we would expect this trust fund to grow at such-and-such a rate to be continually available", right. So, it can grow and be continually available. I mean, that's sort of how the New Zealand Super Fund should be operating. You know, it's sort of designed to operate – well, it's not really, but it should be designed to operate with – in precisely that manner.

Q. Yeah. Yeah, and you'd probably find that a number of iwi operate that way today.

A. That's fine if there is a – but that then has an expectation of a continually raising amount of money over time, and that's fine. But then if you're using that, that sort of needs to be specified rather explicitly about how we're thinking of the welfare losses associated with being deprived from that money because you would say, "Well, we would have spent some of that [and that's one aspect of the welfare loss]. And, yes, we probably would have invested some of that in this continuing fund". And that would have grown at such-and-such a rate and that would be a different aspect of that. So, I have no problems with that, but that needs to be specified fairly tight and it will lead to very different answers for very different reasons –

Q. Depending on what your assumptions are around rates of consumption?

A. Yes. Yes.

Q. And if I come back to the original discussion about stewardship, I think what I'm saying - and I think you're agreeing, but tell me if you're not - that that idea is not inconsistent with the notion of stewardship?

A. It's not, but stewardship doesn't imply that idea, right. You can just have stewardship over the land and – without needing to build up an additional asset on top of the land in that case.

Q. If I could change tack?

A. Sure.

Q. I'm sure everybody's had enough of listening to us talk about that. If I could take you paragraph 81 of your evidence, and this is where you deal

specifically with the situation as it relates to Wairarapa Moana Incorporated.

UNIDENTIFIED SPEAKER: (13:42:39)

Just tell me where you are.

MATANUKU MAHUIKA:

Paragraph 81. Yes, on page 33, Dr Coleman.

DR ANDREW COLEMAN:

Yes.

MATANUKU MAHUIKA TO DR ANDREW COLEMAN: : (CONTINUES)

Q. Let's look at my notes. And first of all, again to help me in understanding what you're saying here – so in paragraph 80 when you introduce this, you haven't analysed every aspect of the issues that have been raised in relation to Wairarapa Moana. You've really highlighted those matters that stood out most to you first of all?

A. That's true.

Q. And in terms of the Maraetai power scheme, the way that I have read your evidence is that – so you raise an issue with the weightings, if you like, of the alternatives that Dr Meade has considered.

A. Right.

Q. And also there's a question that you raise about if the Crown had understood in 1947 that it would have to pay $8 million - or £8 million, I think, was the number - then it might have done something different. So, you're looking at this idea that there's a counterfactual here. So, had the Government known that it was necessary to come up with a different arrangement, it may have done something different.

A. Yes, I think that's reasonable.

Q. Is that a fair summary of –

A. Yes.

Q. And I was just wanting to understand a little bit more about the counterfactual. So, in terms of that analysis, there are other counterfactuals potentially. So, you could accept that the Government may not have been prepared to pay £8 million. But another alternative might have been the Government entering into a joint venture with the iwi landowner, which would have been – wouldn't have cost the Crown anything from a cash point of view and would have provided a benefit to that iwi into the future in respect of that area.

A. That's true.

Q. So, that's another possibility in terms of looking at what might have been done?

A. Yes, there's several possibilities and one I didn't raise, which you might want to ask me about.

Q. Well, raise away.

A. Well, one of the issues here is that the calculations in some sense have been done on an ex-ante basis. It's saying, "This is what the Government would have paid in 1947 if it had gone through this procedure on an ex-ante basis". But with your joint venture and that, it could have gone forward on an ex-post basis. So, to take an analogy, it would be a Government might have said, "We think there's gold under that land and we are going to make a value of their land based on what we think the gold is". And then – or they could say, "We think there's gold under that land and we're going to have a joint venture. And if there's gold under the land, you can have half and if there's no gold, you don't get anything", right. And in some sense, what Dr Meade and my understanding of Dr Meade has said is, "This is what we think is the value of doing the Maraetai scheme, relative to the next best option. And we're going to take that on an ex-ante basis on what, in 1947, we think is the next best option". And in some sense, what I've said here is, "Well, those expectations may have been wrong", partly because they might not have done enough work on it. And then I'm also sort of saying, "On an ex-post basis, we actually found that the ex-ante" – I'm getting ahead of myself. The ex-ante expectations was that the next best option was an oil-fired generator and that's an expensive one, and so the gap between Maraetai and the oil-fired

generator is very large. In ex-post, they could have said, "Well, actually we did coal and geothermal before oil and gas. And so the ex-post benefit of Maraetai, relative to these alternatives, is actually much lower than what we thought in 1947", right. So, if you'd done an ex-post basis, the calculation would have come out and said, "Well, actually in 1947 we thought it was going to be very valuable, we thought there was gold under the land, but when we actually went and dug it up, there wasn't nearly as much gold as we imagined". And so the benefit of doing Maraetai, relative to these other alternatives, wasn't so high. Now – so there's two issues. There's the "What is the ex-post benefit?" That appears not to have been so high. And "What was the ex-ante benefit and was it calculated properly?" And so there's two separate sort of issues flowing around there and I guess I was focusing on, "Look, ex-post the benefit does not seem to be so high. [And they found that out pretty quickly because they got started on these alternative power stations pretty quickly.] Ex-ante, they may have had those beliefs that only oil was possible. But if they had known that the fee they were going to pay was going to be based on their beliefs, they might have actually done an investigation somewhat differently".

Q. Part of the challenge here, it seemed to me, is that we do have to try and recreate, first of all, what was in the minds of the people in 1947, although actually I think the land was taken formally in 1953. But secondly, we are, because of this process, in a situation where we have to say, "Well, what would a Treaty-compliant regime have looked like?" Now I understand that's not your –

A. Right.

Q. – area of expertise, but that's the process we're in here. So, we – inevitably, don't we have to be thinking about "What does that scheme look like?" and therefore "How does that compare with the situation that existed at that time?" I mean, I don't if you can comment (over speaking)

A. No, I completely agree; is that the decision by the Tribunal to say that the land should have been purchased at the – its usefulness as hydro station – as a hydro station, as I make a note in my brief, that is likely to be quite different than what was expected in 1947 when they were, you know,

following the Settlers' Act of 1943 about buying land at alternative farming value. That was the law of the time. So, already we've got into account a factual situation at a time when land values were, by law, very low. So, we're at a very different counterfactual situation from that and then we're now having to go back and say, "Would we have done it on an ex-ante basis in 1947, based on the expected value of the Maraetai power station, relative to the next best alternative?"

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A. And that's still swallowing that that's how they would have valued it. Or would they maybe have done it on, "Well, let's give you a measure annually of the cost saving, relative to the next best ..." They're all counterfactuals. I guess in reading this material, I was struck that the ex-ante counterfactual chosen delivers a number that appears to me much higher than one that would have been an ex-post counterfactual if a different arrangement had been chosen, just the same way that if I bought the land of a gold mine, expecting to find a million ounces and only found 300,000. It's sort of that thing, and had paid for the land on the expectation rather than the reality. I'm struck that, "Okay, we're paying for the land on the expectation of a million ounces. Only 300,000 were found. What should we be paying?" And again, all of this is counterfactual and I was just struck that the counterfactual is "Well, we've chosen quite a high number, relative to the ex-post benefits of the Maraetai station, relative to the best alternatives". So, I'm not wishing to make a judgment there. But I am actually wishing to point that there are alternatives which could have made sense and those would probably have been a much smaller number, given how the evolution of power station building eventuated.

Q. And I think – so if you applied my joint venture counterfactual, the –

A. Which I'm sympathetic to.

Q. Yes. Yes, and so the timeframe though is that when you are negotiating those things, you do it in advance of doing the work typically rather than afterwards, don't you?

A. Well, again, typically? Well, with a joint – I mean, yes, you typically do do these things in advance. In this case, it's not typical because, as we have established, in 1947, you know, there was a completely legislative regime

going on. But even if you did a joint venture, the joint venture might be based on the actual savings from using this power station, relative to another, as they come about and as technology evolves, rather than what we think the savings will be, based on our current expectations of the evolution. That seems completely plausible; is that we say, "We'll have a rule, which says each year we will say 'What is the next best cheapest way of producing electricity, as we understand it now?'" And you get - I'll make up a number - a third of the difference between that and the third is just the want of making up a number. But you can imagine a rule-based joint venture, which says, "It will be based on some formula about ex-post results", just as with a gold mine you would say, "Well, you get a third of the gold that we discover and if there's not much there, well, you don't get much and if there's lots there, well, you get lots".

Q. Although in this situation, the incentive was to build the power station.

A. Yes, the country was desperate for power.

Q. So, it's logical to assume that if you're thinking about it through a set of 1947 eyes, your key objective will be to get the power station built, without necessarily considering your alternatives?

A. Well, the – that may well be true, particularly if you think that this is the best way of building a power station. But that's actually not the issue here. The issue is: how would you value the land to build the power station there? And if the answer is – that's an "if" statement. If the answer is, "Relative to the next best option", then the land value does depend on the next best option, rather than – well, next best relevant options, rather than other considerations, which is Dr Meade's approach in here; was to say, "The value of the land should be on the next best option". And then the – then it comes down to a question. Do we say it's "What is the next best option, as believed in 1947, or as it actually eventuated?" or "What is the next best option, as we believed in 1947, given an investigation process, which wasn't actually expecting to pay out on that basis?" So, that was the sort of the two points that I tried to make and in both of those cases, that would – from an ex-post observation of what eventually happened - that we found that coal was actually much cheaper and geothermal much cheaper again than oil - you know, those 1947 options were – may have

been best – as best as they could have been or maybe not as best as they could have been. But they were out anyway and they would have led to, you know, paying for the land under the gold mine under the expectation of a million ounces when you're only getting 300,000.

Q. Well, I think that's the point though. If you're negotiating a price to buy a piece of land where you think there's a million ounces of gold, the price you pay is going to depend on there being a million ounces of gold, not 300,000 –

A. Right.

Q. - (over speaking)

A. That's the point, but –

Q. Not 300,000 ounces.

A. – but that presupposes that when we're creating a counterfactual of what the Government should pay for the value of that land, it's based on an ex-ante valuation in 1947, rather than the ex-post we know what it was worth. It's like using my gold analogy again. If there's an instruction that, you know, the Government had taken gold mining land from Wairarapa Moana that they should be recompensed on the value that the Government thought there was of the land – the gold in the land, rather than what we eventually mined out of it. And you can sort of see, well, it's not inevitable that that would be seen as the best way of evaluating that. So, you can imagine – again, I can imagine quite a few things, although not everything. But you can imagine the Tribunal setting on that exact question and saying, "How much should Wairarapa Moana have been compensated for the gold found under their land?" Is it the million ounces you thought were there in 1947 or the 300,000 that actually were there when it was dug up? And it's not obvious to me that you would choose the million that the Government thought that there were there.

Q. Change of tack again.

A. Okay.

Q. So, let's go to paragraph, I think, 139 of your evidence. Let's see how accurate my notes are. Yes, so paragraph 139, and hopefully this doesn't take too long. There's a discussion in relation to the Harvard project.

A. Right.

Q. So, this is a project about American Indian economic development with Joe Kalt and Steve Cornell and co.

A. Yeah.

Q. So, there's quite a bit of discussion in your – well, there is a bit of discussion in your evidence – well, let's not overstate it – in relation to the importance of institutions and good governance, based in part at least on what comes out of the Harvard project. Is that a fair summary?

A. There's two aspects to that, yes. It's the importance of good institutions and good governance and the importance of belief in those institutions and good governance, yes.

Q. Yeah. So, for example, one of the things that's come out of the Harvard project is the idea of culture fit.

A. Right.

Q. So, the idea that institutions need to reflect the culture of the people on whose behalf they're acting. If they don't do that, then there isn't confidence in those institutions.

A. Yes, and that's really why I had wanted to discuss this material.

Q. Yes. But in terms of that, that deals with one aspect of a community. I noticed in paragraph 133 of your evidence on page 55 – and here, I accept you're not talking about communities; you're talking about successful firms.

A. Right.

Q. And you have listed underneath. You've got the list from (a) to (f) and then the – in the part under that, you say, "Firms and organisations that have healthy and educated workforces, that employ appropriate scientific and management technologies, that have appropriately large amounts of capital, that have access to energy resources ..." You list a series of things that are important to success.

A. Yeah.

Q. And so when you're thinking about the idea of good institutions and good governance, if I – and you can tell me if I shouldn't be running these two things together. But if I put that alongside what you've said in paragraph 33, that's one but not all of the equation that you would be wanting to complete in order to have a successful firm or a successful community?

A. Right. So, good institutions are often seen by economists as a necessary condition rather than a sufficient condition. You need them and – you need them around, but just having them doesn't mean you will get success. You need other things as well to get success.

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So, yes, I listed those as typically what is necessary for a firm to perform well. In some sense, the institutional framework necessary to induce a firm to have all those things is lying behind. You know, it's the wizard behind –

Q. So, there's a bit of chicken and egg there almost , is there, or – if you don't have –

A. Not really actually.

Q. No?

A. Well, no, I'd say almost not really. Some of the biggest experiments or occasions in recent - and actually "recent", I mean 150–year history - is that when countries undertake big changes in their institutions, they normally get big changes in output, right. So, South Korea had big changes in its institutions after the South – the Korean War in the 1950s and South Korea went one direction and North Korea went another. East Germany and West Germany is another case. The Meiji Restoration is another case. When you see countries adopting big changes in the rules and institutions which govern them, you often see big changes in economic performance. So, that's more of a chicken or an egg or I don't know, but it's – there seems to be some causality there anyway.

Q. Yes. But I think my point though is that you could have good institutions. If you don't have capital, then – or you don't have access to those technologies or if you don't have access to that capability, then the institutions in and of themselves don't get you to the ideal end point, do they?

A. No, that's certainly correct. So, that's – I guess I – what I meant by a necessary condition; that they tend to be – you can fail for many reasons, unfortunately.

Q. Yeah. But I could be the best governor of the world. If I'm the best governor of the – in the world and I have nothing, then that's not really a

good starting point for me to be in, is there? I'm better off being something to govern than nothing at all to govern?

A. Actually, that's probably not true. There are many countries which have started with –

Q. There's hope for me yet then.

A. – there are many countries which have started with very little but good rules and have done very well because other people have seen that they've got good rules and have lent them the capital or invested in them because they believe that this is a country that will be going places and will repay them. And there's many countries which have a lot of natural resources and have done very badly and partly because the governor has expropriated them all for himself - it's normally a himself, but sometimes it's a herself - and the country has done very badly. So, I wouldn't ...

Q. So, you don't think that's a precondition? It would be better to have capital though than not have capital?

A. Yes. Yes, it's normally better to have capital, but it's not a necessary condition because countries which start with very little can – and have the right frameworks and institutions can oftentimes borrow and – or have investment in them if it's not borrowing and that leads them on to a very productive path. Singapore started with very little in 1962 but an institutional framework, which encouraged a lot of foreign investment, and Singapore is more or less the richest place on earth now. They started with nearly nothing and, through a process of accumulation, have done very well.

Q. If you think about the Harvard project and what's come out of that, sort of all that research and other activity, one of the things that they emphasise as a starting point is self-determination. And that's recognised, I think, as being an important condition in which to succeed.

A. In those circumstances, yes.

Q. Yes, and I accept - and I think you said it yesterday - that that is very specific to the Native American situation where your Native American tribes are treated like sovereign nations and therefore given a high level of independence. That's fair, isn't it?

A. Yes. Yes, it's not directly relevant to –

Q. No.

A. – the circumstances in New Zealand, except the recognition that adopting a culturally appropriate response to the institutions may be very necessary in circumstances where an indigenous people or another people have suffered from the prevailing abuses of the current rules.

Q. Yes. So, would you agree that self-determination is also – there's an economic aspect to it? So, ways that I can control my destiny: some of them are political, some of them are by having the economic and financial means in which to do the things that I choose to do.

A. Yes, that seems reasonable.

Q. I'm almost done.

A. Okay.

Q. One last thing. If I go to – it's really paragraphs 13 and 16 of your affidavit where you discuss the approaches taken by Dr Meade and Mr Mellsop in relation to their evidence. And, look, I think I'm right in saying this. I don't think you're saying they're wrong, are you? But you're saying that there are alternatives and perhaps you're saying you prefer alternatives?

A. I potentially wasn't as clear as I could have been here. It would be – I do believe that in some of their uses, they're wrong; that in other of their uses and potentially more important cases, that they are right; and that you need to take a case by case basis to these valuation issues. And it seemed to me that they had used a very similar process on all of the problems - the compounding, using historic interest rates - whereas I certainly would not have chosen to use that on all of the approaches. This, if I may, Miss Faith?

Q. Feint.

A. Her questions this morning were sort of getting at that. Am I unhappy with a valuation based on the current value of land? Well, not really; I'm not unhappy with that. Am I unhappy with some of the valuations on historic interest rates, opposed to, let's say, in wrongful imprisonment? Yes, I'm not particularly happy with that. You go through on a case by case basis and you work out which one is appropriate and then you use the most relevant ones of those. And I think that is – what I was hoping to convey by those two paragraphs is that the, what appeared to me, a fairly blanket

approach of using historic interest rates to compound historic losses did not seem appropriate in many of these cases for me but not – some of it was. Some of the cases, it would have been appropriate or the approach adopted in some of those cases was appropriate and that you really need to carefully go through these on a case by case basis and work out which ones were the most relevant calculations for the Tribunal.

Q. Thank you very much, Dr Coleman.

A. Thank you.

Q. Ma'ams, I have no further questions. Thank you very much for your evidence.

JUDGE WAINWRIGHT:

We're giving you, even the most experienced of you, new experiences. You get to go "Ma'ams".

MATANUKU MAHUIKA:

I have to say: I wasn't sure what the plural was.

JUDGE WAINWRIGHT:

It's not "Ma'am".

MATANUKU MAHUIKA:

I'm better not to comment.

JUDGE WAINWRIGHT:

Well, kia ora, Mr Mahuika.

TIM CASTLE:

Judge, just for a moment if I may?

JUDGE WAINWRIGHT:

Yes.

(14:08) TIM CASTLE TO DR ANDREW COLEMAN:

Q. Dr Coleman, could I just take you back to Mr Mahuika's olive grove?

A. Yeah.

Q. Leave Maraetai power station to one side. This is an olive grove under the protection of Hikurangi and Mr Mahuika cherishes the land and he cherishes the olive tree on the land, and there is philosophically a wish. Because he cherishes both and his whānau does, now and before and no doubt to come, he wants to leave something behind for those who are to come. And as I understood your thesis when addressing that olive grove analogy, you – for the purposes of trying to establish value and plausible, robust value, you calculate or factor in certain assumptions, one of which is the assumption of stewardship, if it applies. Another countervailing assumption, at least as I understood what you were saying, was an assumption of consumption over time.

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Now in circumstances where you may have colliding assumptions, my first question is: why make assumptions at all when the underpinning philosophy that the Mahuika whānau bring to their cherished land and olive tree is that there will be, always, something of them both available for all of those who are to come?

A. Right. So, I really wasn't making assumptions about that other than then, in those circumstances, it would be completely appropriate that if the person – the olive tree was cut down and the person was displaced from the land that their descendants should have an olive tree and the land restored or if it's not possible to have the land restored in that place, an olive tree put on land somewhere else. What we were discussing subsequently was really, look, every year this olive tree is generating olives. Would the original people have saved those olives or sold them and invested the proceeds in addition to leaving the olive tree and the land? And for that, you need assumptions on whether the people would have consumed the olives or the value of those olives at the time or whether, in fact, they would have set aside some of those proceeds to set up an additional trust fund so that subsequent generations had an olive tree, the land and a trust fund that was providing them with additional

revenue. I think that's really where the discussion was and when the discussion comes down to, well, what would the original people have done with the olives - not the olive tree or the land but the olives - my contention is that the use of historic interest rates is equivalent to saying, "All of the original value of the olives, every year, would be sold and compounded in a trust fund for availability of the generation in 2019 and for no one in between". And that's what I find implausible, not that they would have left the olive tree and the land subsequently, but that all of the proceeds of the olives would have been sold, invested and never eaten by the people in the intervening years. So, it's those assumptions that I think you have to make because that would say whether the proceeds, the investment proceeds of the land, are consumed or not.

Q. Thank you. So, is it – but is it – maybe it's not even a "but". So, is your thesis that it's an all or nothing situation for the purposes of reaching a plausible circumstance for value, valuation purposes?

A. No, it's not that it's all or nothing. That – again, if –

Q. I mean all of the olives not if - (several inaudible words 14:12:54)

A. Yeah, you're taking from the olives. I mean, no, it's not all – pardon. So, our discussion was, for instance, whether we use half the olives and then sell half and invest those proceeds in some sort of trust fund so that each subsequent generation not only gets half the olives from their tree but gets some of the proceeds from the trust fund, is – not only gets the olives from the tree but also gets some of the proceeds from the trust fund as well. And that, to me, it seems relatively implausible – it's not completely unbelievable, but it seems relatively implausible that a trust fund would have been set up, which specified, "We're going to put all the money plus the compounding interest in, but it's going to come available in 2019". You know, and it's – sort of it's the implausibility of the 2019 bit. I don't find it implausible at all that the first generation could have sold their olives, put the money in a trust fund and said, "All subsequent generations can spend the annual interest from this trust fund". That seems completely plausible to me. But that leads to a different outcome because then we would be saying that having no olives in the first place is leading to a lack of consumption for each subsequent generation equal to the interest on the

olives. And that is the – that then needs to be valued using whatever valuation metric you're using for lack of consumption.

Q. And – thank you. And so if philosophically the wish of the Mahuika whānau is to preserve the substance of what is cherished and the return on what is cherished for as – for many generations, for a long time into the distant future, cannot that simply be the subject of adjustment to your interest rate, so the compounding calculation? Can it lend itself to simply a variation in –

A. So, in the case that I recently suggested –

Q. – compounding rates?

A. – was that if we had an idea that if we get a settlement – I mean, I guess this is quite relevant to what might be done going forward; is that if we have a settlement and we say, "We want to put the money in a trust fund and the trust fund will earn interest and we will spend half that interest to be passed out to current people every year and half of it will be compounded going forward", yes, under those circumstances, if you came up with that rule you would say, "The value of the fund in X number of years' time should be this much". And it would be the interest rate halved and then compounded out because that's actually what the institutional structure is that you would have set up. And that seems – you know, that seems quite plausible if –

Q. And legitimate.

A. And legitimate. If someone wanted to do that, that would be an appropriate thing to do. But now we're – I mean, we could either do that now and have that legislated, you know, or – not legislated but adopted. That is a process going forward where it would be very patently obvious what was happening. Or we're having to have a counterfactual going backwards and saying, "We believe that these people would have done something like that". And then, again, not only do you need to value the size of the trust fund coming now, which is growing at half the interest rate because that's all you're preserving, but you would want to value the losses of each intervening generation from not having the flow of benefits. How those values are losses, that's the welfare metric that I keep saying is a different way of valuing than historic interest because those people

would have had different living standards and we want to value those living standards. So, yes, I'm not disagreeing with you at all. But I am saying that it seems to me very unlikely that we would have had a full fund going, which says, "We are going to invest this money and no one in the next 150 years is going to be able to touch a penny of it, but then it will become available to be distributed afterwards". It's – you know, that just seems implausible to me.

Q. One of the things that arises for me out of your answer is with reference to Dr Meade's response to your evidence. I had anticipated someone might ask you about this. But in Dr Meade's reply evidence to you, he suggests that you have inaccurately described the work he and Dr Mellsop have done in applying available investment returns as distinct from what he describes as the application of "sub-investment" returns. And as I understood the challenge to what your criticism was of his work and Dr Mellsop's for that matter was that you can – you are able to accommodate even the implausibility, of which you've just spoken, by adjusting for or adjusting on the basis of calculations of investment returns.

A. Yes. So, if there had been a case –

Q. So, is he right about that; that you can do that?

A. There's two issues there. The first one is that if you're valuing welfare, it seems to me the use of historic interest rates is not the right metric and it doesn't matter whether you use a sub-investment return or a full investment return. It's methodologically different than what I think should be done.

Q. Well, yes, I understand that, but I'm still in the olive grove if you can stick(?) with that.

A. In the second one, if you – if we take Dr Meade as saying, for want of a better word, the actual average return is 7% and I've assumed 5%, yes, I could go and say, "Well, 5% is actually consistent with setting up a trust fund, which pays out 2% a year and reinvests 5% a year in perpetuity". In that case, there would be a trust fund, which would have grown up at 5% and there would have also been a loss of welfare equal to 2% of the size of the contemporary trust fund each year. So, that would be right, but I –

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Q. That's –

A. So, that's consistent with the use of 5% by Dr Meade rather than 7%, but I don't think he said that that was just why there was a 5% use at all. But that would be consistent with – you know, you could –

Q. So, (over speaking)

A. – manufacture a situation, just like I described, where you'd get a historic 5% return because the iwi says, "We are going to use most of our –

Q. Trust fund, yeah.

A. – money, not to spend on ourselves but to compound in a trust fund", right.

Q. Yes, we could spend some for welfare purposes but –

A. Yeah, we've just allowed 2%.

Q. – retain most of it?

A. Yes, we've allowed two-sevenths rather than five-sevenths –

Q. Yes, so you –

A. – and we choose five and seven just for numbers and any numbers that you choose would be done like that. So, we could say, you know, one in six –

Q. So, –

A. – or 15 cents. No, that wasn't justified. That's what the Mad Hatter has on his head.

Q. No, that's all right. So, you can reach the conclusion – you can apply investment return –

A. Yes, you –

Q. – indicia, even for welfare losses, by adjusting the indicia?

A. You could. If you said that this is a plausible response to how people would spend the money by setting up these trust funds, which are growing at these sorts of rates, then, yes, that seems – in those circumstances, I might be favourably disposed to saying, "Yes, the losses suffered in 1865 meant that the trust funds that they were setting up were deprived of all of this money". And I'm going to be cheeky and ask: do these trust funds exist at the moment where they are consciously taking large fractions and compounding and paying out like this way? Because that would be evidence that actually, yes, the losses from 1865 weren't put into these

trust funds, which have either existed then and have been – were depleted or have been subsequently set up in exactly this form, right.

Q. Well –

A. So, that's a – I mean, you know, you can imagine saying, well, certainly if they had been and were there now, then there would be a more plausible reason for using numbers like that. Yes, you would say the Māhaki were deprived of their money and they had these trust funds and they have them now, which is – and they're compounding in the way that you suggest. Now I'd be very happy and then I would probably not have written what I have written. Well, I would have written what I have written. I would have put an extra clause in and said just what I've said.

Q. So, that the accommodation of which I've – of which you are speaking, that's as I have interpreted it. The accommodation is partly because of a recognition of the ethic of stewardship prevailing over time, adjusted for maybe some practical circumstances which arise, including the need to spend some part of the fund, and that that accommodation can be made through an interest rate mechanism legitimately?

A. Yes. It would be nice if it was specified in advance that that was happening because then you would go and actually calculate a welfare loss using that as the institutional – or the institutional setting of how you would want to do it. But in general, I would be – you know, and as I did, it would say, "The loss of money led to a loss of consumption and we need to value that loss of consumption" rather than "The loss of money led to the loss of money being put in a trust fund that was growing at 5% and we need to value that".

Q. Thank you very much.

A. But, yeah, I'm not disagreeing with what you've said.

Q. obviously thank you.

A. I'm saying that –

Q. Thank you very much.

JUDGE WAINWRIGHT:

Ms Dixon?

KELLY DIXON:

Ma'am, I'm obliged to my friends from both the Mangatū inquiry and my friend, Mr Mahuika, for the questions that they've put to the witness and for pulling together a lot of the threads that are applicable to our inquiry. So, at the risk of duplicating some of the conceptual lines of cross, I'm going to forego our time, Ma'am.

JUDGE WAINWRIGHT:

Thank you, Ms Dixon. Mr Colson?

MIKE COLSON:

I'll just be very brief, Your Honour.

JUDGE WAINWRIGHT:

All right.

(14:24) MIKE COLSON TO DR ANDREW COLEMAN:

Q. Dr Coleman, may I take you to, sorry, paragraph 143 of your evidence?

A. Yes.

Q. And just to familiarise ourselves a bit, I think there you are speculating or considering potential outcomes from the payment of sizeable compensation to iwi and hapū for past wrongs. Correct?

A. Yes, I'm just – if you give me –

Q. Yes, please take(?) –

A. Sorry, I didn't catch your name, sir.

Q. Sorry and I should have introduced myself. I'm Mike Colson and I'm appearing for Ngāti Kahungunu ki Wairarapa Tāmaki-nui-a-Rua Settlement Trust, who are a group or an iwi who have entered into effectively a conditional settlement with the Crown but for whom some of these applications have caused some problems.

A. Right. No, I just read my paragraph while you were talking, which may have been rude of me, but –

Q. No, it's –

A. – I listened with one ear and read with one eye. So, –

Q. – efficient(?). It's not rude at all and, as an economist, you should be acting efficiently. So, –

A. No.

Q. So, I was just wanting to ask you to elaborate really on the second paragraph where you talk about "payment by themselves are insufficient, particularly if they do not lead to a subsequent improvement in the opportunities available to members of the iwi". I just wonder if you could elaborate on that a bit for me, which I assume is based on some of the North American work you referenced earlier?

A. So, in writing that paragraph, I had at least two things in mind. Firstly was that a large sum of payment does not necessarily always lead to an ongoing improvement in economic outcomes. Now obviously if you have a large payment sum, which is invested and pays out to each generation some money, yes, there's going to be higher income coming from that, but there may not be an ongoing improvement in the underlying economy. That's not guaranteed. So, that's the first thing I was trying to say. And the second thing is if you live in an area which his not particularly productive - and there are different areas where that's true - even receiving a large sum, it's certainly not a necessary condition for saying, "This will automatically lead to an improvement in incomes" because there's something wrong there. It's again – if you have a farm which isn't on productive land, getting a lot of money to improve the farm, it's not going to improve the farm very much. Yes, you can get some more fences or something like that, but it's not necessarily going to overcome the deficiencies of the area. And at the moment, you know, in my view and according to the statistics, some regional areas are finding it very hard to provide average incomes that are equivalent to major cities around the world. So, really what I was warning against is saying, "Look, a large sum is not a guarantee of improvement". You could be trying to spend it in the wrong area or you could have a set of institutions which don't actually stimulate people and firms to generate ongoing improvements in outcomes. Now again, you obviously know by now I like analogies and that may be a weakness. But yesterday, I suggested in an analogy with women's incomes being lower on average than men's incomes and

calculating an income gap and you could imagine providing a lump sum to women to improve their resources. But if we then didn't have equal opportunity laws which said, "You may do whatever you want and work in whichever industry you want", that wouldn't get round the underlying problem. And it's that same issue; is that if you don't – a lump sum without the institutional change may not improve the underlying performance of the economy.

Q. And I'd just like to explore that a bit in terms of the underlying performance. So, if we leave to one side a lump sum of such magnitude that it would give effectively a dividend or a sum of money to everyone in each year –

A. Right.

A. – but we focus on the opportunities and attacking or trying to remedy the underlying causes, is – I'm just interested as to what you would make of that. Or if you had a sum of money that you would seek to apply in the best possible way, would you, for example, focus on health and education and housing? I accept what you go on to say; that that doesn't necessarily lead to better job outcomes.

1430

But if you were to apply the money to try and tackle those underlying causes, are they the type of things you had in mind when you refer to opportunities available to members?

A. There's a "Yes" and a "No" to this. In general, yes, investments and education are very important for getting ongoing improvements in economic activity and there's a lot of evidence on that basis. And obviously, investments, improvements in health make it much easier to work. If you're too unhealthy to work, well then you're not going to do very well. So, both of those are clear examples where improvements in such things are likely to lead to improved ongoing economic performance for a person. But I'm also conscious that I've talked in this document particularly with respect to the Native Indian issues; is that it's really important for the people affected to be choosing what they want to do and what's important to them. And I don't want to be giving suggestions where my understanding of what the people of – think is important to them because I will be inappropriate to do so. It's not really my role, but I – you

know, education and health seem obvious to me as an economist because there's a lot of evidence that they improve outcomes. However, there's other things to do. This culturally appropriate sets of beliefs, this renewed confidence that effort will be rewarded and not penalised by the Government. I mean, I think that's, you know, sort of at the psychology of it all. In some sense, you can – now here's another analogy. I'm terrible at this, aren't I? But the analogy is with a sports team that gets a coach that inspires belief and so it's no longer the training and the health, but it's the belief that leads to the out performance.

Q. (over speaking)

A. That is the sense I get from the American evidence; is when you get those changed attitudes about the belief that your efforts will go somewhere and that you will be able to do this, that, I think, is really important. And, as I say, that's just way out of my –

Q. Comfort zone.

A. Well, I have no role in saying what is needed to be done in that.

Q. But if we were trying to – sorry, if I can just perhaps –

A. Go.

Q. – capture that slightly to summarise and then finish. So, if we're trying to capture or build the Silver Ferns of iwi, you'd have an institution that had values and support and was constructed by the people but could still deliver the health and education outcomes. Would you say that's close to giving you a – you know, perhaps not the best chance but a very good start?

A. I think that's a very good analogy. I might use that one in the future, if I may.

Q. Okay, in which case I'll leave it at that. Thank you, Dr Coleman.

A. And – no, but it's not – yes, it's the coaching method that is suited for the team. Now the coaching method isn't going to work unless people are fit, have the good education and – but it's the coaching method that is suitable for the team and I don't want to be involved in saying, "This is what works for me and so it will work for you". That's – yeah.

Q. Thank you, Dr Coleman.

JUDGE WAINWRIGHT:

Thank you, Mr Colson. Well, we've come to – oh, no, we haven't. Somehow these are different sessions from previously. Okay, so we're going until 2.45 pm. We've – we're up to the Crown in the schedule, but I have received a message that Ms Zwaan has been commissioned to ask two questions on behalf of Mr Vertongen, who is the māngai from Raukawa. So, Ms Zwaan?

ROBYN ZWAAN:

Yes, Your Honour (over speaking)

JUDGE WAINWRIGHT:

Kia ora.

ROBYN ZWAAN:

Kia ora. I have been instructed and there's four questions, but they are on a very small area. So, it won't take long and it will be definitely done before the quarter-to afternoon tea, assuming that the answers aren't too long.

JUDGE WAINWRIGHT:

Okay. No pressure. I think we've got Noelene Taura in the room.

(14:34) ROBYN ZWAAN TO DR ANDREW COLEMAN:

Q. Okay. So, tēnā koe, Dr Coleman. As you have heard, my name is Ms Zwaan and I'm appearing today for the Raukawa Settlement Trust. Just to give you some context, they're involved in the Wairarapa Moana inquiry as an interested party and the area of land that the inquiry is about is right in the heartland of Ngāti Raukawa.

A. Okay.

Q. So, just jumping to paragraph 53 of your evidence, which is on page 23, and you're discussing a "forward-looking stewardship" principle to value future or past events. That's been discussed quite a bit in the last couple of days. In a future context, this is the about the way a dollar figure changes future decisions or actions, and you point out the difficulty is that actions in the past can't be changed. Would it be fair to say though that

what we're looking to achieve in valuing past events or setting a level of redress is to still change a group's decisions or actions? Like for example, we're looking for a way of coming up with a level of compensation that allows a group to decide to settle a grievance and move forward?

A. Yes, I think that is the intention here. Yes.

Q. Yeah. And then jumping to paragraph 55, you discuss the approaches in table 1 there that resonate with you, and today – earlier today, you referred to the Chichilnisky hybrid method as your preferred kind of thing. Would it be fair to say that some of these resonate more than others because they feel like they have a better relationship with how a grievance feels and so it would take – to move on and put a grievance behind us?

A. Not really actually.

Q. Okay.

A. These columns were chosen to suggest – to reflect how we may value events or wrongs occurring in the past or the future, and they're really used to illustrate how the different assumptions can lead to very, very different valuations. The subtext of my brief, as I made very clear, is that I personally find – a valuation metric which makes the value of past wrongs much, much higher than current – the same wrongs done currently and higher at exponentially increasing rates the further back in time you go, I find that quite difficult. You know, that certainly does not reflect the way I value anything really in terms of welfare whereas the zero time preference seems to me, personally, quite plausible that I'm valuing a wrong in the past in the same way that I would value the wrong done to me or my daughters or my wife currently. That seems plausible. And the other two are ones which say that actually for some people it may be very plausible to value things done in the distant past at very low rates, simply because it was a long time ago. These people, we don't know, never did know and it's a long time ago and so that the further you go back, the less value you put on that. And again, I think that's quite plausible to describe some people's – the way some people value and I said yesterday that that would be the way I would value some events. So, that was the intention here; is to show that there is a range of possibilities here and that some people will find some far more plausible than others.

Q. And the majority of those different ways of calculating it value an event or a harm that occurred, say, 100 years ago as the same or less than the impact of the same harm if it was done today?

A. That was certainly the way that I indicated my preferences, yes. And again, it's all come with the proviso – the two provisos is that (1) most economists think that people value events in the distant future less than current values and it's using that as an analogy; that the longer away they are - whether it's in the past or the future - the less important that they are. So, that's one and I've forgotten the other one because I've been standing up a long time.

Q. That's okay.

A. Sorry, but that's where that analogy comes from. It's based on an understanding of the way people look forward. I was going to say because we really don't have a large economics literature about how we value events in the past. I suspect Dr Meade might be about to start writing one. He would be an appropriate person to do so.

1440

Q. Okay. Now I note that you don't have much expertise in terms of how the Tribunal works or the –everything else. But are you aware that the Tribunal has said that in settling in Treaty grievances, we should be careful not to create fresh harms? Are you aware of that at all?

A. I did pick that up, yes.

Q. Yeah. So, is it fair to say that your report, and particularly looking at columns 2, 3 and 4, essentially gives us the economic justification for that approach? That if we create a fresh harm in settling historic grievance, we're likely to be worse off?

A. I would not have made that interpretation from that table, no.

Q. Okay.

A. I'm not saying that's a wrong interpretation, but that's not what I meant at all and it – you know, that's not what I meant at all.

Q. Okay. Thank you. Those are my four questions.

JUDGE WAINWRIGHT:

Tēnā koe, Ms Zwaan. We do have the Crown next and, in the interests of conserving time, I think we'll press on if you're able to, Mr Linkhorn.

(14:41) CRAIG LINKHORN TO DR ANDREW COLEMAN:

Q. Kia ora. Just before I start, can I introduce Mr Tyson to the Tribunal and the room, who's appearing to lead for the Wairarapa inquiry on this issue? So, I'll cover things for the Tūranga Inquiry. Dr Coleman, would you prefer to be seated?

A. No, I'm fine.

Q. Okay.

JUDGE WAINWRIGHT:

We're all worried about you now, Andrew, because you're letting things slide. So, maybe you should have a –

DR ANDREW COLEMAN:

No, really, I stand most –

JUDGE WAINWRIGHT:

– drink of water.

DR ANDREW COLEMAN:

– I stand most of the days, but water's always good.

JUDGE WAINWRIGHT:

Yeah, have a drink of water. It's been a long time.

CRAIG LINKHORN TO DR ANDREW COLEMAN: : (CONTINUES)

Q. All right. Well, first off, Dr Coleman, thank you very much. A lot of very challenging material there, very stimulating in terms of how we're thinking about these issues. So, I want to thank you for that. I want to start with a few questions about your approach and I'm going to try to not repeat material that over the course of today has been covered by others. But I think we can just clear away a few matters pretty quickly; that your testing

and critiquing of the approach taken by others is asking really whether those things are useful and what the weaknesses might be. That's it, isn't it?

A. Yes, it was an approach, which was trying to, as I sort of suggested by analogy again yesterday, go through a menu of options and say, "I'm not convinced on some of these whereas other ones seem more sound". And then the effort of the Tribunal may be best directed towards considering those which are soundest.

Q. And so you're asking us all to sort of test, I guess, which are the best yardsticks, not what the exact measurements are under those yardsticks?

A. Well, to do both really but certainly to test – to ask, "Which are the best yardsticks and, amongst those, what are the appropriate – you know, the appropriate numbers for those yardsticks?" And I guess some of my critiques have been saying, "Well, some of these yardsticks that have been suggested aren't as good as others and are leading to numbers which, in my view, I don't think are particularly helpful in coming to a conclusion.

Q. But just to follow through on this, you're not actually getting down to the level of saying, "So, exactly what rate should we choose if we were to do some compounding?" You're actually stopping us all and saying, "Whoa, should there be compounding at all for some of these scenarios?"

A. Yes, that's what – that has been the major point I wish to make in some of these cases.

Q. Yeah. Or "Are there some limits here? Does it taper off the further back you go or the further forward you go?"

A. Yeah. No, exactly.

Q. Of course(?).

A. It's to suggest that methodologically there may be approaches which involve lower numbers rather – you know, discounting, reducing a loss rather than increasing a loss. So, that – as a methodological approach, that's actually been the first thing I've been trying to say, with the actual rate at which you then use being oftentimes I haven't even come up with a number, saying that – well – and in some cases, it hasn't been very

necessary to come up with a number. Or where I've come up with a number, it's been full value and so that's very easy.

Q. And an example of that would be the value of land where it's appropriate to return land, for instance?

A. At full value, yes.

Q. Yeah, okay.

A. And so that would be a zero discount rate and I can do that one in my head because it means full current value and I don't need to go any further.

Q. Yeah, got that. Got that.

A. But I haven't tried to say, "The intertemporal discount rate is 2.57%" or anything like that.

Q. Now your example of a welfare loss though, taking the value that society currently puts on a year of unlawful imprisonment, that's a very interesting example, isn't it, of a welfare loss because it reflects a social judgement, doesn't it?

A. It does, yes (over speaking)

Q. It's not just pure arithmetic. It's someone set that level based on judgement informed by social factors, didn't they?

A. Well, I said I didn't know that yesterday, where the number came from. So, I'll still say I don't really know where that number came from, but I presume that that's how it came about.

Q. And you're aware that it hasn't been changed since it was adopted?

A. Yes, it's in real value as 1998 terms and I just adjusted it for inflation following Dr Meade's lead, which I think is the appropriate thing to have done.

Q. Well, that's just what I wanted to deal with very briefly perhaps before we have the afternoon break on a – and it's possibly a little bit of a side issue to the reason why you adjusted it and thought it was appropriate. It seems that in following his lead there, we can observe that a couple of things can happen, and they bring risks. One is that we've uncritically adopted a higher starting point that can have an impact on subsequent calculations, can't it? And in other respects, I think you've pointed this out.

A. I don't really know what you mean here. We could have either used $100,000 in 1998 terms or we've just done a sort of a mechanical adjustment and said, "Well, look, prices have gone up by 40 or 50% since 1998 and so the intent of the law was presumably to provide a real value".

Q. Well, that's the exact question, Dr Coleman, in the sense that this is an illustration, I put it to you, of a situation where rather than have a set and forget, the executive says, "Right, we've set it at this level and hereinafter it's going to track this index for returns on investment" or CPI or whatever. They didn't do that, did they?

A. I don't know. I'll ask you. Did they make an adjustment? When people are compensated for wrongful imprisonment, is an adjustment made or is still the $100,000 paid out? I don't know the answer to that.

Q. So, there's no adjustor in the mechanism. However, people like you have a –

JUDGE WAINWRIGHT:

Mr Linkhorn, I think that illustrates that you're in trouble here, doesn't it, because you're giving evidence?

CRAIG LINKHORN:

Well –

JUDGE WAINWRIGHT:

Because the – what – the use that Dr Coleman made theoretically of the $150,000 is not a real, present-time use, which is what you're asking him to do now and I don't – I think he said he doesn't know where the – where it came from, what the methodology was or what the legislation provides.

CRAIG LINKHORN:

– well, just very briefly, Your Honour, the two points. Is this being illustrative of social choices made about when and how to adjust amounts, and this being one of those ones that hasn't been subject to adjustment? So, it provides useful illustration to us.

JUDGE WAINWRIGHT:

Well, that may be so, but you're giving us evidence on that.

CRAIG LINKHORN:

Well, I'm asking him of is awareness of these things and I think we've –

JUDGE WAINWRIGHT:

But he said he doesn't have awareness, I think.

CRAIG LINKHORN:

Yes, and so we've come to the end of the road on that, haven't we?

JUDGE WAINWRIGHT:

Great. All right. Well, we've also come to a cup of tea. Just as well, phew. Back at 3.15 pm, whānau.

HEARING ADJOURNS: 2.48 PM
HEARING RESUMES: 3.14 PM

JUDGE WAINWRIGHT:

Kia tīmata ano tātou. That's a very practical response, Mr Linkhorn. And there's been a little bit of discussion about whether there needs to be some juggling of the order in which people are going to be questioning because we need to get Mr Nana on this afternoon because otherwise he's not going to be available. But it looks like if we continue efficiently, we will get there in time.

CRAIG LINKHORN:

We shall.

JUDGE WAINWRIGHT:

Kia ora.

(15:14) CRAIG LINKHORN TO DR ANDREW COLEMAN : (CONTINUES)

Q. Kia ora, Dr Coleman. I want to talk next about our – what you've described is our gap, a knowledge gap, as it were, about valuing the past. And I see from your paper and some of the sources that you're familiar with people like Jeremy Waldron, Tyler Cowen, people that are like – I guess have identified issues and questions for us. But what you're really saying is that there's a whole lot less evidence of its application and the working out of these things on particular scenarios. That's a fair way of describing summing up your evidence?

A. Yes, I read their materials and had been aware of some of them earlier. And in most cases they were dealing with conceptual issues about the approach to deal with wrongs of the past when the magnitudes of the wrongs were so large that a full compensation did not seem practical. And they were discussing a lot of the philosophical issues in any case with counterfactuals and so forth when some of the counterfactuals involve people, who would not be alive today if the counterfactual occurred differently and such things. So, yes, I have read that. In most cases, they weren't concerning the nuts and bolts of valuing the wrongs in the past.

Q. So, in a sense, in this country it's a body like the Waitangi Tribunal, isn't it, through this inquiry and other enquiries that's really breaking new ground of developing some application of these ideas?

A. As far as I'm aware, yes, but I might not be right on that.

Q. I also take from your evidence that economists can't or don't necessarily give us special insights on what the best amounts should be; that they help us to measure the things we want to measure, but they can't choose the base for us. Is that an appropriate way to sum it up?

A. Better economists than me may be better at doing that than I am and I haven't really attempted. But I certainly didn't try and do this and I'm not aware of many attempts to estimate processes for valuing the wrongs of the past. But I would say that methodological; that would be one approach. But, you know, economists, I would say, would be useful in making conceptual differences between the historic interest rates and time preferences and giving some ways of estimating reasonable ranges for time preferences.

Q. And this analogy with using how we forecast for the future and price it with turning it around and doing it for the past, you're really cautioning us that that's an analogy to be very careful about and it only applies loosely in any event. Correct?

A. Well, it was – there definitely was a cautioning process and saying that the inability to change the past provides real limitations on our ways of estimating the value of past welfare losses. So, that's the first thing and hence the use of analogy is to say, "If we can't get direct evidence on the past from the past because we can't change the past, then we may need to see how we value things where there is better direct evidence from". So, that was the whole point of talking about the future so much, rather than talking about the past.

Q. And some of these future-focused tools -and I have one in mind, the value of statistical life or VoSL - that's just really focused on planning assumptions, isn't it, about investment approaches to looking at risk reduction measures for the future? You're aware of the method?

A. Yes, but it's not just planning approaches. They – but, yes, it's trying to work out the current value of life of someone who will be living from now to some indefinite time in the future. And so needless to say, it has a way of valuing the future and the valuing of future earnings which is involved. Now when it comes to valuing future earnings, we sort of – then we tend to use interest rates to the extent that that's a component of the value of statistical life. When it comes to valuing utility, well, we'd then be valuing that utility and using different approaches. But, yes –

Q. I'm just using it as an example because –

A. Yeah. No, of course.

Q. – it's a future-focused one, but it's one that we can identify as inapt to turn around and use it in a backward sense, can't we?

1520

A. The point I kept saying is because you discount future values doesn't mean to say you should inflate past values. That, to me, is the inapt - not inept - the inapt analogy that needs to be questioned.

Q. And so then you've had discussion with a number of other people about counterfactuals and we've talked about the – well, not necessarily infinite

but out of sensible counterfactuals very large numbers of variety, skill and care required in positing them. And then you became involved in a discussion with Mr Castle about the olive grove of te whānau a Mahuika. And I found that very interesting because it seemed to me that he got your agreement that financial measures could be used, including compounding, to address welfare objectives. But did I misunderstand you?

A. No, you didn't misunderstand me, but I would make that as a distinction from valuing welfare losses of the past, right. I keep saying –

Q. So, this is a forward-focused investment fund approach. Therefore, investment measures have some resonance. Is it just that?

A. Yes, if there is a deliberate attempt to invest monies, then investment approaches should be used. But then when that money is spent at some point in the past or the future, you need to use a welfare metric to evaluate the value of that spending at a time. So, again, to go back to the olive grove example, you would be saying, "If there were to be a trust fund set up in the past and that would have paid out some monies during the intervening periods, we would want to value those payments in the intervening period using a welfare metric", which may, in my view, would not involve positive multiples from compounding –

Q. Right, thank you.

A. But the trust fund would continue to compound and if that had been set up in a reasonable way, it would be quite reasonable to say, "Well, actually the loss of the past would have translated to this compounded view, increased compounded value of a loss available to the current generations".

Q. Thank you. The next topic I want to turn to is Dr Meade's brief of evidence in reply to yours. His one's dated 5 July. I'm presuming you've read that.

A. I have read that. I may have it in front of me.

Q. I believe this is P60 in the Wai 814 inquiry.

A. Yes, I have it in front of me.

Q. This is very reductionist of me, but he says you're irrelevant or that you actually deep-down support him, is my way of summing it up. And I thought, given time's tight, we might as well cut to the chase on this.

A. He wouldn't be the first person to say that I'm irrelevant (over speaking)

Q. So, could you turn to 96? Paragraph 96, please.

A. May I also suggest that in my own brief I build in that possibility? I quite clearly tried to convey that.

Q. I will be coming to that with you –

A. Okay.

Q. – Dr Coleman, because that is definitely another topic to pursue.

A. You see, I was the first person to call myself "irrelevant".

Q. So, I mean, there isn't time –

A. Right.

Q. – to go through all that Dr Meade says about you. You've read it. The Tribunal will be reading it. The balance of this three days will be used to evaluate where all this lies, but I thought a couple of examples would be useful. So, at paragraphs 96 and 100, Dr Meade's talking about lower loss estimates instead of available investment returns. And I don't mean to repeat questions that have already been put to you, but if I take those two points along with Dr Meade's insistence that his rates are conservative and if, for instance, you go to 106 after that – have you got that?

A. I've got 106 (over speaking)

Q. I'm just asking you to just take in a few matters by way of refreshing your mind. And then 118.1 –

A. Yes.

Q. – he says he's got lower loss estimates that he's been extremely conservative and in fact he claims to mimic the Chichilnisky compounding approach. Does he mimic it?

A. Well, I don't think so and, again, it comes back to the – he would be mimicking it if it was appropriate to invest, to use the money or investment approach to calculating losses. So, again, if there was a trust fund set up that – and we were confident that the money would have been put into there and it would compound over time, then I would consider that Dr Meade is correct in saying that. I wouldn't say extremely conservative, but I would say conservative; and that the values that he uses are less than full market values and may reflect some sort of average between zero discounting and full market values according to the Chichilnisky

approach. But I would say that's still not the right metric to use to value welfare losses in the past as that is inflating the welfare losses in the past to be much more valuable than the same loss occurring now and at a rate which makes it more valuable the further distant past it is. And I find that approach not necessary and in fact it's – I've made it clear that is not the approach I would have adopted. But if Dr Meade can show that the investment approach is the right approach to use because some of these funds would have been invested in a way that they would have now been available in a trust fund or something like that, then, yes, I have no real disagreement that his values are not full value and may reflect. But that's going far from saying what I think I read in his reply, which is, "This uses the Chichilnisky approach" in a similar way that I'm advocating it to be used because it's really not.

Q. Right. That was my understanding. I just wanted to check that with you. And so this whole discussion about whether more normal investment rates have been used, had they been used for illustrative purposes they would have produced numbers that I think you would have described yesterday as silly in the sense that they would have intuitively told us that they're bigger than the local economy, they are beyond what people would have saved rather than consumed. Is that how it adds up?

A. I did use the word "stupid", but it was in the context of using the technique over a 1000-year period rather than the period that we have used it, and I'm sure I said that I didn't say it would be silly to use it over a period of 150 years. So, I don't want to be recorded saying that. I'm saying that the technique cannot be extended into the distant path – past in a manner that I find sensible at all.

Q. And choosing – I mean, we've had – we've heard your answers to other questions about whether the rates are comparable, you know, apples and apples or apples and pears and so on. But choosing a more normal investment return rates, as Dr Meade says he could have done but didn't, would in turn have led to compounded final amounts that were much larger and intuitively made us more suspicious again, wouldn't it –

A. I'd certainly say –

Q. – even though it's 150 years.

A. – they would be much larger and they would have made me more suspicious again or at least me – you know, I would – I – as I say, I find it difficult to accept valuations for welfare wrongs in the past which grow exponentially with time. And these ones would grow at much faster rates. But I don't find it necessarily difficult to believe that a dollar invested can grow at a compound rate.

Q. Of course, yeah. Now other people have asked you questions about the effect of consumption and, beginning with Ms Feint this morning, as to whether Dr Meade's figures would be even bigger if consumptions had been factored. And then other people have followed it up with you since and I don't intend to repeat that matter. But just to round it out, as it were, this in part reflects, doesn't it, that in long-run scenarios, the chances of both success and of failure have to be factored in, don't they?

A. I don't understand your question.

Q. Well –

A. If you could make it –

Q. Sure.

A. – slightly easier for me to understand, I'd appreciate it.

1530

Q. I'll build up to it a bit more in that Dr Meade's saying his figures would be even higher if consumption along the way had been accounted for.

A. I don't really understand. I mean, he may have said that. That's not quite what the reading – that I took from his work. I took more from the reading that if interest rates had been even higher, then the valuation metric would have been a much bigger number than the numbers that he put in. That's my reading of his brief and my response in some sense is, well, that would be true, but I'm not agreeing with the methodology of valuing welfare losses in this way. It's the methodology rather than the number that I have the greatest concern with.

Q. And(?) a sense of not allowing for consumption but just continually building the portfolio has to also take account of the inevitable periods of success and inevitable periods of struggle, doesn't it?

A. Well, yes, but – so that's true. So, the average rates of return on historic investments, they're average because they do take –

Q. (over speaking)

A. – periods which are above normal and periods which are below normal and so they're sort of incorporated into that automatically. So, –

Q. But (over speaking)

A. – if that's what your question is, yes, I think actually he has taken into account the periods when investment returns are abnormally low.

Q. But those averages of course apply across a whole sector or a whole economy or a whole bucket of economies and they don't tell us about what any one enterprise or organisation will look like in 100 years' time, do they?

A. No.

Q. The next topic is: why are you so self-deprecating, which I think you tried to jump me too just before? I want you to go page 84 at paragraph 159 of Dr Meade's reply evidence.

A. I've got page 84. Which paragraph please? Sorry, could you repeat the reference again?

Q. I think I've got my reference wrong. There's a point – paragraph 159 starting at 82. There's a quote at the top of page 84. A. number of phrases from your reply evidence is set out there and I'm assuming you've read this.

A. I may have written some of it.

Q. You wrote it all and it's been said back to you, as it were, and this of course risks confusing us all because we're not used to economists in this inquiry being so self-deprecating and it's rather refreshing but I want to test whether it really is so. Not that I'm suggesting you've pulled some cunning wheeze on us all where you're not at all self-deprecating but I wonder if this is really a technique of an academic economist rather than the expert witness economist, in the sense that you're not meaning to write yourself out of a picture here at all, are you?

A. For a start I am an academic economist and this is my first Tribunal appearance so my choice of writing probably reflects that background. But, no, what I wanted to make clear is a couple of things. One, that there are a range of values or approaches to these problems that can be adopted and it is not my role to say which of these is the appropriate one.

I think that's a lot of what I'm saying in those quotes there. The second one, made much clearer, I think, now than I did previously is that my criticisms are on particular options in the menu rather than all the options in the menu, so I want to make it quite clear that by ruling out one, which I think is – a better word – unsound, does not mean that there are others which I think are fully sound and which actually may be the determining ones. Not only because they're the right arguments against a menu of things which may be not quite right and which may be right, but also because there are legal considerations about which I do have no expertise, which say this is actually how we're going to do it. I might say, "As an economist, I think that's [I'll use the word "daft" because that's how I was taught to talk] that's a daft way of doing it". But that's not my role if the legal situation has already been the situation. I've tried to be very careful in saying that by making comments about some approaches on the menu I'm not ruling out other approaches as being the main contributing factors to what the Tribunal should actually be using in their determination. In that sense, I will share Dr Meade's view of me as being irrelevant in some of my criticisms because some of the criticisms are not done on what we earlier established, for instance, on returning the full current value of the land and, as it was established, this is larger than the cap. That would be a case that me criticising other menu options is actually not the binding issue before the Tribunal.

Q.. We're all agreed that it's the Tribunal that will decide all of this. We're just supplying it with information to help it in its deliberations.

A. Exactly, and so that's what these series of statements about my own limitations are trying to make sure.

Q. You've identified that some of the measures are apt, some are inapt and then you're telling us about degrees or levels of confidence in utilisation of the measures discussed here in the evidence that you've reviewed.

A. I probably could have done that better but, yes, that would be the intention of me doing that.

Q. Then at paragraph 190 of Dr Meade's reply brief, I take him to be saying that deep down you actually agree with him. I was surprised by that. If you could just take a look at that.

A. I'm a little surprised too but let's read further here.

Q. He says it's providing additional foundation to his approaches, which seems to me to be to appropriate your support, in a way, and I wanted your comment on that.

A. I'm not inside the head of Dr Meade so I don't really know what he was trying to say there but my interpretation reading this would be that he found some of my work useful in supporting some of the claims, particularly those surrounding the full value of land returning based on the idea of stewardship and zero discounting. That's on the positive side. On the second side, I'm not sure I would agree with his interpretation that my work or my briefing supported his view that the losses could be valued even more highly because he was using low values of interest rates rather than full market values of investment rates. I meant investment rates in each case. I would still probably disagree with that. But if his contention is, "On the crucial aspects of the menu Dr Coleman agrees with me" and if that were these ones concerning stewardship and the value of land, he's probably right saying that, yes, my view would be in circumstances where an iwi has a strong stewardship ethic then the current value of the land seems to be a reasonable approach to recompense. That is one of the options.

Q. Thank you for clarifying that. The next point though is that he also says that where you're silent then he can take you to tacitly approve of his approaches. There's an example of that in 245.1 where he says, "By implication he would also seem [he meaning you] to approve of that approach being applied from Māhaki 1962 losses in relation to the Mangatū forest land purchase". Your silence isn't assent, is it? It's just that you haven't looked at something.

A. In that case, yes, I thought that he was making inferences where no implication was actually made. So, yes, I was sort of surprised to read that when I read it because some of the issues that I did not talk about were really from a lack of time as much as anything and the need to concentrate on what I thought were the biggest issues.

1540

Q. So, just turning to that 1962 purchase of land for forest purposes. You're aware of the basics of it, I'm assuming?

A. Yes, I read the briefs by Dr Meade and some other people.

Q. I presume you've also seen some of the Waitangi Tribunal's own work on it, for instance no economic prejudice found in that purchase.

A. I'm not sure I have read the Tribunal's reports. Again, if it was included in the briefs that I was given I would have read it but otherwise –

Q. But you're generally aware that the land was purchased at full value? Because this is relevant to your trust fund discussion perhaps. I'll put it this way. The land was purchased at full value and the owners turned around and passed a resolution to distribute all of the purchase price immediately rather than reinvest it. You're aware of that?

A. My memory is not fresh on this. I do remember the land being purchased as a compulsory purchase, and that was part of the discussion on whether it should be compulsory or not. I do remember it was purchased at a price that was then distributed, or at least I think I remember that. I don't remember it being full value. In fact, one of the issues I found difficulty with that whole issue was the insistence in Dr Meade. Some of Dr Meade's briefing remarks that alternative farming arrangements could have led to much higher returns because in some sense the whole point of this was to prevent erosion from farming practices which were not sustainable for land cover.

Q. Yes, I'm hearing from your responses that there's a range of other material that you possibly haven't had a chance to consider on that.

A. If that's what you wanted me to say, yes. You note that I really haven't commented at all on this 1962 case. I did read it but I actually wasn't given an awful lot of time or maybe I didn't use my time wisely in preparing these briefs. They were very large.

Q. I think you have produced considerable output in the time.

KAREN FEINT:

Judge Milroy, I wonder can I just record a belated objection that the statement that Crown counsel made in his initial question about the 1961 land, he said, "The Tribunal has found there was no economic prejudice". That finding was

contained in the 2014 report that was quashed. So, I don't think he can accurately record that as a finding that stands.

JUDGE MILROY:

Thank you, that's noted.

CRAIG LINKHORN TO DR ANDREW COLEMAN: : (CONTINUES)

Q. That's a valid observation, thank you. That was a finding previously made and is now an issue, it's a live point again. Next topic is the influence of stewardship ethics and most of what I had here for you has already been covered by other people, you'll be relieved to know. Perhaps just building on this idea though of returning land when it's appropriate is on a valuation basis, that you explained to me earlier, was fairly straightforward. But there's complications, aren't there, when you have to take account of payments earlier made or agency? Do you see that?

A. Yes, and those complications were outlined in many of Dr Meade's calculations, particularly around the 1961 return. In fact, I even think in 1865 where it said, "Here is a payment that was made at the time and that needs to be subtracted from the value of the loss", so I agree that that's an appropriate approach.

Q. I mean Dr Meade's work is looming large here but there's also other upstream Treaty grievances about the same land, including its title determination in 1881; are you aware of that?

A. I may or may not be. If I read it two or three months ago I probably did read it. I mean it resonates but I am not clear, if you gave me a question of factual content on that, I wouldn't be able to answer it.

Q. The question is going to be then about how we need to think carefully about the fact that we're only dealing here with claims that relate to the forest land and of course there are many other claims beyond the claims that relate to the forest land. In Māori society it can be taken that a stewardship ethic can apply over ancestral land. Do you have any understanding of that?

A. Yes, I do.

Q. All land can be ancestral land, can't it?

A. It can be ancestral land for many parties if it's been fought over and swapped hands in many occasions.

Q. But in a broad sense, all land can be ancestral land.

A.. It can be but that's in a very broad sense. In the sense that not all people treat land as being special if it has been owned by their ancestors, whereas other people do. I think we would normally use ancestral land in reference to land where there is a tradition of considering it special because it's been owned by someone's ancestors.

Q. When we come to think about the application of what you've picked up from the literature around environmental protection, the stewardship ethic, and then apply it into the Tribunal's work here, we need to think in nuanced senses, don't we, about the return of some of the ancestral land because the circumstances of Treaty breach demand it?

A. Without doubt. So, in emphasising stewardship, and we've emphasised that much more in the last two days than the content of my paper emphasised it, it was introduced as a way of saying the individual approach of valuing assets is not the only approach that can be adopted and there are important considerations when considering these other approaches which do exist. These ones do appear relevant to this case. Yes, of course it needs to be adopted in a nuanced case. My background would lead me to the literature which is talking about stewardship in environmental circumstances more than in an iwi situation. That's how I introduced it. But with the understanding that to my mind these are important principles to be considered in this case as an alternative to the standard economics of approach, which is focused on individuals. I hope I've made that clear. In fact, I'm sure I've made that clear.

Q. The next topic I wanted you to turn to please was the final page of Dr Meade's reply evidence at 287.1 and paragraph 289. This is one of the places where he's dealing with the moral hazard point that some of my learned friends have raised with you. He's saying at 287.1 that your approach creates an incentive for the Crown to delay compensating Māori claims or even to kill Māori. You're not saying that at all, are you?

A. No, I have to admit I was a little surprised to read that. I raised moral hazard issues in one paragraph of my briefing to say that generally

economists consider that these issues can be important. That not only is it a value to the transgressed party that we need to take into account but we might want to take into account the provision of incentives on the transgressor to make sure that they do not do that again. But that I was not adopting that perspective in my approach to the evidence. If the Tribunal thinks that that's very important then that is a reason for generally increasing the recompense but it's a reason unrelated to the losses suffered.

Q. There are financial and non-financial measures to counter moral hazard risk, aren't there?

A. Yes. Financial ones are normal in today's society but previously people used violence.

Q. Non-financial measures involving the state might also include reconciliation, remorse, apology, matters like that.

A. I wouldn't consider that a moral hazard. That may be the most appropriate thing for the state to do but I don't see that as being consistent with a moral hazard related punishment or incentive to avoid doing similar acts in the future.

1550

The moral hazard is meant to be creating an incentive for the transgressor not to transgress in the future. It's not obvious to me how making a transgressor apologise, if that's not a painful process to the transgressor, is going to stop the transgressor doing it again.

Q. But the transgressor may be incentivised to bring its operations into, for example, compliance with the Treaty.

A. That's all true but it depends on what you mean "incentivise", which is actually a word I don't know if it exists. I always like "motivated". The transgressor would be motivated to do something. The moral hazard arguments in economics at least normally require, in some sense, a punishment on the transgressor or a potential punishment on the transgressor to ensure that there are incentive compatible criteria to ensure the transgressor doesn't do it again. It's not obvious to me that an apology has some of those painful consequences to the transgressor, which would be consistent with a moral hazard punishment or a moral

hazard regime. I don't want to use "punishment". A. moral hazard regime that prevents subsequent transgressions.

Q. The point I'm putting to you I guess is that when it comes to the state, to think about it in terms of financial penalties or fines, such like, things that we'd think about in relation to the state and citizens, they just simply don't seem apt, do they, to cover the range of things that a body like the Waitangi Tribunal might recommend to the Crown occur?

A. Again, I did not discuss this much in my brief but I've actually mentioned this. That if a punishment was placed on the Government, a very large fine for instance, which involved them imposing taxes on the citizenry, then the citizenry might take quite a lot of effort to ensure that there are no future transgressions by the state. That actually might be a very successful way of ensuring that the state does not commit transgressions of one sort or another again because the state or a Government will know that they will raise the ire of the general population because of the threat of much higher, say, taxes to pay for the punishment. That does seem to be a consistent moral hazard approach to such things. However, I have not been advocating that at all in my brief. What you're asking me is: could the Tribunal do this? And I'm saying yes, but I'm certainly also saying I'm not advocating this at all.

Q. It's been put to you by some of my friends that other jurisdictions and development examples or examples of self-determination would be all very well but here the Tribunal's confined to recommending compensation. That's essentially to try and put a legal submission in your mouth. But if it were possible for the Tribunal to make other recommendations than compensation recommendations, say for self-determination, those would be apt to address some of the development issues you discussed in the latter part of your brief, wouldn't they?

KAREN FEINT:

I think, Judge, it's not possible for the Tribunal to do that so I'm not sure how the question can be relevant.

CRAIG LINKHORN:

We can make legal submission on the issue later, Your Honour, but meantime I can have the witness's comment in the same way that the other counsel had his comment on inability to do anything else.

JUDGE MILROY:

Mr Linkhorn, if what you're trying to do is to remind the Tribunal that it's not in the business of making recommendations about self-determination for Māori, I don't think we need that reminder. I'm not sure –

CRAIG LINKHORN:

I'm certainly not, Your Honour.

JUDGE MILROY:

– what Dr Coleman can add to that area. I'm not sure where you're going with it.

CRAIG LINKHORN:

The discussion has been around the schedule 1 compensation from other counsel and my point in dealing with the section of Dr Coleman's brief that discusses development and non-financial measures to achieve improvements, that the Tribunal isn't of course restricted to its section 8HB recommendations, it can make other recommendations.

JUDGE MILROY:

Can make other recommendations, yes, that's assuredly the case. But I don't think Dr Coleman can help you with that, can he?

CRAIG LINKHORN:

He can because he's given examples, including from other jurisdictions, about how recommendations for stronger institutions, more self-determination and the like, leads to improvements over and above what money alone can purchase.

JUDGE MILROY:

So, the Tribunal you mean in its section 6 capacity could be making recommendations to the Crown about setting up better institutions for Māori?

CRAIG LINKHORN:

To take a very recent example, it's top of mind for me because of what I've been doing for the last couple of weeks, Te Mana Whatu Ahuru report, makes a first and overarching recommendation to ensure Te Mana Whakahaere from Maniapoto and Te Rohe Pōtae. In other words, institutions and self-determination first, other things second.

KAREN FEINT:

Judge, none of the claimants in the Mangatū Remedies inquiry are seeking such recommendations. That's simply not an issue.

CRAIG LINKHORN:

I'm not sure that's at all correct, Judge Milroy.

JUDGE MILROY:

Thank you. In fact, we were not entirely clear that other recommendations were not being sought either. So, I think in that case the question can be put.

CRAIG LINKHORN TO DR ANDREW COLEMAN CONTINUES:

Q. Thank you. A rather long way of getting to you, Dr Coleman, to say non-financial recommendations to strengthen institutions and self-determination can be effective measures, can't they, to address some of the disparity that you've commented on?

A. I did include the evidence from the United States about American Indian where some of the evidence suggests that that's completely the case. But in my presentation yesterday, I stressed the need for institutions that are appropriate and the need for belief in the fairness of those institutions is what's crucial and whether that requires an improvement in the belief and the fairness of them or a change in the institutions, it would be done on a case-by-case basis. In the United States it may be appropriate for Indian tribes to develop new rules or institutions to govern their behaviour

whereas in New Zealand it may be appropriate that actions are taken which strengthen iwi belief that the application of existing institutions going forward is going to be much fairer and will inculcate behaviour where if they do what they want in an appropriate setting that they will be rewarded for those actions. In a case-by-case basis it may be appropriate but that's not the only way that these things can be done. That improving the belief in the fairness of the existing institutions may be a preferred way for New Zealand Māori to proceed rather than having an institutional change.

Q. Part of that could come from non-financial recommendations from the Tribunal but it could also just come simply from a good governance initiative on behalf of all of the people of Aotearoa., couldn't it?

A. Yes and I would say that there is some evidence that the heartfelt apology, sometimes backed with financial means to show that it's heartfelt, and in circumstances where affected people regain confidence that the institutional framework is fair and will treat them fairly may be all that is needed. But again, this is a case-by-case basis. In writing my brief I really wanted to suggest that such options have proven successful overseas rather than imply that they would be the appropriate thing to do in New Zealand. May I add that I'm glad that other people think I'm irrelevant too, to answer this question?

Q. Thank you, Dr Coleman. Those are my questions of you. Thank you.

JUDGE WAINWRIGHT:

Thank you, Dr Coleman. I think that brings us to the end of your presentation.

1600

I'd just like to interpolate that although Mr Linkhorn wanted you to disavow your self-deprecating comments, in fact that whole exchange wasn't really necessary because of course the Tribunal has now had some – both Tribunals have had some time to make their own assessment of your contribution to these inquiries. We don't concur with Dr Meade's characterisation of it as a glaring lack of assistance to the Tribunal. On the contrary, we have found the questions that you have raised in your evidence and the way in which you responded to

questions very helpful for us non-economists in this challenging job of assessing what the losses have been and how they should be valued. We really thank you for what you have brought to our endeavour.

I'm not going to ask Dr Hond to do his usual incredibly eloquent mihi to you because I don't think you're going to be in a position to appreciate it. But you can take it that he joins with us all in thanking you for the work that you were asked to do under pressure and we appreciate what you've brought to this hearing and to our inquiries. Tēnā koe.

DR ANDREW COLEMAN:

Thank you for your comments.

JUDGE WAINWRIGHT:

Now it is fortuitous that Dr Coleman and your questioning of him has concluded in time for Dr Ganesh Nana to speak to his evidence in reply.

(16:02) DR GANESH NANA (#P62):

JUDGE WAINWRIGHT:

Tēnā koe, Dr Nana. You will see that there are more people at the table than you will have seen on your previous appearances before the Mangatū Tribunal and that's because there are two Tribunals sitting today. Those of us on this side are from the Wairarapa Remedies Tribunal and of course you have encountered the Mangatū Remedies Tribunal before. I'm Judge Wainwright and I'm presiding today. We're going to begin by asking you to respond to questions from Tribunal members and then we will revert to the Crown, which has signalled that it would like to ask questions of you briefly.

(16:03) JUDGE MILROY TO DR GANESH NANA:

Q. Thank you, Dr Nana, it's good to see you again. Thank you very much for giving us your time this afternoon. Can I say, first of all, that your brief in reply is admirably brief. But I do have a few questions. The main concern that you raise in your evidence is the question about the range of choices

that people have and that some people may have constrained choices. This issue was put to Dr Coleman and his response was that, yes, that's right. But other people have constrained choices as well and they range over a whole variety of different limitations that affect people. That doesn't necessarily change how you'd value the losses that might be considered in terms of Treaty breaches and so on. Did you have any reply to that?

A. I think my reply is the context in which he was making his comments about choices. The context, as I read them, was he was trying to explain income differentials between Māori and non-Māori in a particular area. He was asserting that some of those differences can be ascribed to choices that people make. Are people making choices about where they live? Choices about what occupations they go into and so forth. That's what put the red warning light up in my mind. In terms of income differentials, a large proportion of those differentials are actually set before we are able to make those choices. Some of those choices we cannot make. In particular, economists and textbooks would love to think that everybody has a choice about where they can live to work but most of us have constraints in terms of where we can live, whether they be family constraints, cultural constraints or just our physical ability to move around the place. There is also the idea that we can choose to gain skills which opens up a whole range of occupations that we can go for but I would argue that presupposes that we all start from that same starting line; if you like that analogy in terms of a race to the finish. Not all of us start at that same starting line as we all know. Many of us have the luck to be born into the right family, for want of a better word; that family has wealth or income and has the support mechanisms around them to ensure that they can make it to the finish line. Others don't even make it to the start line because they don't have those family structures, all those family support networks or don't have the wealth or the income behind them. Those are the things that I was trying to bring up in terms of pointing out that not everybody has those same set of choices. So, it's, in my mind, not a very fair proposition to ascribe the income differentials as a result of people's choices. Does that help?

Q. Yes, it does help. But what I think it says, is that it may not be fair to ascribe the income differentials to that but Dr Coleman did go on to say that – he talked about the regional differences in New Zealand as compared to Australia. He did seem to be saying that in fact where you are living can mean that your income is going to be less because there's simply not the jobs in that place, in regional New Zealand for instance, where you're able to earn the large incomes and so forth. I'm just putting it to you that he did take that into account in his discussions about income differentials.

A. That would be true if you were comparing incomes in Gisborne compared to incomes in Wellington but if you're comparing incomes of non-Māori in Gisborne with Māori in Gisborne then that regional choice matter does not come into the equation. If you've taken the regional bit out of the equation then I don't see how that choice element comes into it.

Q. Right. Thank you for that. That's very helpful. The other major point that he seemed to be raising or issue that he seemed to be raising in his brief was the question of what valuation metric is appropriate to be used. The interesting thing about the way you looked at this issue for the Tribunal was – rather for your client but it was presented to the Tribunal – to look at what could improve the incomes of Māori in Gisborne and that was raising the educational achievements.

A. Sure. That's correct.

Q. I'm just trying to see how the relationship between the different approaches to what would be necessary.

1610

So, yours seems to be taking a future forward.

A. One of the ways I would put it is I'm trying to put some resources behind to bring everybody up to that same start line and the biggest discrepancy in terms of getting people to the start line is that education at the very start of life. So, if we can get as many people to that education level where they come out of our education system with a reasonable qualification of some level then that at least gets past all of those other discrepancies. It gets past not all but some of those other discrepancies and in my mind a large discrepancy that we could do something about quite relatively

quickly and targeted, which is around that education funding element. I'm not suggesting it's going to flow through into all of that income gap being eradicated but it would be a good start.

(16:11) JUDGE WAINWRIGHT TO DR GANESH NANA:

Q. So, if we look at the discussion that you've just had with Judge Milroy, which is about the income deficits that we can see in Gisborne and Dr Coleman's contention that really we shouldn't regard there being much of a deficit in Gisborne because it's not to do with anything really or nothing major apart from the fact that no one does well in Gisborne. I think what you're saying is that you don't accept that and that the deficits that are visible there are to do with not bringing the same – having a deficit from other circumstances that have nothing to do with location. That if you fix those, irrespective of the problems of location, you will still be assisting Māori in Gisborne.

A. Yes, that's correct. In my previous evidence there was strong indications of that income gap taking away the impact of region. So, only focusing on Māori in Gisborne compared to non- Māori. Taking away the impact of ages so comparing people in the same age categories and indeed comparing, if I can recall, people with the similar levels of qualifications. Once you take out those factors you still have an income gap. So, to say that the income gap is not relevant is because it's Gisborne or everybody just needs to move to Wellington or Auckland, I think that's a gross simplification and indeed it's not backed up by the data. And acknowledge that income gap is not all totally related to past losses; accept that as well. But I think the fact that that gap remains and is quite clear for this population group, and is backed up by the evidence in terms of the age breakdown and the qualifications breakdown, suggests that some of that gap could be overcome if we devoted some targeted resources in terms of education in bringing more and more people closer to that same start line.

Q. In terms of our jurisdiction, which is to look at our statutory job, of satisfying ourselves of a very broad criterion, which is what should be done by way of return of land and compensation to address the prejudice that Māori

have experienced as a result of the well-founded claims that the Tribunal has found that they have, you stick by your guns that the Tribunal can be satisfied that some of what they could put in that space usefully would be to contribute money to the job of increasing educational outcomes for Māori – well, in Gisborne you're saying but I'm extrapolating to Māori in areas like Gisborne.

A. Yes, short answer. Money, resources and effort in that education system. Without going too far outside my brief, our education system has not served Māori well so the more that we can target and focus and indeed, for want of a better word, change and/or modify the institutions within the education system so that we do get some better outcomes then why not; to put it simply.

JUDGE MILROY:

Thank you, Dr Nana. Judge Wainwright put that much more clearly to you.

(16:15) DR ANNA PARSONSON TO DR GANESH NANA:

Q. Tēnā koi, Dr Nana. I just also wanted to go to your paragraph 5 where you begin by saying that economists tend to minimise another equally important aspect and that is the choices available to people and their communities and how they're constrained. I was just very interested in that particular comment, why do you think economists do minimise the choices available when, on the face of it, it might seem that that would be one of the factors that would attract their attention if they're seeking to understand how a society functions economically.

A. We minimise constraints, we maximise our ability to choose because as economists we want to be the flag bearers for the market economy. The market economy functions well, is efficient if everybody has a range of choices and makes the right choices that are right for them and, lo and behold, the whole system works. So, as long as we have those choices the text book is quite good. Unfortunately where there are groups in the population that don't have those choices then the market doesn't serve them very well but, depending upon what sort of economist you are, you can sort of ignore those groups or think of some other reasons why the

market's not suiting them well or tell them, "Well, that's the state's problem". I'm of the opinion that actually that's – in my mind, that's where the market fails because the market fails to recognise that there are groups in the population that do not have the full range of choices that are open to people like me.

Q. So, we as a society don't get much closer to understanding the fact that so many people's choices are in fact constrained.

A. Not if you listen to some economists, yes.

Q. Do you see now that there are economists who are in fact working to highlight the inequalities and the reasons for them?

A. I think there are definitely, yes. I think there's a growing school of thought within the economics profession. Obviously not growing as fast as I would like but that do understand the market mechanism is failing for certain groups. Either you approach it by trying to fix the market mechanism or you put in other supports in terms of whether it's a Government intervention or other organisations or you would do a bit of everything. I'm very much in that latter camp where we have to do a bit of everything. We've got to make the market work a little bit better but we've got to ensure that the state and Government and other institutions are also ready and there and willing to step in to help.

Q. Perhaps that brings us to your suggestions to put funding into Gisborne to remove educational qualification and equalities would be a good first step but it would be the case also, wouldn't it, that if you managed to achieve that you've still got to have a strong functioning local economy in Gisborne if people still want to choose to remain within their rohe.

A. Agreed, yes. Very much so.

Q. Do you want to comment further on that particular step?

A. A. vibrant Gisborne economy relies on a vibrant Gisborne community. You need both to go together. Part of that is an education mechanism, part of that is the health system, part of it is all those other social service providers, the ability to set up a business, the ability to source workers, all of those things go together and it's a bit flippant to say they do go together but it is part of that ecosystem. My concern is that many see an economy

as separate to all those other ecosystems when actually they are all together.

1620

We can't continue to focus on just trying to make the economy efficient but ignore all the other elements. Undoubtedly the other one is that environment ecosystem as well. We've got to look at them together, to build them together to ensure – depending upon on what we're striving for, to get us in today's world the wellbeing of future communities.

Q. Kia ora, thank you.

TIM CASTLE:

Tēnā koi, Dr Nana. As always, I've found your evidence most helpful, thank you very much. For the moment, I have no questions for you, particularly having regard to the answers that you've given to their Honours, as well as my colleague, Dr Parsonson. Thank you very much.

(16:20) DR RUAKERE HOND TO DR GANESH NANA:

Q. Mihi ki a koe. What I understand from what you've said and from the evidence that we've heard earlier is that the constraint is really the lack of resources, constrains the ability of iwi to self-determine the future and that it constrains the ability of iwi to be able to have a position where they're also able to influence the Government's investment of social services in education. If it's a larger part of the economy in Gisborne then it has the ability to help influence how the investment in the region takes place, such as education, health, social services. Is that generally what you say in terms of constraint?

A. Yes, I think that's a fair summary. There are significant constraints across many groups in New Zealand and one of those is – even with the large iwi groupings, the constraints remain in terms of their ability to influence the powers that be. That's very much, I would say, reflected in that local government area when you're talking about resource allocation and resource consents, and those sorts of things. The acknowledgement that there are those constraints and so the acknowledgment that those constraints minimise – not minimise but affect the choices that are

available, whether it be to iwi or hapū or even individual Māori is important when we're thinking about future development and/or thinking about recompense for past loss.

JUDGE WAINWRIGHT:

All right, Dr Nana, I'm now going to hand you over to my -

CRAIG LINKHORN:

My question has been answered, ma'am, so no question required.

(16:23) GARETH KIERNAN (#P63):

JUDGE WAINWRIGHT:

All right, you're done. So, we're up to Dr Kiernan now. Actually I said "doctor" but I don't know. Mr Kiernan, I'm glad that we've been able to bring you on more or less in accordance with the timetable and again there's been time allocated to questions of your evidence in reply for the Tribunal and for the Crown. So, I'll just ask you to answer any questions that Tribunal members may have. Tēnā koi.

(16:23) JUDGE MILROY TO GARETH KIERNAN:

Q. I've just momentarily lost your brief so I will just find it again and then I will ask you a question or two; not many. Here we are. Again, thank you for making yourself available to us today. During Dr Coleman's evidence he discussed when it was appropriate to use an investment rate of return as A valuation metric as compared with a welfare loss metric. He also discussed different kinds of ways of valuing. In your brief in reply you refer to the fact that you were treating in your evidence – sorry, I should point you to the page; page 2. You were referring to the fact that your evidence dealt with losses in monetary terms. So, therefore it would seem that – and these were the losses in terms of the dividends that would otherwise have been paid out but weren't because of the fact that Ngā Ariki Kaipūtahi didn't get the share that it should have. The question was put to him that are those monetary losses and therefore it's an investment rate of return

which would be appropriate and he replied no, that he saw those as welfare losses because the money that would have come didn't and so spending didn't occur. So, those are welfare losses and you use a different valuation metric. Do you have a reply to that?

A. In one sense, I agree with Dr Coleman around the – he mentioned somewhere in his evidence that there's a comparability in the way you can treat monetary and non-monetary losses. I know that over the last two days he's been at pains to say for different sorts of losses maybe there are different ways of appropriately valuing those. But in the general principle, the only reason economists care about money is that it's a nice way of converting everything into a similar measurement; a way of measuring things. I guess my difficulty with the way Dr Coleman then approached things, and certainly listening to his evidence over the last two days, is that the difficulty arises in terms of determining what the welfare or the value of the welfare loss or maybe just the welfare loss itself, what that is at any given point in time and the highly subjective nature that ends up coming to that. He's talked about different frameworks or different ways of thinking about that and, having listened to him, I can appreciate that he's tried to provide a range of ways of thinking about it for the Tribunal. But I don't think it gets us any closer to the actual answer of what is the appropriate final – value is maybe not the right word because I feel like it's been overused over the last couple of days. But what is almost the monetary figure that you end up arriving at. I don't know if I've answered your question in circling around there. From my point of view, as I intimated in my brief, when I looked at Dr Coleman's evidence I saw that in my original evidence that I gave it was very much in line with his zero-discounting column, notwithstanding the differences in inflation over time if we accept that it was all in real terms. I still have issues, I guess, around the moral hazard questions or the incentives to the Crown that even at a zero-discount rate that that would imply for past losses. Certainly I'm more concerned when you get into valuing the welfare losses in the past when you diminish the value of those over time in terms of what it implies around moral hazard or the incentives for the Crown or the transgressor in any particular situation.

Q. In terms of the moral hazard issue and the diminishing punishment, I guess, the longer back you go, is that it's because Governments change and over a long period of time they change a lot. Values change and so on and so on. That's the reason why placing a moral hazard incentive in that sort of long-term situation is less appropriate and should have less value.

A. Individual Governments change. I guess, within the realms of New Zealand at least, the overall institution of Government has remained the same. I accept your conjecture or your point that the values of society at any given point in time and what they place around that and how that's enshrined or the legal framework around that can change as well.

16:30

But I don't think that necessarily diminishes the need to at least take that moral hazard side of the equation into account. Part of the discussion yesterday very briefly centred on the Holocaust and the cost of that – cost is not the right word – but the welfare loss associated with that or the cost to the people involved were that and Dr Coleman used the word "stupid" a number of times previously. He may have used it in that context as well. In that the size of the number that you may have arrived at would have been very, very large. That may be true but it doesn't mean you shouldn't actually try and quantify the extent of the loss. Then you step through beyond that into the political sphere and say, okay, in a political sense what can we pragmatically put forward as redress or compensation for what has occurred in the past and it may well be in many situations there is no way that you can realistically repay the monetary value of what has occurred in the past and that is where the other actions start to become more important because any monetary payment can only be a representation of a small part of the role that may have occurred.

Q. I guess we do have to recognise that moral hazard in this circumstance where even the accepted valuation of loss for land loss is well above the cap. It is not – is it an issue really?

A. I did feel like the evidence of Dr Coleman coming back was a bit of a distraction from – as you say, from the point of view of certainly the Mangatū inquiries that I've been involved in, you're right, the cap is here

and the possible losses are well above that. I'm not familiar with the Wairarapa inquiry so it may be that it is more of an issue there.

Q. Yes. The other aspect, I suppose, in your page 3 that I just want to discuss a little or understand a little better is that you're referring to Dr Coleman's statement that Chichilnisky's theory is consistent with a group attributing the non-monetary events in the past similar values as if the events were to occur today. Compensating a group with such values for past wrongs may require the return of the land or payment sufficient to enable the group to purchase land in alternative places. Then you go on to say that this doesn't take into account the special value – or this is what I'm thinking you're saying, the special value of this particular land to Ngā Ariki Kaipūtahi. Is that what you're saying there?

A. No, I wasn't referring to the special value of the land. I think that is a separate area of that, not having a great deal of experience with Māori. It's not really my area of expertise. I was actually merely referring to, let's say, for an example, Ngā Ariki Kaipūtahi were disenfranchised from their land in 1881, they get their land back in 2019 but there is no additional payment made alongside that which seemed, the way I read Dr Coleman's statement, to be what he would be implying with the, "Well, we've sorted out the wrong, we gave you back your land, but sorry about the 138 years in between. Oh well, bad luck, you missed out on all the opportunities associated with that in the meantime". Listening to Dr Coleman over the last day or two he seems – he more seems to have been trying to distinguish between the land and then saying, "Well, there is other lost opportunities, lost welfare, however you want to term it. We need to treat that differently or calculate that separately".

Q. Yes. So, he was saying then that those are welfare losses, the not having the land in between times would really be a welfare loss and that's the valuation metric or that type of valuation metric is to be used. Is that what you've taken from what he said?

A. Yes, that's right, and so he has, for example, advocated his averaging method of Chichilnisky with the zero time discounting whereas my original calculations were simply the zero time discounting, basically converting the historical dividends, either the actual dividends or as we estimated

them prior to 1950, what they may have been in converting them into today's dollars and saying, "Well, you're getting that money back but no sort of profits or the money that may have been reinvested or consumed, who knows, you're not getting any of that additional back".

Q. Okay, thank you. Those are all my questions.

(16:35) TIM CASTLE TO GARETH KIERNAN:

Q. Tēnā koe, Mr Kiernan. Thank you for your evidence, *ngā mihi mahana ki a koe.* Do you have your reply brief there to Dr Coleman available to you?

A. I do.

Q. Just if you would, please, remind yourself of the first paragraph on page 2 under the treatment of monetary and non-monetary losses? You touched on that in answer to the last question to Judge Milroy and how you made the calculation. Then having regard to what you say there, if you would look at the first full paragraph on page 3 of your reply brief and the word that struck me as I thought about what you said there is in this context, your second sentence, "However, if such a payment ..." so this is the prospect that the Crown can settle the past wrongs for Ngā Ariki Kaipūtahi for the value of the land, "If such a payment was to represent full compensation it would mean that the loss of income from the land over the period since 1881 is of no value or consequence to the claimants". My question is: is it possible, in your view, to put a monetary figure, because you used that language instead of the word "value" a short time ago. You suggested that the word "value" may have been overused in the last two days. But is it possible, adopting your language, to put a monetary figure on the consequence to which you are referring in that paragraph and, if so, how do you go about it?

A. I would say there must be some sort of spectrum or range in terms of what the consequence of the monetary losses over that period would have been and indeed the – well, the non-monetary losses as well. At its simplest, if we think about the opportunities that are available to Ngā Ariki Kaipūtahi or Māhaki in having been disenfranchised of the land, having had significant loss of life and wrongful imprisonment back in the 1800s, it is not immediately clear or obvious, certainly numerically, to be able to say

how has that impacted on the iwi or the members of the iwi who are currently alive, the work that Dr Meade has done. Indeed I haven't read Dr Nana's work but the implication I've taken from listening to him briefly today, looking at the sort of income gaps as some sort of proxy and saying that to some extent might reflect the wrongs that have occurred in the past because these people have had – have lost their assets, have lost their mana, and therefore over time they have had less education, less economic resources, all those sort of things, and it is fed through into the outcomes that we see for people today in the iwi, then that to me is some sort of estimate in terms of trying to work out what those consequences, as we've termed it, may well have been from the losses or the actions that have occurred in the past.

Q. And your calculation, based on the factors you took into account, the three parts to which you refer, is that designed to accommodate the breadth, or the depth actually, of the losses of which you're speaking, so non-monetary as well as monetary welfare?

A. Not at all, no. No, my original calculations, and certainly the brief I had back in 2012 and then again 2017-2018, was very much focused on as much as we could quantify the monetary losses in that period of time and any other losses that may have been associated with the actions were over and above what I was given to look at.

1640

Q. Yes. So, there are multiples of loss, some beyond your monetary figure?

A. Indeed.

JUDGE WAINWRIGHT:

All right. You first then, Ms Feint.

(16:40) KAREN FEINT TO GARETH KIERNAN:

Q. Kia ora, Mr Kiernan.

A. Kia ora.

Q. I just wanted to ask you about the statement on page 1 of your brief and in the last paragraph there is a statement there where you say you agree with Dr Meade that it is appropriate to allow for an opportunity cost on

historical losses if those losses are compensated at some later date. You reference there the joint statement 2(d), which was the joint statement put out by the expert witnesses after the hot tub, correct?

A. Yes. I don't have it in front of me but that sounds correct.

Q. And I went back and had a look at that and that joint statement does indeed repeat the statement that it is appropriate to allow for an opportunity cost on historical losses if they are compensated at some later date. It adds the words "based on economic principles" and I wonder if you could expand on what those economic principles are, why you reached that conclusion in the hot tub?

A. Sure. So, essentially if Ngā Ariki Kaipūtahi in the case of my client – well, I think that is the right word – if they had suffered a loss at some point in the past, in 1881 for argument's sake, then who is to say what they would have done with the asset or the money value of that asset, however you want to frame it, over the intervening 138 years. There has been a lot of discussion about the plausibility or otherwise of is all that money or is that asset reinvested over time to compound up and at its most – not necessarily its most extreme but towards, I guess, one extreme or one end of the spectrum is that that is the path that is taken and then we have a relatively large number when we do the maths today in terms of what the value of that loss ends up being measured at. Others have argued that they can – that the profits are consumed or the revenue or whatever is consumed over time and the size of the asset does not change during that period. My difficulty is that it is not clear to me that I or necessarily anyone else should be able to dictate to Ngā Ariki Kaipūtahi what they would or should have done during that period, and this comes to the options or the question of choice, which was touched on briefly earlier. So, I guess in terms of – what was the phrase used, economic principles, I guess from that point of view that is the sort of thing we had in mind in the hot tub session.

Q. So, you're under-counting the loss if you don't provide for that?

A. Potentially. Potentially under-counting it because you are imposing a – you are effectively imposing a constraint or a dictation to the iwi by saying, "This is what you would have done".

Q. Right and, of course, it is hypothetical because no one knows for sure. Then you say over the top of the next page that you also support Dr Meade's use of PTRF or DGDP compounding rates. You say they are relatively conservative. Have you been here to – you've listened to Dr Coleman's evidence?

A. Yes.

Q. If I understood him correctly, he did not support – he did agree that those rates were conservative, I think, but his point was they should not be compounding in the first place. So, what is your response to that, at least in relation to welfare losses he would say?

A. And that's the difficulty in relation to welfare losses, I guess, versus Dr Coleman essentially is trying to convert everything into a welfare value. I almost go in the other direction and try and take it into a monetary sense, which may or may not be correct or may or may not be more valid. The work that I had done was obviously already in that monetary sphere and I didn't have to worry particularly about the non-monetary side of losses. But I think, as you point out, the main disagreement with Dr Coleman is not that those returns or the returns that Dr Meade has used or the compounding rates that Dr Meade has used are conservative or not. From an investment point of view, I think there is general agreement they could be termed to be reasonably conservative compared to some of the other numbers that we could generate, but Dr Coleman's point is you shouldn't be using them at all. In fact, you should potentially decay the value of past welfare losses quite significantly over a period of time, which is obviously the opposite effect to what the compounding factors would suggest.

Q. But you don't agree with Dr Coleman?

A. I have concerns, not least of which is the moral hazard one.

Q. All right. Thank you very much for your evidence, Mr Kiernan. I have no further questions.

(16:46) CRAIG LINKHORN TO GARETH KIERNAN:

Q. Kia ora, Mr Kiernan. Just a couple of points left. There has been some discussion around whether the available compensation in the Gisborne inquiry is eclipsed by land value. It is starting to trip off the tongue for

people as if it is just a given and accepted by all, but that requires us, doesn't it, to consider compensating for land loss beyond the subject land, doesn't it?

A. Can you –

Q. Beyond the Crown forest licensed land, doesn't it?

A. Potentially in this case. I haven't looked at the maps and the land particularly recently to be 100 per cent familiar with that but I do recall from the recesses of my memory that there was various approximations, shall we say, made particularly with the claim for Ngā Ariki Kaipūtahi that some was outside the boundary of the Crown forest land and maybe that was represented as some sort of proxy by the land that the Mangatū Incorporation owns and the dividends thereof.

Q. But the Crown forest licensed land, the value of it, the current market value of it won't affect use of the compensation. Are you aware of that?

A. In terms of the compensation being calculated under schedule 1, do you mean?

Q. In terms of how you measure what the compensation is compensating for, because you've already returned the land, haven't you?

A. Sorry, you're talking about some hypothetical in the future when the land is in theory returned; is that what you're saying? Sorry, I don't understand quite what you're trying to put forward here.

Q. Well, in answer to earlier questions and statements you and other people have pointed out that the land value in the district eclipses the available compensation for the Tribunal. That's correct?

A. I believe in terms of the land that whether it be Māhaki or Ngā Ariki Kaipūtahi have talked about, yes, that would be true with that land.

Q. But if the subject land in the Crown forest licence is returned, then that won't be by deducting from the compensation, will it?

A. I am not 100 per cent sure of the ins and outs of it but I'm happy to take your word for that. Is my understanding correct that the land can be returned within ... obviously there is questions around the practicality of that. But we could return the land and compensate the iwi? Is that what you're trying to say, financially, I mean?

Q. Yes. There is available to this Tribunal the ability to recommend the return of land –

A. And compensation

Q. – and compensation.

A. Okay, yes.

1650

Q. And so to talk about the value of all the land in the district eclipsing the available compensation that goes with this land is to muddle up two ideas, isn't it?

JUDGE WAINWRIGHT:

I am struggling to follow where you are going with this, Mr Linkhorn, and I think the witness is as well. When you're referring to the land and the district, you're not talking about the Crown forest land?

CRAIG LINKHORN:

No, land including but beyond the Crown forest land in the inquiry district, the value of which is said to eclipse the statutory compensation.

JUDGE WAINWRIGHT:

I don't think that – well, that is not my understanding of what we were talking about.

CRAIG LINKHORN:

Well, I can put to this witness, you're not saying that then? You have or don't have a view as to whether the –

JUDGE WAINWRIGHT:

I don't think he knows what you're putting to him, Mr Linkhorn, so I'm not sure that he or hasn't agreed to any proposition that we understand at this point.

CRAIG LINKHORN TO GARETH KIERNAN: : (CONTINUES)

A. All I can say is there are losses associated with the land specifically. There are losses associated with not having the land for the past 138

years in the case of Ngā Ariki Kaipūtahi, or a proportion of the land. There are other non-monetary losses arising from the disenfranchisement, et cetera, of Ngā Ariki Kaipūtahi. So, if you want to separate out the value of the land, and I am still not – as Judge Wainwright said, I am still not 100 per cent clear about what we mean when we say "the land", but nevertheless if we want to separate out the land as part of the compensation from some financial compensation then giving the land back, whatever land that may be, may well be part of the recompense but don't mistake it for being the sort of full redress that may be necessary given the other two components that I've mentioned.

Q. Yes, understood, and in the case of Ngā Ariki Kaipūtahi its exclusion from its fair share of the land title in 1881 is different in nature, isn't it, from the full payment made to the 1961 owners?

A. I don't profess to have enough familiarity with the payment to the 1961 owners because that was not particularly relevant, as far as I knew, to my clients and their claim.

Q. Turning to page 2 then and the last paragraph before the heading at the bottom of the page, you're saying there that these alternative valuation methods seem to be little more than personal preference on Dr Coleman's part to justify his results. I want to ask whether you stand by that in light of having heard Dr Coleman's explanations?

A. I think having heard Dr Coleman's evidence over the last two days has helped me understand his position that he is coming from and the discussions have assisted in that regard. I think, given the lack of a body of literature and sort of evidence, well, the lack of evidence that there is in the economic sphere regarding historical losses and valuing those, particularly in terms of welfare, I would say there is no consensus and, therefore, it is still a case of essentially personal preference whether it be his personal preference, my personal preference, Dr Meade's personal preference.

Q. Isn't Dr Coleman's evidence that there is a lack of literature for the kind of approach you're advancing and so we could all argue ourselves to a standstill of personal preferences when really these are the expert opinions of witnesses, aren't they?

A. Yes, that is a fair point. I guess the writing of the sentence or the paragraph that you point out was written from the point of view that, as I understood it, the Tribunal had asked Dr Coleman to go away and review some of the briefs and the evidence that had previously been presented. One is somewhat then concerned to have a new point of view brought in and it potentially be viewed as the last word, so there is no right of reply. It is not necessarily to say that Dr Coleman is any more right or wrong than anyone else, more to say that, "Hold on, just be a little – don't take this as the gospel or the final word".

Q. All right. I can leave that there. Thank you, those are my questions.

JUDGE WAINWRIGHT:

All right, Mr Kiernan, I think we can release you. Thank you for your reply and for your attending today to answer the questions. *Nā reira, ,kua tae tātou ki te whakamutunga o te rā nei. Ka hoatu ahau I te rākau ki te hoa whakakapi mā tātou.*

(16:56) DR RUAKERE HOND (MIHI)

Kua eke te wā ki tēnei haora, ka titiro ki ngā whanaunga kei tērā pito o te rūma, kua noho ngū ana i te roanga o tēnei rangi, kōrero roia, te kōrero kaikaute engari anō, nau e Koro Tiare, ana nāu e wāhi atu a tātou kōrero ki te karakia, hoki atu ki a Te Kooti me ana karakia nei, nā pai tonu māu anō to tātou rā whakakapi. Haere tonu ana me te mihi ki a koe, otirā koutou katoa, tātou katoa i roto i te rūma, tēnei te mihi, tēnā tātou.

KARAKIA (CHARLIE PERA)

WAIATA

HEARING ADJOURNS: 5.04 PM

HEARING COMMENCES ON WEDNESDAY 24 JULY 2019 AT 9.02 AM

(09:02) DR RUAKERE HOND: (MIHI)

Ka whakairihia nei te mauri ora nei, te mauri kōrero, te wānanga o inanahi ki runga i a tātou katoa. He ōrite anō ki inanahi, ngā mea tae tuatahi mai nei i te rangi nei, tēnā kua iri te mauri o inanahi ki runga i a tātou katoa. Engari anō, ka tuku atu tērā, tēnā nā te karakia ki te wāhi ngaro ki runga i a koe e te matua, tēnā, kei a koe.

BRIAN EMERY: (MIHI)

WAIATA

BRIAN EMERY: (KARAKIA WAKATUWHERA)

(09:08) DR RUAKERE HOND: (MIHI)

Kia mihia koe e koro, e te pā whakaruru nei ki te wāhi ngaro. To mai o kupu nei, herea nei ngā waka katoa nei o roto o tēnei rūma, puta atu ki ngā rohe e kōrerotia ana i te rangi nei. Otirā, te tō mai rā, te paimarire ki tō tātou Kīngi, a Tuheitia ki roto ki te rūma, ka iri ki runga i te katoa i tēnei rangi, tēnā koutou, tēnā koutou, tēnā tātou.

(09:09) JUDGE WAINWRIGHT: (MIHI)

Ata mārie tātou. Te mea tuatahi, ka hoatu ahau i te rākau ki tāku hoa kōrero ai ki a tātou.

(09:09) JUDGE MILROY:

Tēnā koutou, Mōrena. I just wanted to say to the Mangatū Council, we indicated that we might have time for a judicial conference during this sitting to deal with matters that are upcoming for us in terms of the iterative process. But given the way things are going and given that people need to eat at lunchtime and have a break, and because both myself and Dr Parsonson have to catch planes,

myself to the Riviera of the Antarctic otherwise known as Invercargill, this afternoon, I think we'll have to just delay the short judicial conference that I was hoping to have and what I'll do is organise a telephone conference when I get back from the south. So, that's all I needed to say.

0910

JUDGE WAINWRIGHT:

Tēnā koe, Judge Milroy. Now we turn to Dr Meade. He is to present a summary of his evidence which I think probably has been distributed in hard copy and that is P60(a) on Wai 814, A62(a) on Wai 1489 and Wai 863 cause at J92(a). All right, where is he?

KAREN FEINT:

Ma'am, I'm going to lead Dr Meade's evidence today.

JUDGE WAINWRIGHT:

Tēnā koe, Ms Feint. Tēnā koe Dr Meade.

KAREN FEINT:

So, I'll call Dr Meade to the stand. Day 3 of hard economics and if anyone can make it sound exciting it's Dr Meade. That's the challenge we throw out.

JUDGE WAINWRIGHT:

What do you mean it sounds exciting, it is exciting, isn't it, Dr Meade?

(09:11) KAREN FEINT:

So, Dr Meade, just before we start can you confirm this is your brief of evidence which is P60 in Wai 14, A62 Wai 1489 and J92 in Wai 863?

(09:11) DR RICHARD MEADE:

Yes, it is.

KAREN FEINT:

I've just noticed the entitlement is incorrect. So, let's just record for the record this is a joint brief of evidence which we're doing on behalf of Wairarapa Moana ki Pouakani Incorporation which is Wai 85, Ngāi Tūmapuhia-a-Rangi hapū, Wai 429, and then Te Aitanga-ā-Māhaki Wai 274283 and Mangatū Incorporation which is Wai 1489.

DR RICHARD MEADE:
Indeed, yes.

KAREN FEINT:
Do you confirm that the contents of your evidence are true and correct?

DR RICHARD MEADE:
Yes, I do.

KAREN FEINT:
All right. Thank you, Dr Meade. So, if you proceed to present your PowerPoint slides.

DR RICHARD MEADE:
Thank you.

KAREN FEINT:
So, this has been filed electronically as well as distributed in hard copy.

DR RICHARD MEADE:
Please may I have a hard copy if there is one? Okay, thank you. Okay.

So, a pleasure to be back, Ma'ams and fellow members of the Tribunal. It's like the ageing rock stars after the final gig, here we are again having a reunion concert. Now, I'm in your hands somewhat as to timing. I would propose that I perhaps just present on this occasion in the interests of time then I'm wholly responsible for time-keeping, and then perhaps take questions. But of course if you wish to ask any question along the way I'm in your hands. I have to say

my slides have probably expanded a bit given I added a few at about 4.00 this morning thinking about yesterday's testimony. Just because I think we've had some very helpful discussion and it's brought about some important points of coalescence which I wish to emphasise in my brief.

JUDGE WAINWRIGHT:

Coalescing is always good, Dr Meade. You've got — in the timetable, and I think we should try and stick to the timetable today because we don't have anything to flow into, you have 45 minutes for your presentation and then according to the timetable the Tribunal has half an hour for questioning and then Wai 507 has ten minutes for questioning before the morning tea adjournment. So, shall we aim for that?

DR RICHARD MEADE:

Best endeavours, Ma'am.

JUDGE WAINWRIGHT:

Kia ora.

(09:14) DR RICHARD MEADE: (ORAL SUBMISSION #P60.814; #J92.863)

Okay. So, if we can just take a moment, I wish to acknowledge the passing of John Ruru and of course his great carrying of the torch for the Māhaki claims over many decades and I was very happy that John's whānau were prepared for me to put this up to acknowledge his contributions. At the same time they provided me with various photos, I had this one myself from when John took us, his advisors, around the land and it struck me as quite significant. This is the board room of Mangatū Incorporation. It's like a wharenui. It has the carvings of the ancestors on the walls. I'm a Pākehā but my understanding of Māori collectives is that the collective is the accumulation of all those who have lived, including those who are no longer alive, and that collective is forever looking towards the future of those who are not even here yet. So, there is a kind of inter-temporal quality to Māori collectives that are quite distinctive compared to just ordinary collectives that we normally think about like companies and so forth. So, there is that.

Also very briefly, I just wish to quote from my reply evidence how much I welcomed in fact my evidence being tested by Dr Coleman's reply and the underlying bit. The personal remark I've made about Dr Coleman is this: he's an academic economist whom I hold in the highest regard, and I wish that to be recorded, Ma'am, just because there was a suggestion yesterday I had indicated otherwise.

Anyway, my presentation is summarising my reply evidence, I should have added at 4.00 this morning, and a few extra slides based on what we got to over the last two days of hearings because I found them tremendously helpful to clarify Dr Coleman's position where he felt there were areas of overlap, where he felt there were still areas of difference between us, et cetera, and I think there are some very important points of coalescence that have come out of that.

Of course what I'm saying basically is that I think Dr Coleman's evidence reinforces my conclusion that the Tribunal is justified in awarding the available statutory compensation. I said that before the last two days of hearings and I only say that more now, okay. So, this is why I want to point out these areas of coalescence and of course I'm acting on behalf of the three claimant groups.

(09:16) JUDGE WAINWRIGHT TO DR RICHARD MEADE:

Q. Can we just go back to that previous slide?

A. Yes.

Q. I hadn't appreciated that Dr Coleman had expressed a view on whether all the available statutory compensation should be awarded other than in relation to schedule 1 of the Crown Forest Assets Act.

A. I'm stating this is my conclusion, Ma'am.

Q. Is this your conclusion?

A. Then I'm saying that Dr Coleman's evidence reinforces that conclusion.

Q. So, you're saying that all the available compensation or available redress under the SOE Act is also supported by his evidence.

A. Yes.

JUDGE WAINWRIGHT:

Okay. Kia ora.

(09:17) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

Thank you. So, I won't dwell on this. Really I'm just going to respond to his major areas of comment on my brief of evidence and so we kind of know what they are since he discussed that yesterday and the day before. Dr Coleman's evidence is not causing me to revise any of my substantive conclusions, and they are effectively that the relevant statutory schemes provide that a successful claimant should take the maximum compensation because that's what the scheme provides. That has always been my first port of all in these hearings and even if that were not the case, the claimants losses are sufficient and even if that were not the case, well, you could get to that same answer just looking at the economic base.

So, Dr Coleman's evidence doesn't speak to the first point, he acknowledged that he hadn't really got into the details of the statutory schemes, and he offers various comments on my loss and economic base estimates but once I boil them down I believe that doesn't change and, in some cases, even reinforces those second and third conclusions.

Okay, the main reason why I don't need to change my evidence based on Dr Coleman's critique is that effectively I had anticipated these sorts of comments and I had accommodated or provided for them in my evidence already. It was a matter of design strategy. When I came up with my loss estimates some time ago I deliberately said, "Use conventional frameworks like exponential compounding but use very conservative assumptions". I think you'll have the words ringing in your ears from various hearings that I've stressed just how conservative I think I've been. It's been quite helpful I think for Dr Coleman to effectively implicitly test me on that point because now I have to demonstrate how conservative, how much conservative have I been and this is what I'll be showing in my evidence.

So, context: the CFL regime in particular, as I've always maintained, has two very strange quirks that need to be answered really. So, why does a claimant

get the accumulated licence fees since the CFL was created and why does the schedule 1 compensation tie that compensation to the value of a forest that certainly wasn't on the land at the time of the breach? These are two very strange things and they demand an explanation effectively. So, when I answered these questions, when I looked at the background of the 1989 agreement that led to the CFL regime, what that says to me is the CFL regime is a bespoke compensatory scheme. It's got these weird features. It's trying to do something very particular under which the successful claimant is compensated for not owning the relevant land but also the trees at the CFL's inception. So, implicitly you should have had the land and the trees at the inception if you were a successful claimant. It's only a quirk of the CFL regime that the value of the trees was separated from the land and sold off to somebody else and so the Crown says, "We're going to make good on that through the compensation in the first schedule".

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So, what this means is a successful claimant is due all the land but they also get all the accumulated rentals because they should have been in a position of the landowner at the time the licence was created and, via the first schedule, get the tree value as well. I just note in passing that the language of the CFAA, the Crown Forests Asset Act, is explicitly compensatory. It doesn't talk about anything else it talks about compensation; we're compensating we're compensating, the compensation shall be. The CFL regime was a particular implementation of its predecessor, the TOWSE regime, and that can be interpreted similarly, and as I stressed in my evidence, in Ngāi Tumapuhia's case, was quoting the Crown's own understanding from the day that the CFL regime was being created that the Crown understood the TOWSE regime to mean that improvements, not just the land, would be subject to resumption. The improvements are tagged just as much as the land is tagged by the memorials.

Now, Dr Coleman hasn't said anything about their statutory contexts. He hasn't explained these two interpretational challenges about the CFL regime itself and

he hasn't acknowledged that these are inherently compensatory regimes where you compensate for the improvements, and so I think these are just important contextual things we should probably have in the back of our minds as we proceed into the more detailed economic discussions.

Available compensation I've estimated of course, so for Te Aitanga-ā-Māhaki we're talking $192 million-odd.

(09:21) JUDGE MILROY TO DR RICHARD MEADE:

Q. Sorry, Dr Meade, could you just go back to the last slide? I just want to check with you, I realise that actually you're talking about what Dr Coleman has and hasn't said, but you said he hasn't acknowledged that both regimes compensate for improvements and I just wanted to check, was it the improvements that they were compensating for or the lost opportunities that you're referring to there?

A. In this case I'm trying to make the particular point that the way the schemes are set up, the improvements are part of the package.

JUDGE MILROY:

Right, okay.

(09:22) JUDGE WAINWRIGHT TO DR RICHARD MEADE:

Q. Just to clarify, Dr Meade, is it implicit in that statement that Dr Milroy — I've just elevated her academic status — that Judge Milroy brought your attention to, that your metrics reflect a financial and interest rate approach because you're talking about improvements and not welfare benefits?

A. They're different things, Ma'am. So, effectively when I calculate losses I'm looking at the breaches and I'm trying to figure out what do those breaches add up to in terms of a number. In terms of interpreting the two regimes in accordance with their own terms, which is something you can do without reference to the breaches per se, they have implicit breaches or implicit losses that they're trying to compensate and so you're taking a different route altogether to be looking at the specific breaches and the

specific losses, which is where all the methodology stuff comes in. Just look at the implicit losses in terms of the schemes themselves.

Q. But Dr Coleman said that the specific losses, when they are expressed properly, should be conceived as welfare issues because it's a failure to be able to purchase resources that enable you to fulfil your potential. What I believe you're saying, and maybe I'm wrong in which case you'll correct me, is that if we look at the scheme we are directed to look at a financial approach because of the concept of the improvements and the compensation for the improvements that's implicit in the scheme; is that what you're saying?

A. I think that's a fair interpretation, Ma'am, yes.

JUDGE WAINWRIGHT:

Right. Thank you.

(09:23) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

So, I've estimated the available compensation at $192 for Māhaki, $206 for Tumapuhia. Mr Reid, for the Crown, has estimated the improved value of the Maraetai scheme and he's given us two numbers: $440 million for Maraetai 1 and $600 for Maraetai 2. Effectively, these are the numbers to beat, if you like. So, if the losses are somehow materially greater than these numbers or if the economic bases are somehow materially greater than these numbers and you don't accept the proposition that the statutory schemes automatically imply that these values should be disgorged to the claimants, then you're still kind of home. Well, you are justified, should I say, in awarding this compensation, and there is a cap there is not infinity of the number on the table. We know that there are specific numbers that are available. They are growing in time of course, that is just happening under the statutory formula, for example, for the CFL regime.

Just for context, all along I've been thinking of the claimants as indefinitely lived collectives. Yes, we've got named individuals who are on the front cover of each of the claims but these are always on behalf of the collective groups and the groups are either incorporations and iwi or hapū. Of course the

incorporations are legal collectives. We know they exist as a matter of law because they've got statutes that give them legal identity but Māhaki and Tumapuhia you can say have collective structures according to tikanga, even if they don't have structures recognised at law, and under Article 2 of the Treaty hapū and iwi have treaty guarantees in their own right, they have Treaty based guarantees. So, all along I've been conceiving of the claimant groups as these collectives.

So, Dr Coleman, he acknowledged the distinct legal personalities of Mangatū and Wairarapa Moana incorporations and that seems kind of obvious because of course they have that statutory identity. But effectively I think he's treating Māhaki and Ngāi Tumapuhia as collections of individuals, you know, people alive now, people dead from the past, some people in the future.

JUDGE MILROY:

I understood him to have moved on from that position during the course of the presentation.

DR RICHARD MEADE:

I wish I could say I felt that he had but I still feel there's a degree of individualisation going on. But if he has moved on from there I'm happy with that but I'm just trying to stress the way I've been treating this.

JUDGE MILROY:

All right.

DR RICHARD MEADE:

So, just to give a bit of a fly-over of how I did my various things. I've got various claimant groups, various types of loss from various time periods. I used various methods. I'm going to come back to this in a bit more detail later. I'm just trying to point out that for Mangatū Incorporation and for Wairarapa Moana we're not looking at very long time periods for how we compound. Dr Coleman yesterday said there was some point at which you flip from his view that we need to be using zero or negative, effectively, rates for converting welfare into current

dollars to a more investment based approach. So, there is some point you'd do this. He wasn't able to be clear on when that was. That's fine it's a judgment call but in my judgment if we're talking about incorporations with their own legal personality and a whole lot of those members of those incorporations are actually people who were alive at the time of the breaches, we're kind of getting into a very moot distinction here. We're kind of talking about people who are still alive today and Dr Coleman himself would agree that that gets treated quite differently to if you're thinking about an inter-generational sort of problem.

I just want to point out in this table, yes, I've got some long-term compounding, if you like, for Māhaki up to 153 years. I didn't do this for Ngāi Tūmapūhia, that was Mr Mellsop obviously. So, the only super long-term stuff you might say that I've done is for Māhaki and even then I didn't always use compounding. So, in the middle I've got this current land values based approach where I looked at the issue of how do you figure out losses using current land values where there's no compounding at all so we don't even do this stuff. So, if you had quibbles about all the compounding from the past, it doesn't apply to that. That's effectively what I've said here.

That one approach, the land value approach, and it's already been traversed in the oral presentations over the last two days, effectively the current land values are higher already than the available compensation or at least as great as in the case of Wairarapa Moana. So, on that basis alone you could reach the conclusion actually the maximum available compensation is awardable even if you don't accept that the statutory schemes are bespoke schemes and you wanted to look at losses to justify doing so. We'll spend a bit more time on this soon.

So, you saw this graph yesterday I think, Ms Feint took Dr Coleman through this. This is for Māhaki showing improved and unimproved land values. They're higher than the available compensation. As a matter of shorthand I'm calling this the "land plus argument" because Dr Coleman had argued that if you've got some sort of stewardship focused body, and it's probably fair to say that Māori collectives tend to be fairly stewardship focused bodies, that a return of

the land that had been lost is a minimum requirement. You need to do that. Where does the plus bit come in? It's like you've got to do something as well for the fact that you've been out of the land for 153 years, you've not been able to enjoy any of the fruits of the land over that period. And there's a debate over how you measure that plus bit but the basic point is it's the land plus that other bit and if the land value by itself is more than the available compensation you're already justified in awarding the available compensation.

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If you add the plus bit you're only more justified in awarding the maximum available compensation, if you accept this particular metric. So, the same, you can say, is actually true for the other two claimant groups, for Ngāi Tūmapūhia, for Wairarapa Moana. As I mentioned for Wairarapa Moana, on the land value it's a bit of a line call because the available compensation is the value of the land it's one and the same thing. We don't have a schedule 1 and all that sort of thing we just take the value of the land. But as I've just said it's a land plus formulation that Dr Coleman and I actually agree on. We both agree this is a relevant way of doing it. Take the current value of the land but then add something for the fact you've been missing out on the land for a time period.

(09:30) JUDGE WAINWRIGHT TO DR RICHARD MEADE:

Q. Conceptually, the plus in relation to the land of Pouakani is the improvements, isn't it?

A. That's one way of getting there, Ma'am. I argued in my Mangatū evidence that you could justify using improved land values as a kind of proxy for having got some recognition of being out of the land for the time period but only in a very kind of crude proxy sort of way.

TIM CASTLE:

He used it as a counter-factual in the Māhaki.

(09:31) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

They used the kind of land values. I was just simply arguing that the counter-factual is you should have had the land that you had lost and I got some land values to figure out what the two different types of valuations were and when I discussed how you motivate the use of improved land values one route was because you've got to recognise that they've been out of the land for a long time. But the other is actually just because the statutory schemes point in that direction, this is how the CFL regime has been set up. You get the improvements under clause 3 of the first schedule. There's a recognition that you get at least something of that if not all of it. So, long as the current value is at least as great as the available compensation and more so if you've got this plus factor as well, then you're justified in awarding the maximum available compensation for all three claimants; this is true.

That's actually kind of an important landing point. You could almost say we're kind of done we don't need to say terribly much more. But actually I will. Anyway, so we won't dwell on discounting and compounding. I think we've probably traversed this well enough so I hope the Tribunal is feeling conversant enough with the ideas. Discounting is when you take a future value and you bring it back to a present value. Compounding is when you take a past value and you bring it up to now. Dr Coleman suggested that compounding the past value up to now might in fact be going in the opposite direction where you make numbers lower not bigger over time. That's a point of debate but in my presentation today I'll be saying we can actually park that point of debate because there's enough commonality in other areas where that doesn't change the outcome, and that I think is the key.

Now, I'll just point out the whole exponential discounting thing, this is routinely applied by Governments, analysts around the world, it's just what people do on a daily basis when they value stuff and actually compounding is also applied, less routinely, but it does actually come up when courts award compound interest or look at schedule 1 of the CFAA. This stuff comes up.

(09:33) JUDGE MILROY TO DR RICHARD MEADE:

Q. Sorry, Dr Meade, before you move on from that slide, and this was something that I was finding hard to understand when discussing it with Dr Coleman. I think I've come to the view that it's because economists are doing one thing and the Tribunal is doing another job and that is about whether — Dr Coleman and I had an exchange and he said it's unlikely that people would value something as highly in the past, or in the long distant past, as they do now. What I said to him was yes, but if you're looking at putting people into the position that they should have been in the past then the past means the longer it is the harder it is to get to that position and so it does cost more. Is that really simply a function of the fact that we're looking at two different things, we're looking at two different jobs?

A. I don't believe so and I'm more sympathetic with your view, as it happens, than Dr Coleman's and you might have gleaned that from the way I've approached the problem in the first place. I struggle with the idea that the more distant you go in the past the less you should be worried about the loss. I think that reflected Dr Coleman's own personal views and that's some other words that are echoing through all our ears. It was his personal view and that's fine. I'm not dissuaded by it to be honest and I don't think it's consistent with practice and I've got some details about this in my presentation.

JUDGE MILROY:

All right, thank you.

(09:35) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

So, I won't dwell on this slide too much because it was traversed yesterday. The main point is, I want to just point out I decided when I went back to the paper where I got my data on New Zealand's post-tax equity returns and I realised they provided a figure that was a more appropriate sort of figure to use; it was a geometric mean not an arithmetic mean, not that you should care. But anyway, I decided to adopt the more suitable figure and that's actually a lower figure so it goes against bigger numbers if you like. So, put a line through that last set of numbers but don't throw out the New Zealand post-tax equity returns

because when I calculate them I get 8.8 per cent per annum so that falls into the same box as the growth in Gisborne region agricultural land prices. So, that is still a live heading, the New Zealand post-tax equity returns. I'm just going to call the number 8.8 per cent per annum on average.

So, this doesn't change my story. The story remains the same but it just changes the orders of magnitude. So, the point I was emphasising is that except for Mangatū Incorporation's 1962 losses I used PTRF and DGDP rates and these are very much lower than the compounding rates that I could have applied. So, this is the distinction between sub-investment rates and investment rates if you like and I think Mr Castle, you well drew this out yesterday. So, in my evidence I claim I've used sub-investment rates because I've used these numbers at the top, the 5.1 per cent, 5.6 per cent. In an exceptional case my top end of the range for Mangatū's 1962 losses, I used the actual post-tax returns for Mangatū Incorporation because that seems a very obvious place to start. What was happening on the land next door that Mangatū actually owned, that gives us a pretty good guide as to what would have happened on the land that was taken.

But fundamentally I'm using the 5.1 and 5.6 and that's a lot lower, materially lower number than the sorts of 8.8 return you get through equity returns, for example, and certainly lower than the average 9.6 per cent rate you get from the first schedule. I also just want to point out, my discounted GDP rates, DGDP rates, they're effectively the same as pre-tax risk-free rates. This is why I can say my rates are quite conservative. As an investment return if a fund manager turned up and said, "I've got $100 million to invest how would you advise me to invest it?" If you said, "Oh, just stick it in Government Bonds" they'd tell you to go away. "We can figure that out for ourselves we're actually looking for a bit more excitement in our investment portfolio we want some actual real live investment returns not just the safest possible return you can get without even thinking about it." So, my returns are effectively equivalent to the latter.

Now, how I estimated required compensation. Here's a graph I'm taking out of my Mangatū evidence. In the specific cases where I have used compounding,

and of course I haven't in all of my estimates and that's important to recognise. Compounding comes up in some but not all of my estimates. I mostly use exponential or some bog standard compounding, the sort that gets used in courts and all that sort of thing. But as it happens for Māhaki's pre-1962 losses, when we're going back as far as 1865, I did actually apply what I called the Weitzman-Gollier approach and that's a form of hyperbolic compounding. There are other ways of doing hyperbolic compounding but this is a kind of form of it. The point is that when I used this alternative form of compounding it didn't change the conclusion that Māhaki's land-based losses all by themselves are higher than the maximum available compensation and this is shown in the graph.

At various points Dr Coleman seemed to suggest, in his evidence, that I'd had a one-track mind, it's exponential compounding at investment rates. For starters I didn't apply investment rates I used sub-investment rates so that's a critically important distinction. But in addition I didn't just use exponential compounding I also did hyperbolic. Look, in the one case that I did 153-year compounding I also did the Weitzman-Gollier approach. I did that. I said it was necessary to think about different approaches. No one put a gun to my head, that was my evidence. So, echoing base, just looking at the three different approaches that I used, I used two of those approaches for all the claimants and from Māhaki there was a third approach. Is there any major sort of time adjustment going on in any of these? Only for one is the answer, it's when I do my income gaps approach to estimated economic base. I project income gaps into the future and then I calculate their present value and I call that the answer. Dr Coleman, in his verbal evidence, said that it was appropriate to discount those future numbers and discounting makes the numbers smaller. So, by applying discounting I am making the numbers lower.

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None of these approaches is using particularly long-term value conversion. The one that does, in fact I'm going to show a bit later on. But if I follow Dr Coleman's alternatives to how he thinks I should have thought about the income

gap approach, I still get numbers that are more than the available compensation. So, you've got the land plus argument that says if you just look at the land values that kind of gets you to the conclusion you're justified in awarding the maximum available compensation. Looking at this argument here it's like well, leaning just on economic base terms you can reach the conclusion that the numbers are big enough to justify awarding all the available compensation.

(09:40) UNIDENTIFIED SPEAKER:
(microphone switched off — 09:40:43)

DR RICHARD MEADE:
Let's get to the meat of the matter, as it were. On the question of converting historical losses to current values Dr Coleman accepts that exponential compounding is a legitimate approach for legal incorporations and he kind of said this explicitly. He seems to be in favour of this approach where you can say you've got some organisation that's clearly in the business of trying to invest and there's a finer point about what do you do with the money you might have consumed along the way rather than assuming everything is just reinvested all the way along the way. I'm going to come to that and we're going to look at that quite explicitly. He also accepts the approach for claims of individuals. So, if you're the person who's suffered the loss and you're still alive and you're standing in front of a judge saying, "Please can I be compensated for my loss" he doesn't get into concerns about inter-generational issues and how does the current generation feel about the losses of the previous generation, it's the same generation, it's the same person if you like.

I agree. So, that's why I used these approaches for Māhaki's 1962 losses and Wairarapa Moana's 1947 losses. It's the obvious place to start and you'd have to come up with a whole lot of reasons I think about not doing that approach in those circumstances. But I point out that I didn't do strictly an investment approach for these organisations because where I'm using PTRF and DGDP rates they're actually much lower than standard investment returns. It's only this one exceptional case in my upper case scenario for Mangatū

Incorporation's 1962 losses where I used the actual post-tax returns of Mangatū Incorporation. That's the only instance where I used something that looks like an actual investment rate and I fail to see why I shouldn't in that case because the Tribunal itself said Mangatū Incorporation is a great counterpoint, you know, we can consider this is a useful thing to think about for Māhaki in fact. I didn't even do it for Māhaki I just did it for Mangatū's 1962 losses. Because I used these low rates that biases my numbers downwards but we're going to come back to that.

The bulk of Dr Coleman's comments about exponentially compounding historical or future values involved values relating to one individual at one time but to different individuals at other times. So, this is the kind of inter-generational thing, we've got people alive now and they're making claims for people who died some time ago, or the loss was suffered by people who died some time ago. Particularly for non-monetary values, things like foregone consumption and that sort of thing, and even for inter-generational claims of finitely lived individuals or tribes where the tribes are somewhat individualised in my understanding of Dr Coleman's position. He argues that exponential compounding at investment rates is not necessarily inappropriate. He does allow for the fact that actually that could be okay. But he does say that things like hyperbolic and Chichilnisky compounding would be better or a better reflection, if you like, of how people actually adjust for time. There's some debate over this and the thing about hyperbolic and Chichilnisky, especially if you're using it in a compounding context, it's not been done. As far as I know I am the first person ever in the universe to have done hyperbolic compounding.

I consulted Professor Christian Gollier of the Weitzman-Gollier fame, because he's from my university back in Toulouse, and said, "Listen, we've got this problem. Are you aware of this being done anywhere?" And he goes, "Wow, that's interesting I don't know about that one". He's written a book about doing the future stuff, right, but looking at the backwards stuff we don't have that much to guide us, and certainly I'm not aware of anybody who's done the hyperbolic compounding thing. I did it out of interest to see what difference it makes and

what I ended up finding is that it didn't seem to make the answer change; you still end up with losses bigger than the compensation.

There was an implication that I had somehow had a one-track mind and exponential compounding and investment rates was the only way to go. Not really. I thought it was quite important to apply a range of techniques, not just exponential compounding, and especially for the more distant losses and I dedicated a lot of my Māhaki brief in particular talking about these very issues. That's why I used current land values to estimate losses, it's why I also used hyperbolic compounding and it's why I used really conservative rates. I'm trying to allow for the fact that we've got to be cautious in how we think about what happens in the intervening period and by using very conservative rates that makes a big difference to the numbers and that's my approach for dealing with that.

(09:45) ANN PARSONSON TO DR RICHARD MEADE:

Q. Excuse me, Dr Meade, I was just very interested in what you said about consulting Professor Gollier. Can you explain to us, or did he discuss with you, why in fact he didn't apply the hyperbolic compounding for the past whereas you said he'd written a book on it in the future?

A. His research focus is more thinking about things like long-term climate change policy, for example. So, we're trying to say the current generation incurs a cost to create a climate change benefit for people in 300 years' time, for example. How shall we think about that in an economic framework to come up with an answer that doesn't simply say, "We're going to ignore the future because it's so far out that discounting drives all those future values to zero so we don't care". So, this is where he does a declining discount rate approach which is a form of hyperbolic. But anyway because his focus has always been forward looking when I brought him this backward looking question it was like, "Whoa, that's really interesting". I spoke to him recently at a conference in Toulouse and he said, "Has this been written up yet?" He's dead keen to know what the situation is because I think he would be quite interested in weighing in and

looking at this one. So, maybe I can get him to weigh in; we're still working on it.

Q. So, that's an example of an economist who I think, as you've explained to us, doesn't normally think about doing this sort of work into the past.

A. Yes, his focus is forward looking, that's right.

ANN PARSONSON:

Thank you.

(09:47) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

I put a graph in my reply evidence just to try and enumerate what I meant by being conservative, by using conservative rates. Now, the first thing I'm going to do, because I mentioned before I've used a different set of figures for long-term New Zealand equity returns, put a line through my left-hand two columns and let's just re-package New Zealand equity returns as being in the same category as the Gisborne agricultural land returns category. The point I was trying to make is if you calculate my losses using PTRF and DGDP and you express them as a proportion of the value you would have gotten if you'd used these alternative benchmarks, these more investment return benchmarks, what sort of proportion do you get. The short answer is you get a miniscule proportion where most of the bars, as you can see the left ones, these are less than .5 per cent. No, just over .5 per cent big. Half a per cent, so 200 times bigger would kind of be a good starting point for some of these numbers. In the worst case, go to the right-most bars, my biggest number is almost 50 per cent of what it would have been had I used the higher investment return. So, you're kind of saying, "Actually I could have doubled my numbers in that case if I'd used the investment returns". We'll come back to this in finer detail because I think there's been an area of coalescence with Dr Coleman.

This is the old chart that I had in my brief. I think the earlier coalescence was going to be perhaps more helpful. But I just wanted to say I've deliberately adopted very conservative rates I'm trying to show how conservative in this graph. The consequence of being so conservative is that I could have said, "Maybe I should have had numbers at least two times or up to 600 times big".

I've got to put square brackets around that now because I think actually there's been an area of coalescence with Dr Coleman that comes up with a slightly different position but it's still a position that says my numbers are too low, just not by those factors. So, in my brief I had 20 to 2,000. Twenty was a typo it should have been two because 100 divided by 50 has been two since I was a boy and for some reason it came out 20. The 2,000 was because I was using this alternative benchmark for the New Zealand equity returns, but now I'm using the more conservative benchmark for New Zealand equity returns I've modified my top end. But even these revised numbers, as I say, put a square bracket around those.

So, my Rosetta Stone slide. Mr Castle, I think you helpfully started pointing in this direction yesterday. I think it's very important just to recognise what I did or didn't do and so this table starts off with what sort of compounding approach are we using; what sort of compounding rates are we using; what might we call this approach and make some comments. Top row: this is exponential compounding using investment rates. Things like sharemarket returns or at least GDP growth rates which Dr Coleman agrees are a lower bound on investment returns. This, I would agree with Dr Coleman, is something you could fairly call an investment approach. It's exponential compounding at investment rates. Dr Coleman said I used this but actually I didn't except for one very limited case, the top end case for Mangatū's 1962 losses. In general I did not do this. So, it was a mistake for Dr Coleman to suggest I had because I didn't.

0950

This is not a small point this is not splitting hairs, this materially affects the numbers, very materially affects the numbers. The second row is what I did concentrate on so I did use exponential compounding; fair call but I used sub-investment rates. This is my PTRF DGDP. I'll call this the Meade approach just so we can distinguish it from the investment approach because they are different things. I did this and I did this deliberately to address the sorts of concerns that Dr Coleman is raising. This is when I made my claim. I

anticipated these sorts of problems that's why I chose really low rates I was trying to, if you like, pick a line, split the difference where I could say it didn't really matter which way you come at it you're still going to come up with the same sorts of numbers. So, yes, I used one particular approach to get there but by using low numbers I kind of mimicked these alternative approaches.

So, the next row down, third one down, hyperbolic, this is what I call the Weitzman-Gollier thing and I did this again. I wanted to see if it would produce a different outcome but actually it didn't. Chichilnisky is the other approach that Dr Coleman alluded to. It's effectively an average of zero and investment rates, only investment rates. I think Dr Coleman would say if you could say this the claimant would have invested the money because where he got to with his cross-examination with Crown Law yesterday is that there was a test. The investment approach is valid if you could say the claimant group was going to be investing the money but then we get into the question of how much would have been consumed versus reinvested. Only the reinvested proportion is allowed to grow up and give you a trust fund now that we can say should be compensated and then you've got to deal with the question of all the foregone welfare in the intervening period, so all that consumption you didn't get over each year up until now kind of thing. Dr Coleman says, "Don't just value the dollar value of that, value the welfare of that". Okay, fine, and his particular thing is we shouldn't be exponentially compounding those welfare figures up to now and if we did it wouldn't be at a market interest rate it would be at a time preference rate.

But his preference is that you don't compound up. He says it's either staying the same in real terms or declining. We don't need to agree on that and we're still going to reach some very important points of coalescence. The claim I make, and I've got a new way of showing this today because I came out thinking about Dr Coleman's evidence over the last day or so, you can actually get higher losses than my approach if you did the Chichilnisky approach. Why? It's because I used such low compounding rates. If I had done the investment approach with investment rates you're not going to get there. You won't be able to find the Chichilnisky approach beating the Meade approach. But because I

used such conservative rates it is feasible, plausible to get the Chichilnisky approach actually giving bigger numbers than what I produced, which is what gives me great heart that my conservative approach delivered on what I was setting out to achieve.

Now, I want to coin a new term. We've got land plus already. This is the other super important area of coalescence that seems to have emerged and this came out of the very helpful discussions between Mr Mahuika and Mr Castle yesterday. Basically where we get to is that the following two approaches you can say are equivalent. Exponentially compounding some trust fund at a sub-investment rate, I was thinking my PTRF rate. So, you could be exponentially compounding a trust fund at a sub-investment rate assuming the full return each year is accumulated in the fund. So, this is the kind of scenario that Dr Coleman was a bit hesitant about. He says, "I really can't see that someone would just set up a trust fund 150 years ago, put some money in it, keep it growing for 150 years and not ever touch the fund". He didn't buy that that would happen but mathematically you can say that is equivalent to exponentially compounding the trust fund at an investment rate. So, actually, assuming we've fully invested the trust fund, not just at some sort of sub-investment rate, but then consumed some of each years' return, so do allow for the fact that we're going to eat some of the produce of the olive tree each year, and only accumulating the balance of the annual return on the fund. So, each year the tree makes some olives, you eat some of the olives, you sell the rest and with the money you get you go and buy some more olive trees.

Mathematically these are equivalent. I'm going to show mathematically these are equivalent, it's possible to come up with the right consumption reinvestment split and you will get exactly the same number, and that's not a fluke that's maths. Now, Dr Coleman also agreed that if the annual consumption didn't occur, so let's suppose you were meant to have a trust fund some years ago, you didn't get it so you didn't have the olive tree it got taken off you kind of thing, so you missed out on all those olives you would have eaten over the last 150-odd years. There's a welfare loss associated with that. It's not the market value of the olives per se it's rather the satisfaction you would have achieved by eating

them in each of those years and then you would convert those welfare losses to some current value. Though he says with constant or declining value, so he doesn't like the idea that they get really big over time he would rather they stayed the same or went down with time the further back in time you go. I don't need to agree with Dr Coleman on this point and it still shows my numbers are conservative.

Then what you do is you take those extra welfare losses and however you convert them into a current value, whether you take Dr Coleman's approach or some other approach doesn't matter, you get something that you add to the trust fund. So, this is the plus bit. The trust fund, if you like, is the olive grove and the welfare losses converted into some current value, that's the plus. So, we've got the Mahuika olive grove plus formulation if you like. Now, the thing is, and this is where I don't need to agree with Dr Coleman's views on how we should adjust the past welfare losses to present value. All we need to understand is you're going to get a positive number whatever you do. You don't get a negative number. All that satisfaction you would have achieved by eating olives over the last 150 years, it's not like when you turn that into a current value, you say, "That was a really bad thing and I wish I hadn't done it". You're not going to come up with a negative number you're going to come up with some positive number to say, "Actually I would have enjoyed eating those olives it would have helped me out" kind of thing. So, there's some positive number on top of the trust fund that we should be adding. So, this is the olive grove plus formulation.

Now, I've found the last two days extraordinarily helpful and the cross-examination by Crown counsel yesterday also helped to really clarify some matters. Dr Coleman agreed that compounding using financial measures can be used to estimate current losses. He stressed that this is if the claimant made a deliberate attempt to invest. So, it's kind of like saying, "Show me the holes in Jesus' hands and I'll believe he has risen" kind of thing. So, if we can show that the collectives would have been involved in investing and stuff then he accepts that the investment approach would seem a reasonable way of doing things. But even then, once any financial returns have been converted into

consumption, so each year you are eating some of the olives rather than selling them and reinvesting them, means you're valuing the welfare of such consumption not the amount, the market value, if you like, of the olives, the amount spent on the consumption. Even then he's saying he would rather compound at a zero per cent real time preference rate. So, that means don't adjust the values over time you'd only add CPI at most, or negative time preference, so that means declining values the further back in time you go the lower the value you put on those olives you didn't get to eat and the welfare you lost because of it.

You must know that there was evidence of Māori groups growing their trust fund over time before accepting these kinds of propositions. This has been tremendously helpful. I didn't get this from reading Dr Coleman's brief but now that I understand his position more clearly through the oral evidence it seems we have a really critical area of overlap here and I'm going to demonstrate, in some tables, just how critical this overlap is. Here's a table, and I was up late and up early, shall we say, doing some spreadsheets. I'm running two scenarios. The first scenario is how did I actually calculate things, and this is exponentially compounding at sub-investment rates, and then I'm going to model the alternative scenario or let's do what Dr Coleman said is kind of effectively an equivalent thing and Mr Counsel, you drew this out yesterday in your own questioning. So, let's suppose we invest at full investment rates, we eat some of what we produce each year and we only reinvest the balance. So, the trust fund is only growing by the bit that we reinvest each year and otherwise we're allowing for the fact that we're eating some of each year's return. So, if I can focus on this column here. This is the trust fund approach where effectively, let's suppose back in some time, call it 1865 or whatever, we need to have $1,000 but that $1,000 worth of land was taken from us or something. Then what I do is I grow that $1,000 at my PTRF rate and on average that's 5.1 per cent. So, the $1,000 becomes $1,051, it becomes $1,105, blah, blah, blah. After ten years you get to a number $1,644. That's an important number because that's the number I would claim is my loss estimate. That's assuming we've only got ten years to compound but for illustrative purposes ten years is fine. Let's jump over to the next set of calculations. We're going to start off

with the same $1,000 trust fund, that was the value of the land we should have had back in 1865 or whatever and it got taken through confiscation or whatever. But let's generate a return on that trust fund using the actual investment return, so like the average New Zealand stock market returns from a diversified portfolio of investments.

1000

So, that's 8.8 per cent, that's why — my mouse is dying — $1,000 generates $88 in the first year. Let's suppose we consume 42 per cent of that, so of that $88 we eat $37 and we only reinvest 58 per cent of that which means $51. So, if I take that $51 and add it to my original $1,000, so here, I beg your pardon, that's how I get to that number there. So, my next year's figure was my previous year's figure plus the amount I'm going to reinvest from the growth that happened in that relevant year. I just keep doing that over and over again, over a bunch of years, and I end up at precisely the same trust fund number. This is the mathematical equivalent. This is just maths. How did they get my 42 per cent and 58 per cent? I'm just taking the ratio of the two different investment rates I assumed, so 5.1 is my PTRF, 8.8 is my NZ equities, if I take the ratio of those two numbers that gives me 58 per cent. So, as long as that is the right number to use we end up at exactly the same answer.

So, basically, left-hand side, mathematically that's what I did to estimate current loss and it's really easy. It's easy to put in a spreadsheet, it needs one column it doesn't need four columns. But equivalently I could have done that because it produces the same trust fund balance. The reason why I say this means that my numbers are conservative is because we're missing something here, it's the welfare from the foregone consumption. All I've done here is calculate the trust fund balance. I haven't even dealt with the fact that there was some consumption that should have been happening along the way but because the land was taken from the claimant that consumption didn't occur and Dr Coleman says we need these extra welfare losses. So, this is what I now address and by the way trust funds, I use that terminology because that was Dr Coleman's terminology. I would say Ngāi Tahu calls it pūtea and I would note that Ngāi

Tahu, as a tribe, must grow the pūtea. How do I know? Because in 1992 I helped to set up the governance arrangements for Ngāi Tahu, I helped to draft Te Kawenata O Ngāi Tahu, the Ngāi Tahu Charter. It's hard wired into the governance structure of this tribe that their job is to grow the pūtea over time.

It's not like when they got the settlement cheque from the Crown back in 1998, they just wrote a cheque to every single Ngāi Tahu person who was still around and said, "Congratulations guys, here's your money". They said, "No, we're going to hold this and we're going to grow it for the benefit of future generations". So, if you need an example that Dr Coleman was looking for that this is how Māori organisations work, here is one very obvious example. Now, turning to the question I was raising before. So, if you take this alternative approach, the olive grove approach, where we allow for the fact that we're going to be eating some of the olives but then selling the rest and using the proceeds to reinvest into the trust fund, we've still got the matter of all that consumption that should have been happening along the way. We were meant to be eating some of the olives every single step of the way. Dr Coleman and I agree that we should be adding something extra for the welfare loss due to that consumption being foregone. The point I want to emphasise is the trust fund figure doesn't do that it excludes that extra amount. In other words the number I used to estimate my losses doesn't add the extra bit. So, this means that Dr Coleman and I, to the extent we've actually coalesced on an approach that we can both agree on and if we accept that these are good assumptions and that sort of thing, well, then my numbers are too low. This is just another way you get to the conclusion that my loss estimates were conservative.

(10:03) JUDGE MILROY TO DR RICHARD MEADE:

Q. Sorry, Dr Meade, I would like to understand this slide properly. So, 5.1 per cent was the rate that you used in your calculation that you're giving evidence to us. That was taking a conservative approach as to —

A. Yes.

Q. Yes. So, the 8.8 per cent is the rate that a stock market investment, is that —

A. Yeah, sure.

Q. — or something. Can you tell me that again?

A. Sure. So, this 8.8 per cent figure, this is actually a post-tax figure that I calculated myself but I started with a higher number which is a particular kind of average return on the New Zealand share market from 1899 to 2013 in a published study.

Q. Right. That's what I wanted to know if it was an averaged out figure for that because — I'm coming to my actual question in a minute, and then you've got the — so the split in terms of the consumption and reinvestment, and my question is: because of the 8.8 per cent and the difference between where you've consumed and where you've reinvested, we get the same amount.

A. Yes, the same trust fund.

Q. Yes, if the two figures, the amount consumed, was smaller and the amount reinvested was larger so people said, "We've really — it's going to be a terrible world in 2050 when climate change really hits so we've got to —"

A. Save more?

Q. "— yes, save more". So, that 1,644 figure would be bigger, is that right?

A. Correct. I'm actually going to produce a number that shows this a bit later on. So, I've simply shown that if you choose your consumption proportion and your reinvestment proportion a certain way before your 2 per cent and 58 per cent, there is a mathematical equivalence between the two approaches. This is by construction, it has to be this way. Then a very relevant question, and you alluded to it, is, well, is it fair to assume that a Māori collective with a long-term focus would really be eating 42 per cent of the annual returns? Might it be less than that because they're taking the longer-term view for example. I'd say in Ngāi Tahu's case it would seem that that's what's happened because they do make distributions for educational grants and whairawa there, they subsidise long-term savings for the tribal members, they have some aged care and all that sort of thing. It's not like they have a party each year where they write a really big cheque to a whole lot of people and say, "Enjoy yourselves, knock yourselves out". They are definitely skinnying the distributions so they can accumulate the corpus of the trust fund, if you like, the pūtea.

Q. Right. So, and the opposite could be that the population of Ngāi Tahu, or whichever iwi it was, is really dropping so they're not going to need that much money to support their people in the future and so they might spend more now and reinvest less. But what you're saying is it's adding — you have to think about both figures. So, you might get less in terms of your trust fund but you've got more in terms of your — the consumption.

A. Yes. I just have to say all I know about Ngāi Tahu, I don't think they would say, "Just because we see our population figures dropping off we can take our foot off the accelerator". I don't think they would do that.

Q. Yes, but I'm just saying this is — I'm just trying to figure out the difference. I suppose the point that you're trying to make is that however which way you look at it this figure here with the total figures of the trust fund and the consumption figures will be more than your figure.

A. Yes, and in fact I'll give an example. When I did my Chichilnisky calculation I had a crack at the welfare loss thing. I didn't do it for this one I wanted to be conservative. I wanted to say, look, don't even add anything else you get the same answer, the two trust funds are exactly the same, identically the same, to the extent you add something more, the olive grove approach, you're coming up with a bigger number than what I came up with. So, that's the punchline I want to draw out of this particular slide.

(10:08) JUDGE WAINWRIGHT TO DR RICHARD MEADE:

Q. Okay. But can I just — you said that all of this follows if the premises are correct.

A. Well, if you accept that (a) you agree that those returns are the right numbers to use but —

Q. No, not that, the trust fund analogy.

A. Oh, no, I think Dr Coleman and I agreed it's okay to do things and this is part of the conversation that Mr Castle had with Dr Coleman yesterday.

Q. But didn't Dr Coleman query whether that analogy was a valid one for — because it's counter-factual evidence basically. The counter-factual is that if Māori had had the money in their hands at the relevant time that this is how they would have behaved and therefore that's what we should say

they need to be compensated now. He said, "Well, was there evidence of Māori groups growing their trust fund over time?" And you're saying, "Well, yes, there is because look at Ngāi Tahu".

A. I've got more examples, Ma'am.

Q. Are they historical ones?

A. Both contemporary and historical.

Q. Going back to the 1850s?

A. Absolutely, yes. I need to do this. All right.

Q. Oh, good. All right let's go there.

(10:09) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

Okay. So, anyway, let's look at evidence continued. This is for Ngāi Tahu. It's grown its equity from about $170 million in 1998 to over $1.25 billion by 2016. Okay, so this is from a report that was done by TDB Advisory in 2016. They surveyed a bunch of major iwi who got settlements and looked at how their asset performance has been over time. So, the dark blue bars are showing how assets have grown over time and the lighter blue bars are net worth or you'd say equity. Net worth, equity same thing, right. This is only going from 20 — it's really hard to read the numbers in the report, sorry. But anyway it's going back about ten years only. Of course the settlement happened in 1998 so that's 20 years ago and the bars are much lower from 20 years ago but this is very strong growth in the equity of the tribe over an extended period of time. There's no question, these guys have their foot hard on the accelerator they are growing the pūtea. Having said that, even if you divide the equity that Ngāi Tahu's managed to accumulate, and they've done a fabulous job in accumulating it, it works out at about $23,000 per member. So, this is another reason why Ngāi Tahu says, "We're not just going to write a cheque of $23,000 to every one of our members. It's not like it's going to change their world if we did it they'll be just as hard up tomorrow probably as they are today after they get a $23,000 hangover", in a metaphorical sense I would stress. But anyway, the point is it doesn't change your world if you get $23,000 a head but if you keep it together you've got it over time, future generations are going to have much more to play with. You get many more educational grants, much more health support for the old people, much more investment in retirement savings

through whairawa and they do the bank of mum and dad as a tribe. We want to get our people into buying houses because accumulating wealth in houses is an important way of getting wealth and we've got too many 55-year old Ngāi Tahu who are still renting with nothing to their name and nothing to pass on to their kids. Ngāi Tahu does these things and they're trying to grow not just their own tribal pūtea they're trying to grow the equity of their own members on their members' balance sheets as well.

1010

Just looking across the various iwi that this TDB Advisory report looked at, this is average change in net assets per member over a few years basically. But for Port Nicholson Block which, rather sadly, had under performing assets and high costs, all of these groups have been going forward. They've been growing the equity per person in some material way. So, their foot is on the accelerator. We've got a whole bunch of contemporary claimant groups who are very consciously growing their net worth on behalf of their current and future members.

So, I just come back to real life examples. Why, Dr Meade, did you point to all these other groups, what about the claimant groups? Well, Mangatū Incorporation and Wairarapa Moana Incorporation, do we really need to have a conversation about how they are quite investment-focused organisations that have grown their asset bases very considerably over time? I mean that's just clear. What about Te Aitanga-ā-Māhaki? Well, it's got a MIO, a mandated iwi organisation, it's got fisheries assets that's generating a 7 per cent return per year. It's got, through the various trusts like Wi Pere Trust they've got horticulture and viticultural interests. The lands that are still in possession of Māhaki are being used for developing stuff and making money and some of that money is definitely being used for cultural purposes. So, Mangatū makes tangi grants and marae grants and all those other sorts of things but it's also very much growing itself commercially there's no question.

We can say the same about Te Aitanga-ā-Māhaki, and for Māhaki go back in time. Before the breaches in 1865 onwards what was happening in the Gisborne district? Māhaki were using the lands to develop agriculture. They were exporting food to Australia and sending food to Auckland. We know this. This is back in the day this is before the breaches occurred. It's quite clear the land was being used to generate returns. Even with a lot of the land having been lost the land that has been retained is being used, very clearly, even now, for generating some commercial returns.

For Ngāi Tūmapūhia it's a bit more complicated. Ngāi Tūmapūhia don't actually have anything to invest so if you say, "Show me that Ngāi Tūmapūhia are in the business of making their wealth grow". Well, if they had some perhaps we could show it but because they haven't it's really hard to show that. But we can look back in time for Ngāi Tūmapūhia back to the 1850s when the leaseholder colony was thriving in the Wairarapa; it's quite clear that they were using their land resources to generate annual returns and to accumulate some wealth. So, the bar that Dr Coleman set is not a high bar I think it's actually very easy for us to demonstrate, not just for the claimant groups but more generally. I've been involved in Treaty settlements since 1992. I've acted for a whole bunch of different claimants. I can't think of one of them where on day one when they got the cheque they decided to write a bunch of little cheques to all the members and say, "Knock yourselves out, guys" and that was it. It's always been held on behalf of present and future generations with the intention of growing the small amount that was achieved through the settlement to try and come up with a much more workable number. I can't think of any examples that are contrary to that.

You've got the example of Port Nicholson Block not having a good run but we know there were some problems in the governance of that particular block as well. So, there are always going to be exceptions of course but I'm not aware of any organisation where they just said, "Let's just disgorge the funds and it's all over". It's always become a looking to the future sort of exercise.

So, summarising the Mahuika olive grove plus argument, as a matter of mathematical convenience I exponentially compounded historical loss amounts at sub-investment rates. I deliberately consciously, as a design choice, chose to use sub-investment rates in a conventional framework because this was my way of skinning the cat whichever way. Whether you think hyperbolics better, whether you think Chichilnisky's better doesn't really matter. Using low rates in an exponential framework gets you into the same sort of territory and all I was trying to do is get orders of magnitude numbers. I wasn't trying to split the atom and say, "The number's X, write a cheque for X" I didn't need to. I just needed to show that if the numbers conservatively estimated were at least as great as the available compensation then the Tribunal can take that as comfort that awarding the maximum available compensation is justified. That's all I've ever set out to do.

If you do that, if you just compound your historical losses at sub-investment rates it accumulates to the same final figure, ie the same trust fund, the same current value of loss, as assuming that a substantial part of each year's return, and it's either 42 per cent at PTRF or 36 per cent at DGDP. These are big bites out of each year's annual return. If you assume that they're consumed rather than reinvested and then you only reinvest the balance you get to the same answer on the trust fund at least. But in addition to that same final figure that each approach produces, if you accept these consumption ratios, the 42:36, Dr Coleman and I agree that there's an extra amount that should be added to account for the welfare losses from foregone consumption. I haven't spelt foregone right, have I? Anyway, that's a positive number. It doesn't matter whether you agree with Dr Coleman that you should use no time adjustment or negative time adjustment, it doesn't matter if you compound them exponentially, it doesn't matter. Either way you come up with a positive number. That positive number is on top of the trust fund number. My loss estimates are just the trust fund number. So, that means my loss estimates using exponential compounding at sub-investment rates are valid.

We've got an area of coalescence here. We can see that if we can show that this is a group that would have been in the business of investing, the investment

approach is valid. If you allow for some of the investment return each year to be eaten and we only reinvest the rest then that accumulating trust fund is a valid measure of the loss that accumulates over time. We also need to allow for the consumption losses which generate welfare losses and we value them differently but it doesn't matter which way we value them it's a positive number, it just makes the trust fund number even bigger. So, because I've only presented the trust fund number, it's just another reason why my numbers are conservative.

Let's go back a little bit in time and let's go to this Chichilnisky thing. I had a process slightly differently in my brief so what I'm presenting here is from 4.00 this morning when I had the brainwave, oh, actually I think I can see where Dr Coleman was coming from now and I think this is the better way to try and address this particular point. I didn't explicitly use Chichilnisky compounding. Why? It's novel. I don't know anyone anywhere who's done it. No one's done hyperbolic even but Chichilnisky's out on a limb. It requires assumptions that can't be objectively assessed. There are two key assumptions in Chichilnisky: what's your kind of long-term average value and what are the weights you put between your long-term average value and your time adjusted value. I couldn't tell you what that weight should be. Dr Coleman couldn't tell you, Chichilnisky herself couldn't tell you. We have no way of objectively trying to verify what that is. It's a half/half. Dr Coleman used that in his numbers; is it 25/75 or is 75/25? I just can't tell you.

I don't think you would have thanked me had I presented a bunch of numbers to you enthusiastically saying, "Look, here's this Chichilnisky thing it's really cool I'm really quite excited about it and I've come up with some estimates based on Chichilnisky. I had to make some assumptions about what the weights are between the time adjusted bit and the long-term average bit that doesn't get time adjusted". And you go, "So, how did you pick that weight, Dr Meade?" "Well, I don't really know I just kind of chose it". I don't think you'd thank me. We need something more objective than that and that's why I didn't go there as my first port of call. I said, "I'm going to apply a conventional methodology with very low rates because I think that's super defensible, it's

going to generate numbers that are the right sort of order of magnitude with the right number of zeros that you could say you'd get there by taking some alternative approach like hyperbolic or Chichilnisky or whatever but I'm not going to try and sell you hyperbolic, I'm not going to try and sell you Chichilnisky".

Even when I did Weitzman-Gollier, it was kind of like as a bit of a test scenario. I didn't say, "This is my essential case loss estimate". I just wanted to see what difference did it make to do that.

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Does it change my conclusions from my central estimates? And the answer was no. I instead applied exponential compounding at sub-investment rates because I wanted to mimic hyperbolic and Chichilnisky within an exponential framework. Dr Coleman might describe that as a strange hybrid. Yes, true. I'm forcing the exponential framework to do some things it's not kind of normally doing but I'm doing that with intent, I'm doing that to try and mimic the more conservative outcomes. Under cross-examination by Crown counsel yesterday Dr Coleman accepted that I would be mimicking Chichilnisky. Initially he said when he was asked the question, "Has Dr Meade mimicked Chichilnisky?" Dr Coleman said no. But I would have been if it were appropriate to use an investment approach for valuation and what is the criterion, we now know that Dr Coleman thinks is the criterion, to determine should you do an investment approach. It's if the claimant would have made a deliberate attempt to invest.

So, as I said before, I don't think that's a high bar. I think we can say quite easily of course, the claimants would have been investing. So, we can do this investment approach and whether we do the olive grove approach where we eat some of the olives and all that sort of thing or we go down my mathematical convenience approach where we just kind of do the trust fund thing with really low rates, you still end up at the same sort of number and we should be adding a bit more for the foregone consumption. But in any case the Chichilnisky compounding can plausibly or feasibly produce even higher losses than my

exponential approach. I made that claim before and I demonstrated it in a slightly different way but now that I better understand how I understand Dr Coleman to be thinking about this I wanted to try and reflect his understanding to show that we have enough commonality here for this claim to be valid and he might even accept that this claim is valid.

(10:21) TIM CASTLE TO DR RICHARD MEADE:

Q. Can you just switch back for a moment? Dr Meade, by attempting to mimic the hyperbolic and Chichilnisky compounding within an exponential framework, it's the — by leveraging it or elbowing it into the exponential framework, this is an open question, is there a risk of you then effectively corrupting the theory that Chichilnisky is providing us?

A. No. When I apply Chichilnisky I'm trying to apply what Chichilnisky meant except I'm having to do the rear view mirror approach to Chichilnisky. She didn't write a looking backwards formulation she did a forward looking one. Dr Coleman and I had a different view on how you should be adapting Chichilnisky to the backward looking environment but based on what Dr Coleman said yesterday it would be appropriate to use the investment approach if the claimant was in the business of basically trying to invest, and that therefore means it would have been valid for me to claim that I had been mimicking Chichilnisky. We seem to have enough commonality to do that if I do Chichilnisky in a certain sort of way and that's not doing any violence to Chichilnisky. The only violence I've done is to exponential by using the really low rates but I did that with intent, as I said before. I'm trying to very conservatively mimic what a range of approaches would give you including approaches that are more conservative than a full investment approach. This was always my claim for conservatism. I'm not trying to do the investment approach effectively I'm trying to do something much, much less than that.

DR RICHARD MEADE:

I don't know if we want to dive through these numbers in any great detail except —

JUDGE WAINWRIGHT:

I'd just like to point out that we've got seven minutes before the morning adjournment. So, I think we'll have to ask you to summarise.

(10:23) DR RICHARD MEADE: (ORAL SUBMISSION CONTINUES)

Okay. Well, I'm happy to come back to this one, Ma'am. Effectively what happened here, and Judge Milroy — here I deliberately said, "Yes, suppose we've got a lower consumption rate". So, here I've got this 25 per cent in the top box that I've just put up on the screen. Let's stick that number in. We're not trying to get equivalence between the two approaches I'm just going to plug in what I think a more conservative consumption rate is and it also assumes a form of welfare and all that sort of thing. I had to make various assumptions to operationalise Chichilnisky. I assumed the long-term value zero for conservatism. The point is, if you look at the bottom-left box my trust fund approach gave me 1,644, the Chichilnisky approach gives me a higher number. This is with plausible numbers and this includes the weights that Chichilnisky needs. I've put in 85 per cent 15 per cent. Okay, is that wrong? Who knows? But it's definitely a plausible number it's definitely what could be applied and by doing so I end up with a bigger number.

Now, I won't dwell on this terribly much because I actually don't need to, I think we have enough commonality now because I've been able to say my approach is effectively conservative, because I should be adding some welfare losses and I haven't. So, getting into whether you should be using time and variance or declining in time or growing in time adjustments for welfare losses, that's actually something of a second order issue it doesn't matter that much. So, I'm going to dance through this slide and just say, look, if you do a comparison of actual rates that are used by a whole bunch of people, including for long-term stewardship type applications, you don't find zero or negative rates, which is effectively what Dr Coleman's advocating. I just don't see anywhere that this is practice and my focus is more right in the range basically, including in the range of stewardship oriented applications. So, I'm pretty confident that my numbers are conservative.

There was a table that Dr Coleman was taken through yesterday from Creedy and Passi from the working paper at Treasury. Dr Coleman was a little hasty. He dismissed the numbers when he was being cross-examined saying, "These are just market interest rates". Not true. If you look at table 4, SRTP comes up quite a lot, social rate of time preference. TP: time preference. He says we should be using time preference rates not market interest rates. Well, there are a bunch of countries that use time preference rates and they are all positive real numbers they're not zero or negative. Okay. We've already spoken about this so I'm going to dance through.

So, the land plus argument justifies paying the maximum compensation. The Mahuika olive grove plus argument, because that supports my loss estimates as being conservative, also justifies the maximum compensation being payable. Either of these arguments alone reaches that conclusion. We've got the two arguments reaching the conclusion so we reach the same conclusion two times over. Let's just quickly go through. Economic base. My third economic base Dr Coleman didn't like at all. I just say well, that's fine I didn't put any weight on it. It didn't affect my assessed range so even if I put a line through it and ignored it existed it doesn't change the conclusion that, on my economic base estimates from Māhaki, you still get the maximum compensation justifiable. My income gap one, he didn't like the fact that I hadn't allowed for the income gaps to fall over time. So, the dashed line here going upwards, that's effectively what I modelled over 50 years. The declining lines in the alternative — following Dr Coleman's suggestion let's suppose that the income gaps fall within each generation and they fall across generations. Well, if I do that I effectively halve my economic base estimate based on income gaps. That still adds up to way more than the $192 million; $440 million beats $192 by a big margin. It doesn't change the conclusion.

Using wealth gaps. I don't want to get too much into this. Effectively you're saying I could have done a better job certainly if I had more time and more data, et cetera. I don't disagree we don't have that time or data. We didn't have the time and we don't have the data so, this is a life's work we're going to do this better over time. I did a job that I think is actually useful. It's not perfect it could

be made better, that's normal but what I did is better than useless so I'm happy that this is an okay approach, just modestly. On the efficiency of wealth transfers Dr Coleman says it's not an efficient way to relieve socioeconomic deficits. He doesn't actually try to evaluate the cost of any of the alternatives he thinks might be better. So, if he thought that actually doing better education was good or if he thought that better housing was good or all the other better things were good, you really need to put a dollar number on that and until you put a dollar number on that it's a bit premature, a priori, to say that I've just come up with a really high number and that's an inefficient number. Maybe it is. I'm not saying it's not I'm just saying I can't say and he can't say and he hasn't actually said. He made the headline conclusion but he didn't do the work to justify that headline conclusion.

He stresses there are a host of factors that contribute to socioeconomic progress and access to capital is just one of those critical factors. So, there's institutions, belief in those institutions, human capital, all that sort of stuff. I agree but what that says is that if you don't have the other necessary factors then probably you need even more capital. So, if you had all the good things in a nice combination you only need so much capital. If you don't have all the other good things in those combinations well probably, all other things equal, you need a bigger amount of capital. What instruments does the Tribunal have available to it? It can't grant self-determination so it's going to box with one hand tied behind its back so that, all other things equal I suggest, means you need more capital not less. Just on the Maraetai losses, he doesn't like the use of Shapley value but we're necessarily being ahistorical anyway so it doesn't matter that the Shapley value didn't exist at the time and in any case I use alternative methods anyway so that was just one of three methods.

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I pointed to forestry joint ventures, for example, I pointed to royalty sharing rates. There's nothing to do with Shapley there we don't need to go back in time and take an ahistorical view just take an historical view, this is what happened. So, I got three ways to skin that cat and to get upset about one of

them not having been invented at the time, when we are being deliberately ahistorical, I don't think that actually gets us there. I should stress that I applied little weight to the Shapley approach. He was commenting when my estimate was 17.5 per cent first year, in an amending brief I'd gone to 10 per cent. So, chances are he'd be less concerned had he seen that I'd gone to 10 per cent. His main concern was that if the Crown had to fairly share Maraetai benefits it would have looked harder at alternatives to the default of an expensive oil-fired station. Well, I agree, that is precisely why I allowed for a reprioritised Waikato scheme. That was what I called alternative 2 and it's also why I attached significant likelihood of other much lower cost technologies arising even though at the time that the parties would have been thinking about this they didn't think those alternative technologies were even viable. I did this. So, the things that Dr Coleman said I should have done I have done. He might say I should have done them with slightly different numbers but he hasn't taken a position on what those numbers look like. So, (a) I disagree in principle that I have failed to do what he said I should have done, and (b) he hasn't presented any credible alternative to what I've done.

Okay. So, this is just to emphasise that my Shapley based estimates, which was 25 per cent to 33 per cent, they're an awful lot higher than the 10 per cent number that I ultimately assessed when I looked also at forest joint venture rates and royalty based rates. So, maybe he'd be less concerned if he saw that I was using 10 per cent rather than 17.5 but you can see 10 per cent is an awful lot lower than 25 and 33 per cent. I'm placing more weight on the other figures.

Now, Māhaki's losses from wrongful loss of life. His comments don't affect the conclusion that Māhaki's other classes of loss are each individually sufficient to justify the Tribunal awarding the maximum compensation. Let's suppose we altogether ignore my non-land losses, you end up with the same conclusion. So, let's just put a line through that row in the table where I come up with non-land losses, so this is loss of life, wrongful imprisonment, et cetera, et cetera. Ignore them. Just look at the other losses. Look at the land-based losses based on current values or the land-based losses used on compounding up historical losses. Look at your economic base figures. It doesn't matter which

way you go, if you completely ignore non-land losses you're still coming up with numbers that are multiples of the available compensation. It is not just a little bit bigger. They are whole numbers times, so 2.9 times, 3 times and 2.6 times.

Just in conclusion, the bulk of Dr Collins' comments on my evidence and particularly how I and Mr Mellsop in fact computed historical values in the cases I did, but these don't require me to change my evidence because my evidence had anticipated and addressed these ahead of time basically. An exception is his preference for zero or negative compounding rates. I don't think that is indicated by theory or practice but, as I said before, there is actually sufficient coalescence it would seem between us – the olive grove plus thing – that says, "We don't need to worry how big the plus is. All we need to accept is that the plus exists as a positive number" and as a positive number you would add to my loss estimates. I haven't added that extra number so my loss estimates are lower than what they could be. So, we don't need to worry too much. We don't need to die in a ditch over negative, or zero or positive compounding for historical welfare losses. We don't need to go there. We just need to acknowledge that there is this plus bit.

There are comments about my economic base estimates and those specific to Wairarapa and Moana, Māhaki, they don't change the conclusion. The tribunal is justified in awarding the maximum available compensation. His views support the conclusion that the tribunal is justified in awarding the maximum available compensation. You know, he says the land return is a minimum necessary component, so this is the land plus argument and I have shown the current value of the lost lands at least equals the available compensation. So, once you add the plus bit, you're going to have more to be compensated than is available for all three claimants.

If you compound it, some investment rates that can underestimate losses and my loss estimates using this approach exceed available compensation anyway so, as I said before, either way you reach the conclusion that the maximum available compensation can be paid. You only need one of these arguments to

reach that conclusion and you've got what you need kind of thing. We've got two ways of getting there, so we've got more than we need to get there.

Finally, Dr Collins said it may be appropriate to less than fully compensate Māori claims. He talked about affordability issues and acceptability issues and so forth, but this creates incentives for the Crown to violate treaty guarantees and Dr Coleman acknowledged this point. I thought his discussion yesterday on the moral hazard topics was very helpful. I was a little frustrated that in his one paragraph in his brief of evidence he didn't really explore that theme particularly but he did so more in the verbal's yesterday, so I thought that was really helpful.

So, that is me, Ma'am. I apologise for being five minutes over, or Ma'ams, I should say.

JUDGE WAINWRIGHT:

That's good. All right, we'll adjourn now and return –

KAREN FEINT:

Judge, can I just interrupt to say – in case it helps the Tribunal – I've done a survey of claimant counsel and we are able to slash an hour and 20 minutes off our cross-examination estimates for Dr Yeabsley, so that frees up some time in the afternoon session.

JUDGE WAINWRIGHT:

It does indeed. That's most helpful. Thank you very much.

THOMAS BENNION:

Judge, if I can sort of indicate – Mr Bennion here – I had 10 minutes down I think for Dr Meade and I'm not going to take those 10 minutes, so I won't be asking questions.

JUDGE WAINWRIGHT:

Thank you. All right. This feels like being in an auction where people are bidding down. Okay, tekau mā tahi karaka.

HEARING ADJOURNS: 10.36 AM

HEARING RESUMES: 11.05 AM

JUDGE WAINWRIGHT:

Tēnā koe.

KAREN FEINT:

Thank you, Ma'am. Just before we move to questioning there is just one matter I wanted to clear up with Dr Meade, and that was there was a bit of confusion over the Treasury paper on public sector discount rates that was part of the handout that I'd given to Dr Coleman.

(11:05) KAREN FEINT TO DR RICHARD MEADE:

Q. So, Dr Meade, can you just explain that table that we had put to Dr Coleman? He had dismissed it as being irrelevant I think because he said it didn't factor in time preferences. Can you explain what the table is about, please?

A. Sure. I have a copy of that. Basically, it's a table where the authors survey different developed countries as to what sort of discount rates are used in public sector policy evaluations, and there are different kinds of rates in this table. There are 11 countries for which rates are provided but some of them are called SOC, which is social opportunity cost. This is referring, if you like, to a market interest rate type discount rate. There are some, though, that are called SRTP, which stands for social rate of time preference, and the TP time preference I think I mentioned in my slide presentation. This is the sort of thing that Dr Coleman says we should be looking more at when we're looking at adjusting values over time rather than using market interest rates.

He did in his oral testimony say, as a matter of practice, often you estimate social rates of time preference using market interest rates but in this particular table a number of the countries do actually explicitly estimate a social rate of time preference, not a social opportunity cost, and they prefer to use that. It often comes up precisely in the sorts of stewardship type applications where you might not want to use a market interest rate.

These are for things like long-term climate change policies, so should this current generation incur a certain amount of cost to generate some very long-term benefits for future generations? You need to have some sort of number to figure out how you translate the future benefits to compare with the current costs. So, the social rate of time preference this table does have is littered with SRTP, SRTP, SRTP, et cetera, and the point that I drew out in my presentation before is that, even when we are using these rates of time preference, they're invariably – in this table at least – positive numbers. These are real positive numbers, so you would add inflation to them to compare with my 5.1% and my 5.6%.

So, yes, I'm struggling to find support in practice, let alone a very clear theoretical indication, that we should be doing – as Dr Coleman prefers – not adjust time values at all or, if we do, make values smaller the further we go back in time. Because when we look at a table like this it seems the practice is rather suggesting that, well, most developed countries actually do something different to that.

Q. Thank you. And it was you that made the annotations on the table?

A. That's right, yes.

Q. Yes. I would just point out there is an error in your mathematics because there are in fact four countries that have hyperbolic rates, not seven as you list.

A. I beg your pardon. So, let me see. Hyperbolic, you have got one – yes, there are four that use hyperbolic. That's right. Exactly, yes.

Q. And seven that use exponential?

A. Correct, yes.

Q. Right. Thank you very much. Can you remain there to answer any questions from the Tribunal, please?

A. Certainly.

(11.09) JUDGE MILROY TO DR RICHARD MEADE:

Q. Thank you, Dr Meade, for your presentation and for answering my questions as we went because that has meant that I've been able to cross out a lot of my questions.

A. That's good.

Q. There are just two or three things that I want to put to you. The first is that, as you've said, this is a new branch of economics in terms of calculating and valuing losses of the past, so naturally there are going to be disagreements and controversies and so on in terms of how one might do that. I have kind of thought of the law toolbox in this case. You look in it and there are certain tools there, and then the economists have provided us with another range of tools.

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And both you and Dr Coleman have done that. So, what it has done for the Tribunal is open up a range of options in terms – or opened up a menu, I suppose – of how we might look at different sorts of things and then it's up to us to decide which is the one or the numbers of them that we wish to go with for any particular thing. So, you would accept that that is really what this discussion that we're having in this hearing is about?

A. Indeed. I presented multiple bases for thinking about how you might compensate the various claims. Is it the economic base of restoring? Is it compensating losses, per se? Are we looking at the statutory schemes as bespoke schemes that tell us how they should be applied in and of themselves? These are menu options. So, the real question I was trying to address – and I did present this in my Māhaki evidence – was: do we see any coalescence between these alternative approaches? Does one approach give us a vastly different set of numbers or alternatives, so conclusions to the others? Or can we say that they are broadly in alignment and we are in the situation where, just because of the nature of the claims, we can say economic base seems to be big enough, losses seem to be big enough to say that the available compensation can be awarded just by, if you like, comparing the numbers? Then there is a different approach all together looking at the schemes as bespoke statutory schemes. That is a different set of criteria. But I agree.

Q. Indeed.

A. So, presenting a menu of options. I am Vice President for the Law and Economics Association. I think, as economists, we do see it as our – well, some of us do see it as our job to try and interface with the law and influence how the law is understood or applied, in the sense that we often

look at legal things and we kind of wonder why it's like that and, "Wouldn't you want to do it this way instead?" But that sort of lens, for example, that I brought to interpreting the statutory scheme as a bespoke scheme, so I look at these kind of odd features of the Schedule 1 compensation and I go – or not just Schedule 1 but the accumulated rentals being paid, the compensation being tied to the value of a commercial forest that wasn't on the land at the time of the breach. These are things that – as an economist – beg an explanation and so I've endeavoured, from an economic lens, or through an economic lens, to help bring some understanding to that.

Q. Yes. For the Tribunal, of course, the courts have also chimed in with their directions as to how we are to do things as well. So, we have a range of things that we need to look at and a range of tools that we can look at them with.

A. Certainly. Yes.

Q. One of the things that Dr Coleman was emphasising yesterday was that you would need to look at each situation on a case by case basis in order to see what was the most appropriate tool or set of tools for using in that circumstance.

A. Yes.

Q. So, for a bespoke compensation scheme, if we accept that the forestry regime is that kind of scheme then in some ways we can simply rely on the legal toolbox to come to the conclusions, although we need the calculations made.

A. Indeed, yes.

Q. Just looking at the situation – stepping aside from that and considering that wider picture of wider losses and so forth within the Māhaki claims – we can look at, for instance, the Incorporation because that is a good example of rangatira getting together and saying, "We're going to hold this land. We're going to hold it in this incorporation, which is basically a trust, and we're going to try and hold on to it forever" and, yes, there were intervening terrible things that happened to the Incorporation, so it did worse at some times and better at others and they lost the land at one point and got it back at another. I am asking you – I will just put it – it just

seems to me that that is a situation where you've got your olive grove situation.

A. That's a clear example. That's right.

Q. Yes.

A. It seems that Dr Coleman's bar was that you need to be able to show that you've got some sort of collective that was looking to use the pūtea in a commercial way or at least grow it, you know invest and make some returns. I think I started off when I did my little survey of the claimants. I said, "Well, look at Wairarapa and Moana and Mangatū Incorporations. How hard do we need to look in fact?" because when you look at both of them you say, "Well, they both effectively took the assets they had and tried to do as well as they could to grow the assets – used the land assets in particular – and hold on to the land assets, but then also grow the general capital of the organisation. So, that you can do a variety of other things and not just for profit sake because I stress that the Incorporations – and I think I put this in my reply evidence – they make distributions for various sorts, for social and cultural purposes, not just dividends to their owners. So, they are in the business of, if you like, acting like an iwi or a hapū even though they have a particular legal form, but they give us very good examples.

The fact that the Mangatū Incorporation generated 8.7% post-tax returns between 1962 and 2018, that compares with my 8.8% figure that I've been suggesting for just a general portfolio of New Zealand equity returns. It is practically the same number and that is a very good return over an extended timeframe. It shows quite clearly that we've got an outfit here that has their foot on the pedal pushing to make this thing grow.

Q. Thank you for that, but there are other circumstances for others and the loss has occurred. They haven't been able to – you're not the witness for them, by the way. The losses have occurred so they haven't had the opportunity to take the same course as the Incorporation.

A. Yes.

Q. So, we might decide that in those situations we might use a range of methods to try and figure out that loss. Would you accept that that was a –

A. Well I would advocate a range of methods anyway, so that has always been my strategy: don't hang your hat on just one hook. You want to basically use a variety of approaches, see if you can find some commonality between them. You want to hedge. Any approach is going to have its flaws, so if you find commonality between the approaches that gives you comfort that you are barking up the right tree. But if you get a whole variety of approaches and they are giving you vastly different results, you are going to think a lot harder about what you're actually getting out of any of these one approaches. In general I'd say it's good to try a variety of approaches anyway.

Q. The other aspect of our work as a tribunal is that we are working in Te Ao Māori as well as Te Ao *Pākehā* and Ta Ao Tiri(?). There is this whole conglomeration of sometimes parallel universes. We have also got to look at what that series of values and so forth would say about the losses. I wonder in your view if that's the kind of thing that Dr Coleman was trying to conceptualise in saying, "Look, it's not just money that we need to think about. It's other kinds of losses". It is things that are not in the investment realm. They are not in the money realm at all. They are something completely different all together and at this stage not measurable.

A. I kind of agree with that. There are things like lost spiritual values and pain and suffering, these sorts of things. In my Māhaki evidence I did put a number on some aspects of pain and suffering. That was to do with the wrongful imprisonments and the survivors of the attacks and so forth. I just used a metric that we have available to us now, because we apply that sort of same metric when we look at road crashes. But in general I didn't value those extra things. If you look at my table 18.1 in my second brief for Māhaki, I kind of had these "Add X" or "Add Y". I think my plus Y was all this other stuff I haven't even tried to evaluate for all the kind of cultural and spiritual – the more, if you like, psychological or esoteric factors that you should legitimately take into account, and I simply said I didn't. As an economist, being a bit brash you'd say, "Well, we actually do have some tools to get at the kind of esoteric qualities that people attribute to things".

I think Dr Coleman started to talk about this when he talked about using a contingent valuation study and so forth. That is one of the tools you can use. We've got a variety of tools where you do try and figure out people's willingness to pay for non-monetary things. I think we have had this conversation, in fact, before the Tribunal already. So, in principle, you could although some people might regard it as a rather delicate matter and maybe you shouldn't.

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In principle, you could try and figure out what are these kinds of psychological losses or spiritual losses and so forth and, if you like, come up with a dollar equivalent for what that should be. If you think about it, when you have an air line crash and you compensate the families of the victims, part of that is because you have lost a bread winner perhaps. But part of that is because you've suffered pain and suffering, so we have given you something in acknowledgement of the pain and suffering. I think in practice we do this. Whether we measure it that precisely or not is another question but, in principle, we could measure it with some degree of precision even if not very precisely.

Q. Those sorts of losses immediately in front of us are the compensation regime for crown forestry but in the wider Tribunal jurisdiction we look at those losses as well. In some ways we have let it go into the settlement process, in terms of addressing the political and social types of redress, but it is part of our jurisdiction and we are certainly seeing in the kaupapa claims that the Tribunal is starting to make different sorts of recommendations. So, I suppose, it's really over to the Tribunal as to where we think those kinds of recommendations, which are not binding, should be made and how we determine whether the claims involve that or whether it can be addressed simply within the Crown forestry compensation regime.

A. Sure. I think this is where really the only area where I have ventured into this territory is looking at the pain and suffering losses, which are a tiny corner of one corner of my Māhaki evidence. I did squeeze them into a dollar amount that could then be used as part of the comparison with the available compensation: is it higher or lower, et cetera, et cetera? I think

if we put a line through it, as I did in my presentation before, you wouldn't change the outcome.

Effectively, I have, if you like, undercooked the total monetary claim that could be made because there are all these extra elements that you might want to package into the binding recommendation side of things, so the loss is bigger than the compensation and it doesn't support paying the compensation, et cetera, but to a large extent I simply was silent on these things. So, if I'm not including them in my numbers, they are not directly having a bearing on the assessment of whether or not the available compensation needs to be paid.

To the extent the Tribunal wish to assess those other things, it already had enough justification for paying the maximum available compensation. Then it doesn't affect that assessment. It is just rather whether there is something else the Tribunal might wish to do through non-binding recommendations to address these other things, as well as the binding recommendations.

Q. Thank you for that. There is one other question I have got. That is just clarifying, really, that your evidence is about valuation of loss. We've had other valuations for other claimants in terms of loss, and I'm just wondering whether you see or consider whether your evidence says anything about what the divvy up might be between the groups of claimants. You can say no, if you like.

A. Yes. I couldn't say. The estimates to be provided for the other claimants are kind of apples and oranges comparisons. So, I couldn't simply say, "We all tried to estimate the same sort of thing and someone came up with the number that's X proportion of the other numbers". We're comparing different things at the end of the day, so I would struggle to make any comparison.

Q. Thank you. That is my questions.

(11.24) ANN PARSONSON TO DR RICHARD MEADE:

Q. Kia ora ano, Dr Meade.

A. Kia ora.

Q. I think we felt yesterday as well that there was a growing degree of coalescence between you and Dr Coleman, so thank you that has been helpful that you've gone through the pain and suffering at 4.00 in the morning to clarify the extent of that.

Just following on from what the Judge was asking you about, I just want to be quite clear about – on page 46 on your PowerPoint – Māhaki's losses from wrongful loss of life. You've crossed out, as you know, the non-land losses there.

A. Yes.

Q. I just wanted to be clear about why you had done this on this occasion. Is that some sort of response to Dr Coleman's unease about how you had calculated those losses?

A. I'm not saying I agree with Dr Coleman and his concerns about my estimates. What I'm saying is let's just take the most conservative stance on these losses. Let's suppose they're worth nothing. If we do that what does it change? When I scan the rest of the table I say, "Well, it doesn't really seem to change very much even if we look at the land-based losses on a current value basis, or the land-based losses on a historical loss compounded up basis, or if we just look at my economic base estimates". These are all my assessed ranges and I've made the point that my assessed ranges don't change because of Dr Coleman's critique.

He might dent numbers here and there because he says I should have been doing something differently rather than the way I did it, but if I take that into account it doesn't completely cause me to change my loss ranges. With all the stuff that is left over we still get to the same conclusion. That the losses are more than enough to account for the available compensation. So, taking the most extreme position just, say, they're worth nothing at all, it doesn't change the outcome and this is what I was trying to emphasise.

Q. Right. Thank you. Yes, when this was discussed with Dr Coleman yesterday, I think Ms Feint put it to him that his approach might be somewhat Eurocentric and he suggested that it might be good to come up

with a new valuation metric as to how losses to ancestors are valued by present members of the iwi.

A. Yes.

Q. I wondered whether you had a comment on that. And he considered that if the current members of the iwi did indicate how highly they valued those losses that might give us some sort of lead.

A. Yes. So, in fact I pitched a similar idea to a particular iwi – who I won't name – and it came up in the context of people saying, "We don't want to trade off, you know, commercial gain versus cultural values, we want everything at once" kind of thing. I was thinking – I was described as a cold blooded economist – "How many urupā would you trade off for how many marae, for example?" It sounds like a very improper question to ask, and it probably is, but if you didn't ask it in such a blunt way and did it slightly more subtly; we have techniques as an economist to try and tease out how people would work out that trade-off. So, "How many marae will you trade for an urupā, kind of thing, if you had to make the choice?" He mentioned a contingent valuation study, et cetera. So, you could do these things. These things do give numbers but you can get different numbers from different studies. That's for sure.

The way you conduct these studies is actually really critical because if you pose questions in a certain way that can actually lead the respondents into a certain kind of response, and so you have to be very, very careful about how you do this. I think Dr Coleman even mentioned that there are some very heavy hitting economists in the world who don't like this approach at all, but then there are some other very heavy hitting economists who say, "Well, this is the best we've got". So, the challenge is to make this better as opposed to just chuck it out.

Yes, in principle, it could be done. I've tried to tease some iwi to commission a study so I could work out some of these sorts of things, without success so far. I see this as a very important sort of research area that I'd quite like to develop a whole lot. But this isn't something we do overnight. This is going to be a body of research that has to be developed ground up and it's going to take some time.

Q. Kia ora. Thank you.

(11.29) TIM CASTLE TO DR RICHARD MEADE:

Q. Kia ora ano, Dr Meade. Tēnā koe mō to kōrero. Thank you for your evidence. In the real world in which we live how would your economic theory accommodate decade by decade, year by year, moment by moment, changes in levels of consumption or retention of corpus in your trust fund – or Dr Coleman's trust fund example – or retention of some assets or utilising some of the return on the olive trees? How can you build into your economic theory a reality check?

1130

A. If you were to say, okay, we don't want to do what I did where we just take some initial loss and compound it at a low rate. Let's suppose we wanted to formally model the olive grove. We'd have to, if you like, posit what the claimants would actually have done over time. So, how much would they have consumed? What sort of returns would they have generated? If we're looking backwards in time we have the benefit of hindsight. We can say that in a certain year GDP was growing strongly, so you might be generating strong returns in that year and in other years you might be saying, "We're in a recession" or "Things are going south" and you might be saying that the returns are falling.

In fact, I did this for my evidence for Mangatū Incorporation. I looked at history and the way I apply my compounding rates I didn't actually use the average rates. I used the actual GDP rates, lessened my discount for my DGDP series. I used the actual post-tax risk free rates at different points in time for the particular years that I was dealing with, so in a sense you start to account for some of that historical reality that way.

When I modelled my farming of forestation scenario for Mangatū Incorporation I had to assume a pay-out rate. Each year a certain profit is generated. What proportion of the profit is paid out versus what proportion is reinvested in the business? So, you make specific assumptions on those things and you can ground it in reality by looking at what was actually going on. This is where the 1962 land is a really good example because we know the land was managed previously by Mangatū Incorporation. It was carved out of Mangatū 1 and then got forested but the balance of Mangatū 1 continued to be farmed. So, if you wanted to

ask yourself: what might have happened on the part of Mangatū 1 that was put into the forest? Had it not been put into the forest and simply retained by Mangatū Incorporation we just need to look next door. We literally look over the fence.

That sort of very strong, positive counterfactual is not always there of course, and especially when you go back much further in time. That is where you have to start making some judgment calls about what would have been reasonable in the circumstances and – I think Dr Coleman made the point yesterday – there is an infinity of possibilities but the trick is to narrow them down to the reasonable ones, the plausible ones, the ones that we might somehow be able to anchor in what we know in history already. So, this is where, if we were to assume that we would have built a nuclear power plant in 1865 and developed Bitcoin, as a counterfactual you'd regard that as probably a bit implausible. If you see it where you did a leasing economy in the Wairarapa with leases to Pākehā sheep farmers, which is the sort of situation of (inaudible 11:32:41), that was happening already. So, we don't need to go too far to find that sort of grounding for positing that sort of counterfactual. That is Mr Mellsop's evidence for Ngāti Matepū(?), for example.

Of course we have to exercise a great degree of caution in doing this, and we want to be particularly thoughtful about how we do this and we want to look around for as many anchors as we can find. I think that's the thing. If you found no anchors at all, does that mean you should not try? I don't think so. I think we should always try. It's just we've got to come up with some very plausible and defensible assumptions as best as we can, and it may be that ultimately in certain circumstances you don't.

I was just thinking before in fact about Mangatū Incorporation. There were episodes when the East Coast Commissioner took over the management of the lands, et cetera. I didn't even try and assess the losses in that period. I haven't put any numbers on it in my Mangatū losses. It's because I was just really struggling to think, "What would a counterfactual look like here?" I just couldn't. Maybe if I spent a year or something I could come up with some decent historical research and think a lot harder about it and say, "Actually, yes, I can come up with a counterfactual". But in the

time I had I was going, “I’m really struggling to think what that looks like in a counterfactual world. I’m just going to shelve that. I’m going to put that to one side and just say, ‘Look, by the way, I haven’t tried to assess losses on that. I’m just going to focus on these losses’”.

Q. So, part of the reality check – if I’m understanding you correctly – is to actually undertake an accurate study of the historical narrative.

A. Yes.

Q. You talk about trying to find anchors. Perhaps what you look for are examples of pou whenua during a period. At least in Mangatū we have a historical narrative of what the Incorporation actually did over that period, haven’t we?

A. Yes, indeed.

Q. We have an advantage at least as it affects Mangatū. Does that help you look for those – I say “pou whenua”, you say “anchors” – over time for others of the claimants in the Mangatū inquiry?

A. Well, in fact I took my lead from the Tribunal in using the post-tax actual returns for Mangatū Incorporation.

Q. Yes, I saw that.

A. Because the Tribunal said that this would be a relevant “what if” scenario for the wider Māhaki loses.

Q. Yes.

A. I didn’t feel bold enough to say that Mangatū Incorporation’s history – especially if I was trying to project it back through time – would give me the right anchor for the rest of the Māhaki losses. I didn’t see that I had enough to work with there to do that, so I confined myself to applying the post-tax returns just to the 1961 land. That seemed to be a very good safe harbour. You know, as I was saying before, what would have happened? Look over the fence, kind of thing. So, applying the actual year on year post-tax returns achieved by Mangatū Incorporation, I applied a degree of smoothing as it happens in the counterfactual but the same average rate over time is what I used. It seemed very, very clear that that was an okay thing to do for Mangatū Incorporation but I wanted to be more cautious for the wider Māhaki losses, simply because I didn’t feel confident I could extrapolate from the Mangatū situation to all of the

Māhaki environment. That struck me as probably too big a stretch. That's why I went for the more conservative approach of using just the GDP and the PTRFs.

Q. Yes. All right, I found it very helpful. Thank you very much, kia piki te ora.

(11.36) DR RUAKERE HOND TO DR RICHARD MEADE:

Q. Dr Meade, tena koe me o koero anō ki tēnei tēpu. I suppose I have a similar mind to my friend down the other end of the table, Mr Castle, around the grounding in reality. In some ways, the table you provide around the different iwi and how they performed in a post-settlement environment is helpful and interesting but at the same time it's almost a distraction as well. Given that we're talking about quite a different environment and how they recognise the authority they assert within their regions is quite different to what the environment was in earlier times.

A. Sure.

Q. And at the same time also it is simplified to a level that there are many influences that have changed this, but I think the most insightful part about that is the huge amount of variation that has occurred across a number of iwi, including Port Nicholson, hanging(?) low there.

You just referred to Wairarapa with the leasehold, and that was a very positive and constructive approach to land use by Māori in that period and then that was shut down. Are there examples beyond that? You've just said that you need to do more research and analyse historical anchors, but surely there must be a way in which – even more generally how land is used and how the economy has built from those early periods and that if you had – even for non-Māori, in the investments and the decisions they made, this is where they got to in today's time and then using that as a way to ground the figures in a level of reality for us today?

A. I think that is right but I'd be very cautious about doing so. I mean the reason is, if we look back at New Zealand history, we do have some early glimpses of the emerging Māori economy. There are examples of where things were going rather well. There was lots of exporting of produce overseas and Māori buying sailing ships and sailing to Australia and so forth to trade. So, we did see very early glimpses. Even before

colonisation was really kicking off, there was a lot of trading obviously going on with the whalers and that sort of thing.

From first engagement there was a fair degree of exchange going on anyway. Before the period when there was large scale colonisation and the larger scale land loss started to occur, we were getting some very definite glimpses here and there of the Māori economy emerging. In the Mangatū case there are very good examples given of pre-1865, the land that was in ongoing Māhaki ownership was being turned into agriculture. If you think about it – why not – you've got a culture that had suddenly met up with European culture that was bringing a whole range of different tools available to the land that was already available to Māori. If you think about it, that is just like a huge productivity gain. That is an industrial revolution effectively. So, Māori all of a sudden get access to technologies, steel, agricultural seeds, and practice, et cetera, that could transform the way the local land is used.

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There was a tremendous upside for Māori in those days and so we did see this emerging. The issue we face is that it didn't take terribly long for some of that to basically just get shut down, and we get the major land purchases, we get confiscations, we get all the things that we know about that we are addressing these days. So, if we were to then look at what happened to the European economy, it gives us some measure of what was possible, et cetera. Would that necessarily have been what Māori would have done had they retained their lands and simply continued to bring on European technologies, and so forth, and maybe hiring European workers to work on Māori farms rather than the other way round on former Māori lands?

I think I'd probably be challenged if I did that. I think I'd have to try and come up with some concrete basis to say that the non-Māori experience gives me a good anchor for what would have been the Māori experience. Broadly speaking, perhaps it gives us a guide but the variation around that could be so large that I might struggle to defend it very well. I would want to look for some better anchors if I could find it.

Q. I suppose, because we're measuring in effect a positive Treaty relationship between the Crown and Māori, at the very least it would be at a level of non-Māori within the region given that there is a group that has access to resources and is recognised within the region where Māori weren't in most cases.

A. It certainly shows you the potential, doesn't it?

Q. Yes.

A. We know that pastoral farming could take off in the Wairarapa. It was happening under ongoing Māori ownership and it continued after the land was transferred into non-Māori ownership, so that seems quite plain. We know that that gives us a very real example of what actually happened. You might ask yourself, "Would Māori have one better or worse than that?" and that is a relevant question and you would need to grapple over how much you could really pin that down. But, as I said before, you wouldn't assume you built a nuclear power station and invented Bitcoin. This is where you're just getting beyond any sort of experience that we can point to that was reasonable that would give us a guide as to what might have been the case for Māori.

Q. I suppose the last point is that overwhelmingly the impression I get, from both your and Dr Coleman's evidence, is the reasons why it is so much easier to calculate investments into the future as opposed to considering losses in the past, the decisions and the strategies that are employed now for the future you can plan and you can set goals and you can work towards those and say, "This is where we want to be in the future with the information that we have available to us". Whereas, when we look back in the past, there are so many things that happened and we are able to identify those things.

For example, we talked a lot about the Mahuika(?) olive grove. The point that I think Mr Castle made and which I think has been lost is that it was on Mount Hikurangi. The fact is, the reasons why an olive grove would be put on to that land in the first place would have a goal and a strategy associated with that so that the olive grove wasn't simply just an income generation.

A. It was for a purpose, right.

Q. It was for a purpose, and a large part of that was to retain an asset which is culturally grounded.

A. Yes.

Q. So, when we look back in the past, we really need to comprehend in a strong way the sorts of decisions that were being made at that time and the influences, rather than simply just look at this in monetary terms.

A. Yes.

Q. That's not a question. That's just the perception I've got from yours and other evidence to do with this economic –

A. Yes. I think this is part of how you ground your counterfactual scenarios in as much reality as you can. For Mangatū we had quite a lot of guidance, in the sense that we did see the various attempts to try to re-collectivise land that was falling under individualisation and falling beyond Māhaki ownership.

In terms of the general point about: is it easier to predict the past or the future? They used to say in Soviet Russia it's always hard to predict the past, but that is because the past was a choice variable of the state and they would tell you what they wanted history to be and it was (inaudible 11:44:34) not to disagree with that. We are not in that situation and I disagree fundamentally with Dr Yeabsley who suggests that somehow it is easier to predict the future than it is to predict the past. We don't have to predict the past. We just need to look for it.

So, when you go into the future, the further out you go the kind of cone of uncertainty – we use to describe this – gets exponentially wider. The further out you go the wider the realms of possibilities, because you could be taking all sorts of turns as you move out into the future and there is infinity; there is an infinite number of powers going into the future. Whereas, when we look at the past, we can actually prune most of those branches. We can say, "Well, we didn't build a nuclear power station in 1865 in the Wairarapa because the technology wasn't there". We know that. So, when we look backwards and we say, "What was the likely investment return in 1865?" well, we actually know what it was. Whereas, if you asked me what the actual investment return is going to be in five years' time for a particular asset I couldn't tell you. I could tell you with a

probability distribution and the further out I go in time the more wide that distribution becomes and I can't tell you with any great certainty. So, I feel more comfortable in fact doing an historical assessment.

The irony is that we routinely do forward looking valuations. Any cost benefit analysis the Government does is predicated on: we're trying to fight climate change. We're going to assume we do these things. We assume these things happen in response, et cetera, et cetera. There is a lot of uncertainty attaching to that, considerable uncertainty. Looking backwards in time, as I say, I think we can actually do a better job. It is when you don't have any historical data to see, to find, to discover that is when it is pretty hard. If we could go back before recorded history, kind of thing, it is pretty hard to say what happened. We can only read entrails but, when we've got recorded history and we've got numbers and things to work with and we've seen what actually happened, that gives us a pretty good guide that starts to narrow down the distribution of possibilities.

Q. Tena koe.

(11:46) JUDGE WAINWRIGHT TO DR RICHARD MEADE:

Q. Tena koe. Dr Meade, thank you for your burning of the midnight oil to make your presentation today as up to date and relevant as you could. These few days have been very helpful I think for us in the development of our thinking around these economic issues, sitting as we do as people with expertise in quite other fields.

One of the things that was a kind of epiphany for me yesterday, as we have been coming to grips with the evidence of the various economists and looking at these developing conceptual tools for viewing losses in the past, when Dr Coleman observed in the course of questions that – and I'm paraphrasing him but something like – there's been a lot of evil done in the world and we don't seek to compensate for it. Then I realised that the reason why these economic tools for valuing past losses are in their infancy is because, substantially, that's not what humans have done. We have accepted that awful things happen to many people and, substantially, people in the present move on rather than looking back and trying to rectify it in the present.

You can look back at New Zealand history and think of many things that have happened that have caused awful consequences to people – many of them Māori – which many generations of New Zealanders simply skated over. So, the reason, it seems to me, that these tools are embryonic is because it's not what we have done as people, is to look back and go, "That was really bad, let's try and fix it up now".

Even in the context of the Treaty jurisdiction, the recommendatory nature of the Waitangi Tribunal's jurisdiction has meant that we have typically not engaged with calculations. We have dealt with concepts for looking at the Treaty and the ways in which the Treaty hasn't been honoured over time. We haven't looked at: how do you calculate the negative consequences to people who were adversely affected by those breaches of the Treaty?

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So, really it hasn't been until we come to exercise this jurisdiction which creates arguably conceptually an anomalous situation where there were two legislative instruments arrived at, at the end of the 1980s, where in order to settle litigation at the time there was a moment where it was passed into law that the Tribunal would not only be dealing with things conceptually but they would actually be that the Tribunal would have to calculate exactly how much should be transferred to Māori by way of redress for the prejudice suffered.

So, although we have been involved in this jurisdiction for a long time, it is only now that we, as people required to make these decisions, are grasping for conceptual tools to enable us to say that this figure rather than this figure is what should be transferred by way of redress for prejudice suffered.

A. Yes.

Q. That helps me understand why the economic tools that you and Dr Coleman and the others – Dr Yeabsley and, you know, everybody – have been debating in your evidence are still in a debateable form because for the most part you're reaching for tools that have been developed in other contexts, mainly future looking, and saying to the Tribunal, "We can apply those to a backward looking exercise plausibly in this way or this way or this way" but the various ways that you have offered us aren't all the same.

You've been at pains today to say that the differences between you and Dr Coleman have narrowed, by virtue of the way that he expressed himself yesterday that refined your understanding of what was in his written paper, such that you are satisfied that the Tribunal can go, "Oh, well, substantially they're in agreement". I am not convinced that that is necessarily the case but in some areas I think I certainly understand – well, if I can say – Ms Feint's theory of matters, which is what she put to Dr Coleman with which he agreed: that whatever way you skin the cat you get to the cap as far as the forests are concerned. That seems to be a coalescence of concept – well, I'm not sure if the Crown agrees – between claimant lawyers and the cohort of economists. That seems to be one area where there is agreement.

How we deal with the different concepts of loss, whether or not the interest rates that you have talked about are applicable when we are talking about welfare losses or not. It doesn't seem to me that there is actually a complete overlap of view about that as between you and Dr Coleman or, indeed, Dr Yeabsley. I take your point that the differences may not be material in any ultimate sense.

Can you just comment on whether – you are excited about the intellectual challenges of developing these tools, because it's new and you are an economist who is interested in the interface between law and economics – in fact the application of these new tools, that you're developing and that you're outlining to us in different options, are not likely to be of general application because the context for people to arrive at a particular amount of money that should be transferred when the prejudice relates to a long period of time are likely to be few?

A. Yes, Ma'am, I can comment. There are quite a few issues there and I took a few notes along the way. First, I would say I wouldn't even describe that what I've done is new, at least not the bit that I hang my hat on. I use the exponential compounding at conservative rates. I don't think that is very exciting. That is not very out there. That is not pushing the boundaries of what people do. What is new, where I do the hyperbolic approach that is definitely new but that is why I didn't hang my hat on it. I said, "Well, I don't feel comfortable trying to sell you this way new tool that no one has

ever used ever before so that you can decide based on that". I provided it as a cross-check on my main approach and the (inaudible 11:56:02) thing I just didn't want to go there at all because I thought, "It's just too arguable. It's not going to get us home in any objective way". You can do effectively what I did and say, "Look, you could get a higher number than what I did. You could actually do some scenarios and show with (inaudible 11:56:16) I can get a lower number too". It doesn't tell us anything. There is no signal there. It is just kind of noise.

I would say that what we are doing is a context that is both very familiar and new. It is familiar in the sense that courts do routinely look at things like breaches of contract. The breach of contract happened some time in the past. You work out what the loss is on the breach of contract; list it within the negotiating damages approach that I mentioned came up. That supports my ex ante approach, by the way, when we look at Wairarapa Moana's losses. If we took the negotiating damages approach you're looking forward. That's just what you do.

Q. But there is a statute of limitations, right?

A. Yes.

Q. So, the courts have not been in the business of redressing losses that go back over generations.

A. This is where I was going to get to the differences.

Q. Yes.

A. There are two key differences and they actually work in different directions here. One is your point: so the courts historically have been a bit reluctant to look a long way back in time, but Parliament in New Zealand kind of opened that door up by saying, "We'll allow the Waitangi Tribunal to inquire into historical claims". Parliament opened up the door, not because it wanted to but because it had to through the statutory mechanisms to making these claims compatible(?).

Q. Absolutely.

A. That was the deal that was struck.

Q. Look, I completely agree and I'm not trying to get away from that. The epiphany that I had was that that idea that Parliament came up with in the

white heat of litigation that was stymieing the main economic policies of the day is anomalous. I am not taking away from it. It is what it is.

A. Yes.

Q. We are in the business of working out what those imperatives are, and they clearly are imperatives. So, I'm not taking away from that. I'm just saying if we look at it in the real world, in the wider universe rather than in the particular cul-de-sac of the Waitangi Tribunal and floor two of Fujitsu House, if we look at it in the big picture, it's a very particular thing that we're doing and it's not something that has been much done.

A. If I can continue with my theme of what's similar, what's different, I think an important thing that is different is there is the Treaty of Waitangi. To the extent, at least in contemporary times, it has been regarded as defining the rules of the game – and this is wearing an institutional economist hat – the Treaty kind of defined certain rules of the game and effectively affirmed certain Māori property rights, article 2 in particular for example. So, that becomes your starting point of analysis and say, "Well, if you didn't have the Treaty". For example, if you're in Australia where you didn't have a treaty with the Aboriginal people, it is a much different road to go down to talk about fixing Aboriginal claims because you don't have the Treaty setting what the standard ought to be.

Q. I'm not sure that I agree with you there.

A. That's fine. But I think the Treaty is an important starting point to say, "Well, we kind of put a peg in the ground in New Zealand" and so to the extent that we say that that's a relevant rule to aspire to that gives us some guidance.

Q. Okay.

A. That's a bit different to other situations. Because if you look at slavery reparations in the United States or reparations with native American Indians for land loss and so forth, unless you had an equivalent treaty you –

Q. Which many did.

A. Quite. In Canada, likewise, right?

Q. Yes.

A. And it does depend on the terms of the treaty as well, right?

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But the bit that strikes me about why we don't often see so many examples – if someone breaches a contract with a corporation that goes to court because the corporation has got the money and they're going to fight it and they can often slug their way through and, even if they're in the wrong, they can come out ahead. If you're an indigenous people and you kind of lost out and all your resources went to another group and they became the dominant group and the political process favoured them not you, it's not really a surprise that the political constraints stop historical claims being compensated. It's like saying, "Well, we –

Q. That is kind of what I'm saying, you know, S--t happens.

A. Yes.

Q. Throughout history there are winners and losers and, typically, humankind has not gone back and gone, "Dang that was terrible. Let's work out exactly how much you lost and let's organise a transfer". That's the point that I'm making. In all those indigenous people situations, which are more similar around the new world than we tend to think in New Zealand, because every country is sort of inward looking, but if people had been doing that these economic tools that we're looking at here would have been fully formed and fully fledged because they would have been exercised in Canada and America and wherever, and they haven't been. So, that's really what I'm asking. I mean that's really what I'm thinking. That where we are at, where we are specifically enjoined to do a particular transfer for particular wrongs of the past, that it is not something that many other people have been in the business of working out.

A. I think it differs both by degree and scope, in the sense that we can look at things like contractual breaches. We can say, "Actually, we do have some tools" and there is actually a branch of economics called forensic economics where people have their own journal. It's mostly US-centric, to be honest, because there are so many rules in the States that they've got lots of stuff to talk about so, "We do it this way over here and you do it that way over there".

Q. Yes.

A. Anyway, there is a deep enough market for that sort of stuff in the States that we've got a journal dedicated to that. But that is looking at a narrow range of things over a narrow timeframe. They do have pain and suffering type things in there but this is for things like workplace injuries and stuff like that, so it is not so much focusing on the indigenous claims thing. So, I think by degree and by the time periods involved, the nature of the claims, we're starting to get into a different sort of territory to these other sorts of claims, but this is by degree. It's not that we're saying all together we don't have any tools for this sort of stuff. We do have tools and we do use these tools for these other sorts of claims, it is just that we are starting to really push the boundaries out, to look at these other aspects of the indigenous people's claims.

JUDGE WAINWRIGHT:

Okay, thank you. Moving now to counsel, so, Tom, you're not wanting to question, so that takes us, I believe, to the Crown.

(12:03) CRAIG LINKHORN TO DR RICHARD MEADE:

Q. Kia ora, Dr Meade. Thanks very much for your material today and handed out this morning. A lot of new material there for us to digest. I just wanted to pick up on just a couple of points, many other matters already covered. You mentioned compensation for being out of the land for 153 years and it reminded me of the importance of being clear about which lands we're talking about, so the 1962 Mangatū Lands, yes?

A. Well, we know which lands they are, yes.

Q. So, the 1962 Mangatū Lands is more recent than 153 years ago?

A. They certainly are.

Q. The 1949 Pouakani Lands, to take an example from the other inquiry, that's more recent than 153 years ago?

A. Sure.

Q. And the 1881 Ngā Ariki Lands in the Tūranga inquiry, do the maths there.

A. So, what's your question?

Q. Well, which lands are you referring to, when we're talking about being out of lands for 153 years?

A. So, I worked through the various blocks that were sold over time, of the Māhaki lands, and I've confined myself to Māhaki lands, not other iwis' lands and I was working through I think Rose's historical records of each land transaction, and she had a whole book dedicated to the Mangatū lands, so this is — my historical basis was looking at all these different historical records of which blocks of land were initially sold and I'm looking at the individualisation, for example, so under the Native Lands Acts, since that was one of the findings of the Tribunal, that this is the problem, so I focused on where lands were sold under those pieces of legislation. I didn't track those lands through in time subsequently, because that wasn't what I needed to do to look at the original land loss, and the 1961 land from Mangatū, that was a specific case where we had land that had effectively come back into Mangatu's ownership and the '91 had continued, the Mangatū 2 had come back in, and this was where I tracked through just the change in ownership at the various relevant points in time where a breach occurred and there was a finding on that breach.

Q. So, these are lands elsewhere in the inquiry district, aren't they, beyond the subject land?

A. Both, yes.

Q. The calculations you make obviously have to factor in the circumstances —

A. Yes.

Q. — and that will include, won't it, where there's been a sale to the Crown for market value?

A. Well, sales to the Crown. We can debate market value, but go on, yes.

Q. It will include where land was sold that isn't ancestral land, won't it?

A. I'm not sure what you're referring to.

Q. Well, the Pouakani Lands, for instance, in the other inquiry.

A. Oh, well, that's a specific case where it wasn't ancestral land but that's right, through historical accident.

Q. And as I think some other questions have alluded to, it will also factor in instances such as that when the shareholders of Mangatū Incorporation decided to distribute the proceeds in entirety of the 1962 sale, won't it?

A. I'm not sure what you're asking me. I didn't value any losses associated with their distribution policy.

Q. So, that's an example of consumption that you've overlooked, isn't it?

A. It depends on what the money was used for, so I can't say. I don't know what the money was put to, because I know that Mangatū did actually set about buying land to make up for the 1961 land that had been sold so —

Q. Yes, but just to use your words from this morning, you took one big cheque and then wrote out a whole lot of small cheques. That's what happened, isn't it?

A. I don't recall the detail on that instance and the point I just made is it does beg the question what was that money used for? If each of the recipients of the cheque then invested that money in some other venture, like buying land on their own account, then I don't know what that money was used for, but I'd need to know what that is before I was able to determine what the implication of that is.

Q. You can't recall from your previous evidence or you haven't looked at that at all in any of your evidence?

A. I don't — I don't recall looking at it, to be honest.

Q. Okay. I mean, all this adds up to needing to keep a very clear focus, doesn't it, on the particular prejudice that's been found by the Waitangi Tribunal to exist, you'd agree with that?

A. That's the starting point, for sure.

Q. So, when, just before you gave the example of looking over the fence at how the balance of Mangatū No. 1 was being farmed and you said, "Well, we know what would have happened because they just would have continued doing that," that —

A. Well, probably, yes.

Q. Probably, that doesn't account for the fact that the very reason why the land was acquired was to combat the erosion and the fact that it wasn't farmable. You're aware of that, aren't you?

A. That's false, so basically I modelled a farming and afforestation scenario and the land valuers and farming advisors that I was working with explicitly modelled how much of the land was not farmable, and so we retired a certain proportion of the land each year, allowing for the fact that there

would have been continuing erosion if it had not been afforested, but the balance of that land was still farmable. It was a shrinking area that was farmable and in the scenario we're modelling we were progressively afforesting it, so that's factually incorrect.

Q. Well, this might be to, sort of, go over old ground from earlier hearings when really actually the purpose of these few days is to speak more at conceptual levels, so I'm content to rely on our previous exchanges on that material and the other evidence from other witnesses.

A. Okay.

Q. I just want to turn to another topic where you say that you — by compounding with sub-investment rates you've mimicked Chechenovsky's(?) approach, and I want to put to you that that's not a method but an output, isn't it, just to be clear that I understand what you mean?

1210

A. Not quite, so I'm saying that the approach that I get through using an exponential technique with low rates will produce numbers that are comparable in order of magnitude to the sorts of numbers you might get through a Chechenovsky application.

Q. And that's a pretty crude approximation all dependent on the parameters, all dependent on the inputs, isn't it?

A. Oh, absolutely and this is where I struggle with Chechenovsky because there's too much variance in what you might assume for the parameters.

Q. So, then turning to the Treasury table that was handed around yesterday and spoken to briefly today, time preference is shown in part as a method there?

A. Yes.

Q. The uses under discussion there are future-focused, aren't they?

A. Yes.

Q. Okay, thank you very much.

CRAIG LINKHORN:

Those are my questions, Ma'ams.

JUDGE WAINWRIGHT:

Tena koe. Mr Linkhorn, Are we going to hear from —

CRAIG LINKHORN:

No, that's fine. I think we've covered everything.

JUDGE WAINWRIGHT:

All right. All right. Well, that then is the questioning from the Crown, Dr Meade, and as I understand it and parties can contradict me if I'm wrong, that is the only questioning that is for Dr Meade today, yes? All right. You're there. Tena koe.

DR RICHARD MEADE:

Thank you, Ma'am, Ma'ams, I beg your pardon.

JUDGE WAINWRIGHT:

We really appreciate what you've brought to us.

KAREN FEINT:

Ka nui te mihi ki a koe, Richard. I could add, Ma'am, in relation to your questioning of Dr Meade one exception to the limitation period is where there's trust property, so in the Whakatū case the Supreme Court held that the Crown was acting as fiduciary and that to the extent that it holds lands that should have been put in the Nelson tense(?) in 1845, then those fit through that trust property exception, so that's another example of where —

JUDGE WAINWRIGHT:

Yes, that is an exception.

KAREN FEINT:

— of where this sort of historical assessment of economic loss will have to be undertaken as well.

JUDGE WAINWRIGHT:

Indeed, thank you, Ms Feint, and now are you calling Dr Yeabsley, Mr Linkhorn?

CRAIG LINKHORN: (CALLS WITNESS)

Yes, we'll move right along and call Dr Yeabsley.

(12:12) DR JOHN YEABSLEY: (WAI 814, #P61; WAI 863, #J93)

(12:12) CRAIG LINKHORN TO DR JOHN YEABSLEY:

Q. Dr Yeabsley, you've produced a further supplementary brief of evidence dated 5 July, is that correct?

A. Yes.

Q. And I understand that its record numbers are P61 in the Wai 814 inquiry J93 and 863 and A63 in the other? Now, we won't have you read out that material, but just wanted to ask you two questions, and you've seen the presentations over the last few days?

A. Some of them. I can't say I've seen them all for various reasons. Some of them I wasn't in here, so I didn't see all of the material but I heard large chunks of it. Other bits I've watched online and some I've just I'm afraid missed, but I tried to keep up as it's gone through.

Q. Could I just ask first whether you have any observations to add to the exchange with Dr Coleman yesterday about any issues that arise in addressing moral hazard, where the state is concerned, solely in financial terms?

A. Well, what I'd say is that in theory obviously that there is an issue there, and it might be seen as having some degree of restraint on a state, but in my view the real restraint on state action comes from, in our kind of democracy at least, the views of the people, and they express those through the electoral process. The restraint of the state by means of finance is a rather almost meaningless device seeing the state has in our sense massive taxing powers, most of which it's not using at the moment. We've had tax rates far higher than they are today and it does that. I agree that it would increase the competition for resources and so on, but in practical terms I think that as a way of constraining the state the moral side of that, the views of the people about what's happening and the way

politicians are behaving is far more important than a fine or a financial cost that would be imposed on the state. So, it's there, it might turn into a major, sort of, if you like, something like a scandal that it would happen, but I think as a way of constraining the state it's not the most useful way. In our form of democracy as I see it and I wouldn't count myself an expert on our constitution but I've watched it closely over 50-odd years the constraints come more from what a regulatory economist visiting New Zealand once called "restraint by raised eyebrow", the views of people and people rolling their eyes, I think, are far more important than small amounts, relatively small amounts, of money being at stake.

Q. So, having heard the exchanges over the last couple of days what observations do you make to the Tribunal today about your approach to these issues and modelling and calculating historical loss?

A. Well, perhaps I could pick up on the — what I thought was useful observations by Judge Wainwright and Dr Meade's reply and response, which is that if you look long — stand outside economics and look at it as a discipline, what you see is that there's a kind of mainstream that flows through what you might call techniques and large-scale methodologies in areas like macro and micro per se. When you get out into specific questions and issues and areas — and what I should say is that mainstream tends to flow, and there's lots and lots of academics and working economists contributing to that, testing it, using it, and so on every day, and they think of monetary issues, bank economists and financial people around the world are working away at trying to find ways of making money using that kind of stuff. When you get out into specific areas and the application of the question of what losses would be in certain circumstances relating to state actions in the past or community actions in the past the kind of thing that it reminds me of is what you see in what you might call special areas of economics, like, say, the economics of tourism, economics of immigration, economics of the media and so on, and what you see in those is when an issue arises where there is interest and specifically resources associated with it, such as the rise in America of the renewed interest in regulated industries when ATT was broken up 35 years ago, there was a massive upsurge of work, publication, academics

publishing, conferences on the area and the area went ahead at a great rate. Similarly when the question of digital television came along and the question of regulating media where there had previously been maximum of, say, half a dozen television channels and all of a sudden there were 150 or literally thousands available, there was a massive amount of work put in, that was published, people's understanding went ahead. So, your intuition about opening up an area and the work that's been done is right. The second point that I'd like to make is what's interesting when you look at areas is that sometimes they come to a consensus or a large consensus. Other times they don't. People sit, and an example is the table that was handed backwards and forwards a couple of times to Dr Meade out of that Treasury paper, okay? That's the Credy(?) whatever table, if you look at that, and Dr Meade went through it for you, I think there were four people that were using one form of social discount rate and others that were using others, there has been a degree of convergence but the degree of convergence has wound up with people strongly holding different views about what the appropriate social discount rate should be, and in particular, and I won't go into it too much, the New Zealand Treasury has been strongly influenced by certain views that they have about the way politicians should be trusted or not with people's money.

1220

And there's a famous letter to the Treasury from a person who later became Auditor General from London opining that a higher discount rate was absolutely vital because you couldn't trust politicians with any money, and so they adopted a 10 per cent real discount rate back in 1973 or whenever it was. Now, all I'm trying to say is I think we'd be better off if the area of thinking about backward-looking loss estimation had been more trammelled by economists. I think you'd be given perhaps a set of options and probably more formula. Whether it would converge to a single, neat, even mainstream with a few weirdoes on the side, if you like, which is the situation in many economics branches, I think remains an open question and that's — and my intuition about that piece stems from where I got to by looking at the wider literature, about thinking about the past and reparations and how they work, to find that that literature is still

scurrying around and what you see is even very eminent thinkers in the area, and I'll be a bit rude here, but Jeremy Waldron's piece is cute rather than insightful. He picks an area where he can get a bit of a spanner on to a specific aspect and points it out and then says, "Here we go," right, which is that in some areas what's morally wrong and morally right can change over time with the circumstances. Now, that's an interesting insight, but I don't think it helps people in the situation you're in, trying to think about those schemes in the wider, you know, how should we approach this, what sort of framework should we use? It just says, "Watch out because things change. They go in and out of moral judgements over time." Now, I'm not in any position to critique Jeremy as a thinker and an expert philosopher king, because that's what I see him as, but in this area he's got to that, and I can give you another concrete example, which is, the economics of information was opened up by Stigler in the 1960s and he published a really, really thoughtful article on it. Since then what you find is there's literally thousands of articles been written measuring the value of information in different circumstances. There is no overarching theory on it. What each person has done is found a cunning little wheeze that they've been able to work out the value of information in certain circumstances. They've run that through and it's been published in a good journal and they got promotion. Nice stuff, but it hasn't converged to any overarching general theory other than Stigler's from 1961. So, all I'm saying, I suppose, in a pessimistic way, is that you'll be better off when there's more work that's been done, but it may never converge.

Q. So, Dr Yeabsley, one of the responses from Dr Meade today was that the more he heard Dr Coleman explain things the more Dr Coleman came within Dr Meade's orbit of coalescence. Did you understand that yourself from the exchanges?

A. I'm not sure I would have represented it quite the same way. I think there were areas where some of the outcomes grew similar. I didn't see a lot of coalescence about the ways of thinking about the loss estimation and I did hear Dr Coleman be what — my judgement of him is very firm about ways of thinking that he regarded as inappropriate, using quite strong language about that, and I don't think he resiled from those judgements at

all and I think he was most concerned to think that, if you like, you could fiddle with the parameters to get to a similar result.

Q. And so having heard those exchanges do you see yourself being drawn into this orbit of coalescence at all, or do you remain where you've been throughout?

A. Well, if you get high enough in the helicopter I suppose everything starts to look like the same sort of thing. You know, my schemer that — everything looks like an ant, right? My schemer which was involved, you know, giving back either the item that caused the wrong or redressing the wrong or giving back equivalent value is something similar to some of the suggestions that have been made by Dr Meade. The value of the land in some of the cases seems to be what I'm saying. I think I explicitly had a section in my schemer which was about instead of trying to assess the value of the loss over time to rather think about the elapse of time and the fact that the damage was done and recompensed for the time lag rather than for some valuation that was changed by the elapse of time. Now, that's conceptually different, but in the end it could add up to being the same thing. You can think of it as some kind of low interest rate applied over a long period of time. You can —

JUDGE WAINWRIGHT:

Sorry, can you just say that again, Dr Yeabsley? I'm afraid I flicked out at a crucial point. Can you just say that again, what you just said?

UNIDENTIFIED SPEAKER: (12:26:26)

You flicked out too.

DR JOHN YEABSLEY:

No, no, I'm assuming that the crucial point was when I tried to distinguish between taking a loss and mechanically transforming it into a value today and then looking at the fact that there was an action that took place in the past and redress is only happening today, and you're getting recompensed for the fact that there's a time distinction, a time lapse, in those two actions, and what I went on to say was that obviously, by choosing an appropriate number in your

formula, you can always make those two approaches line up, just by fiddling the numbers until they come out the same, right, but that's just because, you know, two formulae can always be tweaked to give the same answer. So, an output overlap doesn't say anything about the underlying philosophy logic and reasoning and is, to be frank, in practical terms it might be all that matters. In terms of thinking about the thing and in terms of thinking about it particularly for precedent purposes or the way that you're trying to satisfy something that's got, and I hesitate to use the word but I can't think of anything else quickly, a sort of moral overtone to it, then I think it's all the difference in the world.

CRAIG LINKHORN:

Could you remain there and answer questions from the Tribunal and other counsel? Thank you.

JUDGE WAINWRIGHT:

We're good. So, we have counsel now. Is that you, Ms Feint, starting?

KAREN FEINT:

I did put my name down, but I've decided on the basis that Dr Yeabsley doesn't say anything original in his evidence, he merely adopts what Dr Coleman said, that there's nothing to be gained from cross-examining him, so I'm not going to question him.

JUDGE WAINWRIGHT:

That's a very mature approach, Ms Feint. Tena koe. Okay, so that's Ms Feint and then it's Mr Bennion.

THOMAS BENNION:

I take a less mature approach.

JUDGE WAINWRIGHT:

Well, it's 12.30 so —

THOMAS BENNION:

I really just wanted to check one paragraph and the use of — and just check some questions about time, the way time is thought about.

JUDGE WAINWRIGHT:

Well, do you want to ask that question now, then?

THOMAS BENNION:

I'm happy to wait until after the lunch.

JUDGE WAINWRIGHT:

No, don't. We'll have you and then we — after lunch will take up with these — Wai numbers don't mean anything to me, Wai 499 and 874. Ah, Ms Thornton, and 892.

ADAM TAPSELL:

Ma'am, we won't be having any questions.

JUDGE WAINWRIGHT:

All right, well, let's go through this and just check, so we've got Ms Thornton, not Mr Tapsell, Mr Mahuika?

1230

MATANUKU MAHUIKA:

I'll have ten minutes, maybe, Ma'am. There are some specific matters —

JUDGE WAINWRIGHT:

So, pretty mature.

MATANUKU MAHUIKA:

Yes. I did think about taking the same approach as Ms Feint, but I think there are a couple of things that —

JUDGE WAINWRIGHT:

Well, you are a man.

MATANUKU MAHUIKA:

Yes. I'm not sure what to say in response to that. Perhaps it's time for lunch.

JUDGE WAINWRIGHT:

Whakatoi noa iho. Wai 939 and 959, Mr Coleson? Two or three minutes, okay, and then we move to Mr Mellsop, okay, so I think we're making good time, everybody. Mr Bennion?

(12:30) THOMAS BENNION TO DR JOHN YEABSLEY:

Q. Thank you. Can I just take you to paragraph 38, Dr Yeabsley?

A. Sorry, this is of —

Q. Of your brief.

A. Sorry, which of my briefs?

Q. The latest one.

JUDGE WAINWRIGHT:

Your recent brief. The latest one. Your recent brief for this inquiry, so this part of the inquiry, so P61.

DR JOHN YEABSLEY:

Yes, yes.

JUDGE WAINWRIGHT:

61, did you say?

THOMAS BENNION:

Yes, P61 is the brief.

JUDGE WAINWRIGHT:

What paragraph number is it?

THOMAS BENNION:

Paragraph 38 is the paragraph.

JUDGE WAINWRIGHT:

Thank you.

THOMAS BENNION TO DR JOHN YEABSLEY: : (CONTINUES)

Q. I appreciate it can get a little confusing, but I am actually talking about your brief.

A. Yes, got you.

Q. And so you've got a sentence there about, "The Meade Mellsop compounding model does not reflect how people actually value events in the distant past or the far future" and so these questions are around about compounding and time and you've said that compounding interest is used and is pretty much standard and acceptable in people's current lifetimes when events occur and we're trying to recompense for them?

A. You mean commercial events?

Q. Yes.

A. Yes.

Q. And losses. Now, you've got a term here, "distant past". I assume then when you say "distant past" you mean sometime further than one generation back, so if we take people alive today, that's one category. Let's go one generation back of people not alive, that's the past, isn't it, and then the distant past comes somewhere later than that, is that the way you're thinking about it?

A. I was here, loosely I'll admit, just making some remarks about relative scale, and so I apologise if that was seeming that it was based on some kind of specific analysis. It was meant just to represent, say, 25 or 30 years beyond that, that kind of thing.

Q. All right, and let's put it into the treaty timeframe here, which is around 150 years, which Dr Coleman talked about reasonably extensively and he gave us tables representing the 150 years, but I was just looking at his evidence and he talks about 150 years being a short time span at one point in his evidence. How do you — so is the distant past, is it 50 years

ago, is it 150 years or beyond 150 years in your view, in the way you're thinking about it?

A. In my view the distant past here is, say, as I've said beyond, somewhere around 50 years, beyond that, that kind of thing. Sorry, I didn't have a specific number in my head, but I wasn't thinking of numbers beyond 150 years. I was thinking it would cut in somewhere before that.

Q. All right, and then I just want to check one last thing with you, which is would you change that slightly, for example, for wrongs done to children and let me give you an example, if a child in the 1880s gives £100 to the Crown and the Crown says, "I'm going to invest it for you, in your interests" and the Crown does not do that at all, do you think we could apply compounding interest rates back to that sum?

A. I mean, are we thinking about like a — some kind of one-off thing? What I was talking about in my evidence was to do with, if you like, wrongs done by the state and individual, treatment of individuals, I would have thought would be looked at on a one-off basis and thought about in that way. In the 1880s the treatment of an individual child, you might set up some kind of a framework for that. I think that that would still be a fair way, a long way back, as far as I'm concerned.

Q. So, you wouldn't apply compounding interest rates in that situation?

A. I might not apply compounding interest in that situation.

Q. And there's a mention that Dr Meade makes about some situations where you use compounding and he talks about fiduciary situations. Are you aware of those, fiduciary situations in law?

A. No, I'm not, I'm afraid.

THOMAS BENNION:

Thank you. That's all I had.

JUDGE WAINWRIGHT:

Nā reira, kua tae tātou ki te wā o te kai, nā reira ka tīmata anō tātou a te tekau mā rima meneti i te kotahi karaka.

HEARING ADJOURNS: 12.35 PM

HEARING RESUMES: 1.18 PM

JUDGE WAINWRIGHT:

Ko te āhua nei e reri ana tātou ināianei kia tīmata anō. All right, so we've had Mr Bennion and I think the next counsel who wanted to go is Ms Thornton, yes.

(13:18) LINDA THORNTON TO DR JOHN YEABSLEY:

Q. Good afternoon, Dr Yeabsley.

A. Afternoon.

Q. I won't take long. I have a very few questions.

JUDGE WAINWRIGHT:

You need to be by your mic, Ms Thornton. We just couldn't hear you then.

LINDA THORNTON:

I was kind of muttering anyway.

LINDA THORNTON TO DR JOHN YEABSLEY: : (CONTINUES)

Q. Dr Yeabsley, much of your evidence in this number P61 is directed toward issues arising from the Wairarapa proceedings, specific instructions you had, isn't that right?

A. Yes.

Q. Okay, then, and the portions of your evidence that are relevant to the Mangatū inquiry, which is the only one I'm really able to address, can you give us the purpose of your evidence?

A. The purpose, sorry, in what sense?

Q. Well, would it be correct to say that part of the purpose of your evidence is to establish a basis for keeping the compensation under schedule 1 as close to 5 per cent as possible?

1320

A. No, I wouldn't say that. What I'd say is my instructions in that case were to examine the methodologies put forward by a couple of other economists and to look at those in the light of what I thought of them, and also to look

at the compensation discussion in terms of what might be viewed as some kind of reparations or restorative material approach.

Q. Is it correct then, though, that the part of the revenue that is identified apply in the calculations and schedule 1 that is not returned to Māori will remain with the Crown?

A. I assume so.

Q. Now, we've talked about the moral hazard and how that's not meant to be a way of punishing the Crown, but I'm going to ask you to flip it over and talk about the idea of disgorging the Crown of its profits arising from its misconduct in treaty breaches. Would that — if the Crown is able to keep it, isn't that a way of rewarding the Crown for its treaty breaches?

A. I hadn't thought about it as that way because it was, I mean, where the Crown sits is the outcome of many, many activities over a long period of time which have added up and they might be seen as adding up to, you know, the Crown as it's now constituted has within it the results of all of those, all of those things that have happened, and some of those will have been caused directly or indirectly by specific actions that have been judged wrong by the Tribunal and which we'd all agree were wrong.

Q. Let's go ahead, then, and look at your paragraph 49 where you comment that Dr Meade doesn't explain the basis for the income gap between Māori and non-Māori. Are you aware of what I'm referring to there?

A. Yes, you're talking about page 17, is this — I take it we're on page 61?

Q. Paragraph 49 I believe is your paragraph.

A. Yes, but we're in P61?

Q. Yes, pardon me, sorry.

A. All right.

Q. Do you have an explanation for the income gap?

A. Not a — not a particularly well thought through one. I mean, it would be in terms of the kind of things that we see and I don't know how I'd assign a full degree of causality to it, but I mean we can see some of the parameters that contribute quite widely, which is that Māori have not wound up with the same degree of education and skills, therefore they don't perform as well in the labour market and so on, and that would be one of the main reasons.

Q. At 51 where you discuss the nexus that you say is required in your view as a necessary connection between the grant of money and the correction of social deprivation is it your view that without that nexus being fully addressed that it's improper to give compensation to address the income inequality?

A. What I'd say is if you're — if you're going to give money away as addressing income inequality for — as part of a context in which it's related to some action of the Crown, I mean if it's just seen as a policy of the Crown to address income gaps then that's a different matter. If it's in the context of being related to a compensation for a specific act that occurred in the past I would have thought you've got to relate the two together in some causative way.

Q. Are you familiar with any research that's been done here in New Zealand that identifies loss of land and the capital that it may represent as an important element in social and economic deprivation of an iwi?

A. I can't say I am.

Q. Do you believe that that loss of land and its capital representation would be part of why there would be an income gap?

A. I'm torn, because I think undoubtedly people losing land and/or capital will have had an influence when it went. I mean, obviously I think we'd all agree that having more resources available is likely to produce a better outcome than less, but I think specifically relating that back one of the things that's happened in the last 150 or so years has been the importance of land as a specific factor producing wealth and high incomes has diminished. The number of people that live off the land these days is a lot smaller than it used to be, particularly just as landowners, so that part of our economy, land owning rentier per se, is now miles smaller than it used to be. More people earn high incomes from skills.

Q. Is it your view that the Tribunal should examine the causes of economic deprivation before making an award under schedule 1?

A. I would — I would expect them to form a view about it, I'll say that.

Q. Well, you're aware that schedule 1 does not require any —

A. Sorry, you're talking about schedule 1 per se?

Q. Yes.

A. Schedule 1 just offers, as I understand it, alternative ways of computing compensation.

Q. Right. That doesn't require any —

A. No, no.

Q. — identification of the basis for it or anything like that?

A. No, no.

Q. Okay, then. Are you familiar with the Canadian Specific Claims Tribunal?

A. No.

Q. Okay, and are you familiar with the lump sum awarded under the North American case, Mohegan Indians v Connecticut?

A. No.

Q. Okay.

LINDA THORNTON:

Those are my questions, Ma'am. At the risk of jumping the gun we'd like to ask if we could be excused following Dr Yeabsley's evidence, because of the same reason that everybody else needs to leave, airplanes.

JUDGE WAINWRIGHT:

Sorry, what are you asking to be excused from?

LINDA THORNTON:

Further attendance after Dr Yeabsley concludes.

JUDGE WAINWRIGHT:

Oh, I see, because Dr Mellsop's evidence is not to do with your inquiry.

LINDA THORNTON:

Right, we don't have a dog in that fight.

JUDGE WAINWRIGHT:

Okay, all right. Well, you go off to another dog fight, then. Thank you, Ms Thornton.

(13:27) JUDGE WAINWRIGHT TO DR JOHN YEABSLEY:

Q. Can I just pick up a certain point with you, Dr Yeabsley, which is more on the theme of the relationship between poor performance in the — in contemporary society from socio-economic indicators and the loss of land in the past, because this was an issue that was traversed in our inquiry when we first inquired into it and we did report on the Crown's arguments at that time, which were that the relationship between ownership of land and wealth in contemporary society is poorly correlated. However, at the time when Māori went out of ownership substantially of land in the Wairarapa, so that by the time the Stout-Ngata Commission inquired into what land Māori could afford to sell in 1905 they concluded that Māori in the Wairarapa had none that they could afford to lose, so by then they were — it was sort of agreed in the inquiry they were effectively landless.

A. Yes, yes.

Q. So, at the time when that land went out of their hands in the last 50 years of the 19th century land and wealth were highly correlated, so that the squatocracy was in possession of a good deal of the wealth of New Zealand at that time and being a landholder was popularly regarded as being co-extensive with being well off, more or less, so even though those correlations are not the same today from an economic point of view can we draw a connection between ceasing to be part of that privileged and affluent class in that period when wealth and landholding were correlated? Can we draw a connection between that and having become a dispossessed minority?

A. I'm not sure I can help you on the grand scheme there, but I can point to the following, sort of, thoughts, which are we're talking now about a period that's 100 years ago, the Stout. The question then arises, if you like, of what are the income dynamics in New Zealand, how do the rich — do the rich stay rich and the poor stay poor?

1330

Because otherwise the connection between what was going on in 1905 and what's going on in 2019 fades and my rough feeling would be, and I haven't seen any longitudinal stuff on it that stands up over that long, but I have seen stuff in the meantime that shows that New Zealand income

dynamics have been quite flexible over that period, and I don't want to go mad about it but, I mean, my English forebears came here in the time of the First World War and they were essentially — they were landless. They were all servants and they made their way in the world in different ways from scratch, if you like. Now, that shows to me that there's a degree of income dynamics in New Zealand that means you can start and go through over generations and the interesting question, sorry, all I'm getting to is was that — were there other factors operating on Māori that stopped them from doing that, or what was it, and I just honestly do not know what —

Q. No, no, well, we didn't have economists before us in that district inquiry, which is why I'm raising the question with you now and apropos, you know, the general agreement that we don't really have evidence about it, I'm thinking, you know, if we could look at the people who came into possession of those Māori landholdings, the Sutherlands and the Riddifords and so on in the Wairarapa and we could observe what's happened to their affluence over time, and how dynamic that's been, that might provide us with some insight into what the relative Māori position might have been, had they had a fund from which they could — well, either they had the land or a fund to purchase the land at the time and what their position might have been.

A. I think it would cast some light on that question. But I think you would want to look at quite a range of things.

Q. Indeed.

A. So, I'm afraid –

Q. That's a complex question.

A. I'm sure Dr Mead's volunteered to do various (overspeaking) for you and I'll just hold my hand up and say I'd be fascinated to join in –

Q. Yes, we could have a party.

A. – if there was research going on. I see James Mellsop's ears pricking up as well. You're always looking for interesting material to work on.

Q. Yes. Well, this is because we're looking backwards and trying to assess loss in a way that, as we said before, is relatively novel, at least to put

numbers on it. Okay. Thank you. I think after Ms Thornton, we were to go to you, Mr Mahuika.

(13:33) MATANUKU MAHUIKA TO JOHN YEABSLEY:

Q. I'm happy to go. I'm not sure if it's my turn, but I don't really mind. Dr Yeabsley, only a couple of things today. What I'd like to do is take you to paragraph 17 of your evidence. Of course, I'm referring here to your supplementary brief of evidence, dated 5 July 2019.

JUDGE WAINWRIGHT:

I know that you're not hungry now, Mr Mahuika, but you're still sotto voce.

MATANUKU MAHUIKA TO JOHN YEABSLEY: : (CONTINUES)

Q. Sorry. Okay. So, I'm at paragraph 17 of your evidence, Dr Yeabsley.

A. Yes.

Q. The conclusion you reached there, and I will paraphrase it, is that the appropriate way to value the loss to Wairarapa Moana Incorporated is to look at the land value based on the use of that land as farmland. Is that a fair summary of what you're saying in that first sentence?

A. That's what I'm saying there, because that's based on the argument that while it was obviously possible to build a dam on that land, and it suited a dam to some degree, there were a lot of alternative strategies associated with power development. Right, so you have in effect, therefore, discounted the hydro-potential of that area down to zero.

Q. Well, no, what I've discounted is the uniqueness of the hydro-potential of that area down to zero.

A. Yes.

Q. So, in other words, you've not taken into account the hydro-potential of that area.

A. That's right.

Q. So, if we look at that then against the methodology that you propose at paragraph 11, which is about righting a wrong, accepting blame and then providing a degree of temporal compensation.

A. Yes.

Q. So, your view about that is that the way that you right the wrong, accept blame and provide temporal compensation is a payment of $380,000. That doesn't take into account the hydro-potential of the land.

A. That's what I'm saying.

Q. Do you have any idea what sort of return the Crown has derived from hydroelectricity associated with Maraetai?

A. I've seen the figures in Dr Mead's piece, but I'm not sure what you mean by the return the Crown has derived.

Q. Well, we can look at it from a revenue point of view or maybe we can look at it from a profit point of view, but I wouldn't be wrong in saying, would I, that the value of that would be in the tens of millions, probably hundreds of millions perhaps, even billions of dollars?

A. Well, I mean, that's imputing the – you're trying to say the State is acting like some kind of profit-making developer whereas, in fact, I think most of the evidence we've seen around the dam is that the drivers to build the dam were around the fact that there was a shortage of electricity and the what was then the hydro-division of the public works department was striving valiantly to try and supply the demand, not to make money out of it.

Q. Right. So, even striving to create demand had no value to the Crown?

A. Striving to create demand had value, but it wasn't a monetary value.

Q. Even if we accept that there's no monetary value attached to that, the fact of the matter is that the Crown has derived significant incomes from undertaking hydroelectric power generation at that site, hasn't it?

A. I think it has, probably most of that over recent years. Earlier on it's unclear that NZED made any money.

Q. Yes, but those numbers, even if it's just recent, are significant?

A. They are significant.

Q. So, if I take you now to paragraph 62 of your evidence. Actually I need to get there myself. It's really the section that you have there, Dr Yeabsley, about ownership proportion. So, it's from paragraph 60 onwards. In that section what you do amongst other things is you discuss other situations where there has been Māori landowner participation in electricity generation.

A. Yes.

Q. That's a fair summary, isn't it?

A. Well, amongst other things, yes.

Q. Yes. You look particularly at the Rotokawa Ngawa Puraru(?) 1.38.47 situation, with Tauhara North No. 2 and also discussed briefly, I think, Tuaropaki's situation in respect of the Mokai geothermal field.

A. Just briefly, yes.

Q. Yes. I think, if I might summarise your position on this, there are two things that you say. The first is that the outcome of the negotiations is arbitrary – I think is the word that you use. Secondly, what you say is it's difficult to assess what was taken into consideration in reaching those agreements. Is that a fair summary of what you say?

A. Sorry, the first one, if I can just tease a wee bit, what I meant by "arbitrary" was that there's without a tremendous amount of inside knowledge and some good luck, I think it's very difficult to work out exactly what the number is that's going to come out. Okay? So, "arbitrary" is a shorthand way of saying that. As for the second one, perhaps you can point me to exactly – I'm afraid I've lost a degree of insight into what you were -

1340

Q. Well, if you go to paragraph 61 and the second sentence there. It says, "There are no details as to what was contributed by each side and no indication of the way the deals were done."

A. Yes.

Q. So, in other words, there were deals done, but we don't have insights into how those deals were done. That would include insights into how the parties valued their respective contributions to those deals."

A. Yes, exactly. Sorry, that was the point I was trying to make.

Q. I think, if you look at those agreements, so if you look at – sorry, let me just get to the right paragraph, so that we can go through this carefully. If I go to your paragraph 60.1, this is the first stage of the agreements between Mighty River Power, now Mercury, and Tauhara North No. 2, so that arrangement was a 50:50 ownership of the geothermal field. MRP owned the plant, but paid a rental to Tauhara North No. 2.

A. Yes, that's there.

Q. Yes. In the subsequent development, I think, Tauhara North took a 25 per cent, approximately, stake in the geothermal power station that was created in the second stage. I think that's what the paperwork says, isn't it?

A. Sorry, I just can't see the 25 per cent on the face of it and it's not an area I know off by heart, I'm afraid.

Q. Yes. Well, what it took was, let's say, a reasonable minority stake in the second stage. You'd agree with that, wouldn't you?

A. It may well be, I just can't – it doesn't pop into my mind and I can't see it on the paper here. But I'll accept your testimony, yes.

Q. Thank you. But I think it's on the record and I'm afraid I don't have the documents, but in the case of the Tuaropaki geothermal power stations, the stake that Tuaropaki ended up with was one share short of 75 per cent of 100 plus megawatt power station.

A. May well be.

Q. Yes. That was in the documents that I presented to you.

A. Sorry, I got one side of a sheet of paper, was what I got.

Q. Yes, with the percentages on it.

A. Sorry.

Q. Look, it's okay if you don't recall. I think the point that I'm putting to you is that all of those situations are much more significant in value than $380,000, aren't they?

A. Probably, yes.

Q. I have no further questions, ma'am.

(13:42) JUDGE WAINWRIGHT TO JOHN YEABSLEY:

Q. Dr Yeabsley, I'm just thinking about your views on the value of the hydroelectric potential of the land that the Crown compulsorily required for the Maraetai Power Station. In terms of our exercise, I guess the context into which that feeds is that the Tribunal found that the Crown breached the treaty when it excluded the potential for hydroelectric purposes as a criterion for valuation when the Crown arrived at a measure of value for compensation for the land. We're taking an ex ante position here, because we're looking at what would have happened if the Land Valuation

Tribunal had had the hydroelectric potential of the land as a criterion for value. Are you saying that if they had had to take account of that when they compensated the Poakuni(?) owners that they would have come up with zero?

A. Well, what I'm saying is that if they'd not only had that criteria but had in front of them the contention that was going on, as I understood, between the various different ways that were in play as to how the immediate power shortage might be remedied -

Q. But would they have done that, because we're talking about a land valuation issue?

A. Yes. Well – sorry, so that's why I'm putting that in there, because if the land valuation was supposed to take account of the valuation of this specific site then it's got to look at it compared with all the other ways in which that hydro-potential might or might not have been -

Q. Well, you say they've got to, but if we look at what a Land Valuation Tribunal in 1947 would have done, are you really suggesting that the gentlemen concerned would have done an evaluation of the alternative competing ways of producing electricity and fed that into a land valuation?

A. I can't say what they would have done in 1947, I was barely born. But -

Q. Well, even now –

A. - sorry, I was going to go on and say, but if the valuers are doing their job properly, the role of the value is to look at all the alternative uses that can be made of it. To look at the alternative uses they have to decide what part, if we're thinking about this as a potential hydro-station, there're lots of other places up and down the river you can build a potential hydro-station. It's a candidate. How likely is it? Because if it's not likely, then it's value in the real world is very low and approaches zero.

Q. But at the point where this valuation has been done, the likelihood is 100 per cent, because the Crown is acquiring the property for that purpose.

A. Yes, but don't forget, the Crown is acquiring the property for this purpose based on the fact that it doesn't have to compensate for that. If it knows that there was the faintest possibility it might have to do that then it might have looked for another site, is the key argument. You're changing part of the world and not the rest of it.

Q. Okay. So, you're saying that we can't just look at what the Valuation Tribunal would have done, because I think that's what the -

A. If you do that in isolation then that's not a proper counterfactual; that's just a selected scenario of the way the world might work where you're getting a result that tells you something about the assumptions that you've made, not about what might have happened.

Q. Okay, fair enough. All right, moving on from Mr Mahuika.

UNIDENTIFIED SPEAKER: (1:47:36)

It was going to be me, Your Honour, but I don't need to ask my questions.

JUDGE WAINWRIGHT:

Okay. Ms Dixon? No. So, are we ready then for Mr Mellsop? Is that where we've got to? Speak now or forever hold your peace. Ka pai. All right, Dr Yeabsley, we can let you go. Thank you for your always measured and valuable input.

JOHN YEABSLEY:

Thank you. I apologise for my croaky throat.

JUDGE WAINWRIGHT:

We all seem to have those. *Tēnā* koe.

KELLY DIXON:

Thank you, ma'am. It's my pleasure to call the final economist for this hearing week, Mr Mellsop. Just while he is getting organised, if I can just orientate the Panel to his evidence, which is on the record as J94. Today we have also filed a summary, which Mr Mellsop will be going through. This one is only four pages. This, I understand, will be registered as J94A. Tēnā koe, Mr Mellsop.

(13:48) KELLY DIXON TO JAMES MELLSOP:

Q. If I can quickly just go through a few initial processes.

A. Sure.

Q. Could you please confirm your full name is James Michael Mellsop?

A. It is, yes.

Q. It's correct that you've produced a Brief of Evidence dated 5 July 2019?

A. That's correct.

Q. Can you confirm that the contents of your evidence is true and correct?

A. I can confirm that, yes.

Q. Thank you, Mr Mellsop. Could you please proceed with your evidence?

A. Okay. Thank you.

(13:49) JAMES MELLSOP: (ORAL SUBMISSION)

My original plan was actually to summarise that 5 July brief. I haven't been here in the room for the last two days, but I have watched some of the YouTube and had some briefing sessions. In light of that I thought it would be more useful to just use three slides rather than summarise what my 5 July brief said.

1350

The first thing I wanted to touch on was a discussion this morning about whether this process for the Tribunal is: how novel is it? I would like to put forward the proposition that a lot of it I don't think is novel. Here I've just noted that we're having this discussion because there was a Treaty breach.

Now, there's a lot of economic literature on how to quantify damages when there has been a contractual breach or when there has been collusion that's affected purchasers. So, in a sense this is actually the approach I've taken in my previous evidence, which I think is actually quite orthodox. What that literature does find is that historic losses should be compounded up. I've noted there that in all the cases I've been involved in quantifying damages for breach and the literature I've read, I've never seen a defendant claiming that the damages should not be fully compounded because of possibly plaintiff consumption. So, that is probably the novel part, I think, of this process.

Moving on, in my evidence I have compounded up all of the assumed rental income of Ngāi Tumapuhia. There has been a discussion about: what if some of that would have been consumed and not invested, how should we treat that?

Dr Yeabsley was the first to raise that issue. I responded in an earlier brief that I still think it's appropriate to compound. I won't go back through that now. It's set out again in my 5 July brief. I thought it would be more useful for the Tribunal just to kind of move on from that. So, leaving that aspect aside, I mean, we've talked about the coalescence, so if I can move into that, I guess.

My understanding, particularly from yesterday's session, is that the sort of coalescence is around these three points I've made under the second bullet here. I understand that there seems to be agreement that land should be valued as at today. That's the first thing. Secondly, to the degree that income was reinvested then it is appropriate to compound it. I understand that that's been agreed. The third aspect really is that income which was not reinvested, but was instead consumed in some sense, should also be compensated for. That I think is where the debate is about: well, how do we do that?

The thing I'd like to point out really, just in my last slide, the next slide is that the figure that I actually have in my 5 July evidence actually captures exactly this approach. I'll work through that. I think it also, that figure, captures the approach that Dr Yeabsley set out. I've forgotten now which brief it was, but I'll come back to that as well. The sort of punchline is that for any plausible way to value missed consumption, the original loss estimates that I've filed, that I've calculated, are basically conservative. So, I'll explain that in more detail now.

This is my final slide, so this is hopefully quite – won't keep us here too long. Before I work through these bars, perhaps if we just briefly think about: how do we value the missed consumption? There's been a lot of discussion over the past couple of days about that. At least one of the proposals put forward by Dr Coleman is what he's termed the zero rate of time preference, which, as I understand what he's saying, is effectively compensate for inflation, but no real compensation on top of that.

So, if we take that as the sort of – there has been some discussion, I think, about even a negative real rate of time preference, but it seems to me that at an absolute minimum zero is as low as we can go. I actually think, personally,

that's not plausible, for a couple of reasons. One is, we had the discussion this morning about the Treasury paper looking at the social rates of time preference that other countries use. All of them have a positive real rate. None of them are zero. They're always positive. Secondly, I mentioned in my 5 July brief that there is this sort of positive externality through time, so that if my great-grandmother was well fed, clothed, educated, housed, I'm probably better off today that I would otherwise be. So, I think it's another reason why a zero rate of time preference is implausibly low.

So, if that background – if we focus now on this graph. Perhaps if we start – has everybody got that? In colour? Is it in colour? Okay. If we maybe focus on the bar which is the second from the right, so that one of the – it's the Chileniski(?) approach. I've got two bars for her approach. So, the second from the right, effectively what this is is it's saying that, if we think back to that previous slide and the three sort of areas of agreement, this calculates the land as at today's value. So, in Ngāi Tūmapuhia's case that's about $1.4 billion. Secondly, this takes half of the lease income from that land and compounds that up at the stock market return. Thirdly, the other 50 per cent of the income is assumed to be consumed, in effect, and is basically valued using the zero rate of time preference.

So, the point of this is that even if we assume that 50 per cent of the income was consumed in some sense and we don't compound it at a real rate, it's simply adjusted for inflation, the economic loss is still $22 billion, much higher than my original estimates. Does that make sense, before I move on? The second Chileniski bar there is the $716 million. The only difference here is that rather than compounding that 50 per cent that is reinvested at the stock market rate, I've compounded it at the risk-free rate plus 2 per cent, which is my original sort of base-case scenario for the compounding rate.

Now this is effectively also the – well, either of these approaches, depending which interest rate you use, effectively is also the approach that Dr Yeabsley did suggest in one of his earlier briefs, towards the end of last year. Where he first raised this issue with what I'd filed that I'm assuming that 100 per cent of

the income is reinvested. He said perhaps it would be 50 per cent. He came up with a number. I came up with a slightly different number.

1400

But they're fairly similar, basically. The point is, once again, that even if we take that approach, the numbers we get are actually pretty close to what I originally estimated.

The final bar I'd like to – sorry, the two orange bars are my original scenarios. The final bar, I'll briefly touch on before finishing, is the left-hand one, as I face it, the $203 million one. This is basically saying: we will not compound any of the income at a positive real rate. So, we could think of this either as being everything is consumed, but we'll compensate on the basis inflation only. Or we could just assume everything's invested, but it's simply at the rate of inflation, the compounding. Whichever way you want to think about it we still get to $200 million, which is actually not that far off the lower estimate of mine.

I would just finish it up by emphasising or repeating that I think using a zero rate of time preference is not a plausible approach. It's just too low to effectively compensate. That is all I really wanted to sort of summarise, so I hope that's useful.

(14:01) JUDGE WAINWRIGHT TO JAMES MELLSOP:

Q. Thank you, Mr Mellsop. Are you a doctor?

A. No.

Q. Oh, okay, good. I didn't want to demote you. All right. I will turn to the Tribunal Members, who may have questions of you.

A. Sure.

Q. All right. We have reached a point where there are no questions. We're perhaps overloaded –

A. I'm not sure if that's good or bad.

Q. - with economic concepts, calculations, discount rates, time preferences and all the rest of it.

A. Fair enough.

Q. Thank you for your evidence, which we put into the kete of all the wisdom that we have been beneficiaries of and we thank you for your time. Are there counsel who want to ask questions of this witness? Well, they are all shaking their heads, Ms Dixon. Again, speak now or forever hold your peace. Look, Mr Mahuika is not mature enough to resist. I saw that hand hovering, Mr Mahuika. No? Okay. Do any counsel have questions that they still wish to ask? No. That's an easy ride. Thank you very much, Mr Mellsop.

A. Thank you.

JUDGE WAINWRIGHT

Nā reira, ko te āhua nei kua tae tātou ki te mutunga o te – o tēnei wāhanga kōrero o ēnei Taraipiunara, nā reira, ka hoatu ahau i te rākau ki taku hoa.

MATANUKU MAHUIKA:

Ma'am, I was just wondering, that was why I was reaching for the mic. I don't know if now is the time to raise it, but it was in relation to the timetable for the Wai85 aspect of this. So, as it currently stands, closings are due from us on 6 August. Having listened to the evidence over the last 2½ days, I think I would like to have the transcripts from the economists' evidence before closing. I don't know what the timetable is.

JUDGE WAINWRIGHT:

As to that, Mr Mahuika, we actually had a conversation about that yesterday. Danny informed us that he thinks that the Tribunal is going to contract out this particular item of work to an entity which turns things around rather more quickly than the Ministry's transcription service. Is that still the case, Danny?

DANNY MERITO:

We're still doing a business case on that, Ma'am.

JUDGE WAINWRIGHT:

So, the business case is still underway. I guess that means that if we can convince the powers that be that there is sufficient urgency around receipt of the transcript, then it will be contracted out and that may mean that it is going to be ready sooner. It doesn't look like whether we can say right now exactly when that would be, but in principle I couldn't differ from you, Mr Marhuika, about the reasonableness of parties who are called upon to file closing submissions to have the transcript available to them before they file. Can you leave it with us, please, and I will confer with staff about the timetable, the whole of which is not imprinted in my cerebellum right now, with a view to creating some space for that. As you know, there are consequential changes, gaps and so on that would ensure and I'm not sure what they are. So, in principle, yes, you won't be required to file before that. What do you think is a reasonable interval, after receipt of the transcript, for the filing of the closings?

MATANUKU MAHUIKA:

It depends a little bit. As I understand the timetable, the Crown has asked for 20 days from the filing of our submissions in order to provide their submissions in reply. So, as it currently stands, any slippage in the timetable for us to file would mean that we would miss the hearing date in September. So, an inevitable aspect of it would be to vacate that date and find another date. I think we would only need a couple of weeks. We have started doing some work on the closings.

JUDGE WAINWRIGHT:

So, in brief, if you have a fortnight after receipt of the transcript and the Crown needs 20 days after receipt of the claimant parties' closings then we would need to vacate the –

MATANUKU MAHUIKA:

The September date.

JUDGE WAINWRIGHT:

The reason I am hesitating is because I think I'm just going to call it all off. The prospect of finding another week when everyone can come is -

MATANUKU MAHUIKA:

Just make the order, Ma'am.

JUDGE WAINWRIGHT:

- beyond contemplation. I'm sure we can do it. I'm sure we can do it. But that would be the consequence, wouldn't it?

MATANUKU MAHUIKA:

Yes, it would be, Ma'am. I have had a discussion with Mr Colson, He can talk for himself. I've also had a discussion with the Crown. As you're aware, Mr Irwin has been leading this matter for the Crown. He's away until Monday.

JUDGE WAINWRIGHT:

I'm sure Mr Irwin won't have a different view, other than that it's reasonable for your closings to be deferred, pending receipt of the transcript, or that the Crown needs 20 days after receipt of the other parties' closings to prepare its closings. So, those two realities, we just have to take on the chin, I think. I completely accept that what's happened this week is material and it would be unreasonable for you to file without reference to it. So, leave it with us. We will confer and come back about the options that are available for reconvening the hearing at which the tribunal will take the closings. Kei te pai?

MATANUKU MAHUIKA:

Kei te pai.

JUDGE MILROY:

Thank you for raising that, Mr Mahuika, because it reminded me that I did need to let counsel for Mangatu know that, of course, you will be able to make submissions in relation to this hearing as well.

1410

But perhaps we can deal with it at the telephone conference that we'll have later, next week or the week after. Then we will also know whether we have

managed to get the transcript outsourced and all those kinds of things as well. I just wanted to let you know that we will set a timetable in place, but a little later rather than today.

JUDGE WAINWRIGHT:

Before we turn to Dr Hond, are there any other housekeeping matters, Mr Bennion?

THOMAS BENNION:

Yes, just one minor matter. Mr Mellsop's evidence has some commentary on compounding rates and refers to some sources and then he's commenting on Dr Coleman's evidence. I am assuming that in closings for Mangatu, we're heard this evidence here in a combined inquiry, I could feel free to reach across and use that information and make reference to that material. I just wanted to check that that is not going to be an issue.

JUDGE MILROY:

I will ask staff to place Mr Millsop's evidence on to the Mangatu inquiry as well.

THOMAS BENNION:

Thank you.

KAREN FEINT:

Can I just say before we close, I've been remiss and not recording Mr Radich's(?) apologies, he's unable to be here for this hearing?

JUDGE WAINWRIGHT:

Are there any other items before we turn to the closing? No? Ka pai. Tēnā koutou.

WILLIE TE AHO: (MIHI)

WAIATA

(14:20) DR RUAKERE HOND: (MIHI)

E tū anō e tūkau ana i tēnei wā. Ehara i te mea he aukati atu i tēnei o mihi atu o mihi mai. Kua rongo i te pu hurihuri nei, Te Kooti e kōrero nei, he pērā tā-rā-rā-rā-ra, anā, ngā kupu katoa tatari ana ki te ngākau tangata kua puta i tēnei te mutunga o tō tātou hui. Nō reira ka mihi ki aku hautū tangata, aku rangatira ngā tōpito e whā o runga, o raro o roto o waho. Ana kua haramai e hoki rā i roto i te ora o ngā tūpuna.

Kua mihia ngā mate engari i runga i tērā mihi ki a Rūtene mā, kia John mā, otirā ki te Wharehuia, wēnei kōrero katoa i hoki wairua mai, otirā e ora ana i roto i ēnei kōrero, i te mea haere tonu ana kia tutuki kia ea, ana kia ea wawe ai i runga i ngā whakaaro i puta i te rangi nei. Nō reira, e mihi kau ana ki ngā maunga kia haere ki Titiraupenga kia piki ki runga i a Maunga Haumi kia haere anō ki roto o te Wairarapa te moana, otirā te awa o Waikato, tēnei e mihi kau ana ki a koutou katoa i tuku atu i ō koutou wawata mō te ao pōpōtanga i te mea ngā kōrero nunui o mua, ana hāngai kato atu ki ngā rā kei mua i te aroaro ana ko ngā uri whakatupu.

Nō reira e mihi kau ana ki tēnā i ō kōrero Willie ana kia hoki atu ki tērā tō taua Hato Pēteratanga. Nā Layne Davis anō te reo i āu e tū nei, nō Te Tai Tokerau. Engari anō, ko ēnei wehewehenga kua hono mai i roto i tēnei kaupapa o Te Rōpū Whakamana i te Tiriti o Waitangi, ko te Tiriti o Waitangi tonu tēnei e whāia. Nō reira, o tātou roro, o tātou pīnati kua patapātai ēnei whikawhika, i ēnei namanama, kāre i āta rongo atu ki runga i ō tātou marae. Koia pea o muri nei e noho waha ngū ana i roto i ēnei kōrero. Engari i tū mutunga iho, i puta iho Willie, ngā kōrero kei te ngākau e titi tonu ana kia hoki mai te whenua kia hoki mai anō te Māori o mua ki nāianei kia anga mua anō ko ngā uri whakatupu. Nō reira koia anō te whainga i roto anō i ēnei kāwai kōrero. Engari, arā anō te nui o te tohe, ara anō te nui o te pakanga, kua oti kē i runga i a Ngātapa i runga i a Waerengahika, kāhore e haere tonu ana ināianei.

Kua murua te whenua, raupatuhia te tangata i rot anō i ēnei āhuatanga e kimi nei kia puta i ērā o ngā taumahatanga ki runga i ō koutou pokohiwi. Nō reira haere atu, hoki atu kia tangata mai nei, kia tāria atu te wā kia hoki mai anō e tutuki ai tēnei whakaaro ki mua i tēnei tēpu. Ngā Tēpu e rua, ngā rōpū e rua kua hui tahi atu kia tutuki ai tēnei whakaaro, tēnā koutou, tēnā koutou, tēnā tātou katoa. Ka pai, kua pai tuarā ana i tēnei, Te Tangi a Te Ruru.

WAIATA (TE TANGI A TE RURU)

HEARING CONCLUDES: 2.28 PM