

Minutes of 56th Annual Fellows' Forum of Royal Society Te Apārangi

The meeting was held on Thursday, 28 April 2022 at Royal Society Te Apārangi, and via Zoom

Present: Doug Armstrong, Barbara Barratt, Andrew Barrie, Richard Blaikie, Barbara Brookes, John Caradus, Geoff Chase, Andrew Cleland, Brent Clothier, Tony Conner, Dr Stuart Corson, Murray Cox, Catherine Day, Susy Frankel, Claudia Geiringer, Gail Gillon, Stephen Goldson, Russell Gray, Alistair Gunn, SallyAnn Harbison, Jane Harding, John Harper, Christian Hartinger, Deborah Hay, Stephen Henry, Andrew Hill, Philip Hill, Patria Hume, Robyn Longhurst, Charlotte Macdonald, Digby Macdonald, Angus Macfarlane, Sonja Macfarlane, Gaven Martin, Janet McLean, Wendy Nelson, Nigel Perry, Ian Reid, Martha Savage, David Schiel, Peter Schwerdtfeger, Barry Scott, Philip Seddon, Cather Simpson, Mike Steel, Murray Thomson, Stephen Todd, John Townend, Graeme Wake, Angela Wanhalla, David Whitehead, David Williams, Menghie Zhang

In attendance: James Henry, Paul Atkins, Marc Rands, Deepshika Singh, Fiona Campbell

1. Welcome

Professor Macdonald welcomed Fellows to the Forum.

2. Valedictories

Dr Conner announced the deaths since the last Annual Forum of the following Fellows and Honorary Fellows:

- **Professor Neil Ashcroft Hon FRSNZ** (Cornell University) 1938-2021. Professor Ashcroft was an internationally acclaimed Physicist working in the fields of Condensed Matter Physics.
- **Professor Peter Bergquist FRSNZ** (Macquarie University) 1934-2020. Professor Bergquist was a world-renowned molecular biologist, who pioneered techniques in cloning and expressing genes from organisms that thrive in high temperatures such as geothermal areas.
- **Professor Michael Corballis FRSNZ** (University of Auckland) 1936-2021. Professor Corballis was one of the world's most respected cognitive scientists undertaking foundational research on the nature and evolution of the human mind, including mental imagery, language, and mental time travel.
- **Dr Moana Jackson CRSNZ** (Ngāti Kahungunu, Ngāti Porou) (Te Herenga Waka – Victoria University of Wellington) 1945-2022. Dr Jackson was a pioneering lawyer and a global authority on Indigenous people's rights, shaping public debate around colonisation and Te Tiriti o Waitangi.
- **Professor Alan Kaiser FRSNZ** (Victoria University of Wellington) 1946-2021. Professor Kaiser was an internationally renowned physicist who specialised in solid state physics, particularly the study of electronic conduction and other properties of novel materials.
- **Professor George Petersen FRSNZ** (University of Otago) 1933-2021. Professor Petersen was a world leading biochemist who helped in the development of DNA sequencing technologies.
- **Professor Mark Warner Hon FRSNZ** (University of Cambridge) 1952-2021. Professor Warner was one of the world's leading physicists working in the field of soft condensed matter.
- **Professor Peter Whittle Hon FRSNZ** (University of Cambridge) 1927-2021.

Professor Whittle was a mathematician and an outstanding pioneer across the fields of probability, statistics and optimization.

- **Distinguished Professor Steven Wratten FRSNZ** (Lincoln University) 1947-2021. Professor Wratten was a world-leading researcher in agro-ecology, with a focus on the biological control of pests.

Obituaries have been, or will be lodged on the Royal Society website as they are provided.

There was a one-minute silence in honour of Fellows who had died during the year.

3. Report of Academy and remarks from Chair of Academy, Professor Charlotte Macdonald FRSNZ

Since we met this time last year, we have had an 'interesting' year, not made any simpler for us by the waves of both delta and omicron strains of covid that disrupted the work of the Academy and Royal Society, as it did all aspects of our lives. It is great to be able to gather here in person today.

At New Fellows Day in 2021 those who were there will recall that the President of the Society was Wendy Lerner, and the Chief Executive Dame Cindy Kiro. Wendy's 3-year term ended on 30 June, and she is now elevated to the rank of portrait in the foyer. Dame Cindy is now elevated to Government House across the city as Governor-General. We are immensely proud of her appointment, and she continues as patron of the Society. But it has brought change. We were delighted to welcome Brent Clothier to the Presidency on 1 July, and Paul Atkins to the role of Chief Executive at the very end of November. Thanks are due too to Roger Ridley for acting as Chief Executive in the July-November months.

On the AEC, I also note some changes of membership: Gaven Martin's term as Convenor of Physical, Earth and Mathematical Sciences came to an end on 30 June. He was succeeded by Shaun Hendy, elected by the Fellows in the domain. In Social and Behavioural Sciences Stephen May finished his term 6 months early in order to take up a commitment that required immersive attention, and we were very privileged when Robyn Longhurst agreed to step into that role from 1 January. It is an even greater pleasure that Robyn has just been elected to a 3-year term as Convenor for that Domain from 1 July 2022.

Fellowship election: is a core role of the Academy. Electing Fellows has continued through the 2021-2022 year, despite challenges. And we are celebrating the outcomes here. It is wonderful to see the breadth and depth of expertise in Aotearoa New Zealand. We are a small society of 5 million or so people, with a largely publicly funded education and research sector, but we consistently produce research and researchers of outstanding quality such as we see in the room today.

Medals and Awards: the Academy, through the AEC, is responsible for selecting winners of the Medals and Awards granted by the Society. This is the other gala day on our calendar. Unfortunately, this year we were out-maneuvred by delta and then by omicron, with Awards ceremonies planned for October/November 2021 and then February/March 2022 having to be first postponed and then cancelled. But the achievements and celebration of winners is no less heart felt and fulsome.

Expert Advice: Fellows have been heavily involved in the Expert Advice work of the Society. In the last year groups have produced substantial reports on 3 areas of the school curriculum: the new [New Zealand History curriculum](#); the teaching of [Technology and hangarau learning in Aotearoa New Zealand](#); and [Pangarau: Mathematics and Tauanga Statistics in Aotearoa New Zealand](#). Expert Advice work has also been produced on

the subject of [‘Te Tapeke Fair Futures’](#) with a major report and focused spotlights on housing and health. These are valuable, and are already working their way into applications in day-to-day life in Aotearoa.

MBIE Green Paper: Te Ara Paerangi – the Academy has also prepared a major submission on the Green Paper which sets out questions for the future of the Research, Science, and Innovation System. This is a broad ranging review and could well set directions for the future – so it is an important moment that we will be watching as deliberations reach the next stage.

Recent months have also been occupied with controversy within the Academy about questions arising from public debate concerning the relationship between Mātauranga Māori and science, with the Society’s complaints procedure, and with associated matters that have been caught up in the swirl of often highly contested speech. As many of you will know, we held a special meeting of the Academy, Ngā Ahurei a Te Apārangi on Wednesday 13 April at Wharewaka in order to address these matters – and to do so in a separate forum to today’s meeting (which is one of celebration) and in which time for discussion is relatively limited. We had a large attendance – around 140, around 40 in person and the remainder online. It was held over 4 hours, independently facilitated and our role – as AEC, as President and Chief Executive - was primarily to listen to the views, and feelings, of Academy members. But I would like to assure you all, that the matters raised are taken seriously, we have been listening, and we will be acting. The Complaints Procedure (which is a statutory requirement of the Royal Society) is in a process of revision (it is an item on the agenda for next week’s Council meeting); we are reviewing the frequency and means by which Fellows can engage with each other and with other parts of the Society in between this annual forum, and other places where Academy members meet - on panels, in branches, in Constituent Organisations, etc. We recognize that the Academy includes a broad range of views and expertise and we want to foster constructive and robust dialogue. More information and updates relating to matters discussed at the 13 April Special Meeting will be forthcoming (see message issued by Chief Executive of the Society, 20 May 2022).

In my address last year I noted that the changes we have seen happening around us, including in Ngā Ahurei a Te Apārangi Academy of Fellows of the Royal Society, don’t ‘just happen’. History doesn’t just roll out like a conveyor belt through time, it is always the result of factors and people working together in ways that chafe and urge, that push and argue, that pull apart and come together. We have felt some of the discomfort of those processes in recent months. But we are seeing also today in our wonderful selection of New Fellows the radiance of research in Aotearoa New Zealand and the role of the Royal Society Te Apārangi in recognizing, supporting and promoting that work.

In concluding I draw your attention back to the words gifted by the great Tuhoe scholar James Wharehuia Milroy in 2007 in the name ‘Te Apārangi’ – a group of experts. The name made the Royal Society of New Zealand into the Royal Society Te Apārangi. We are a group, we are strong as a group, and a group that recognizes and respects expertise. We are distinctive in being an all-encompassing, multi subject Academy – like our colleagues in Scotland, the Netherlands and some other parts of the world. That gives the group particular strength and boundless potential.

Last week, our colleagues in Europe restarted the Large Hadron Collider sending those proton particles into their next eternal orbits, so we don’t need to keep singing what Nick Cave¹ has also gifted us in his ‘Higgs Boson Blues’. We can sing a waiata for the vigour of research and knowledge that flourishes amongst the matai, taupata and pohutakawa trees in our forests and beside our moana.

No reira ra tena koutou, tena koutou, tena koutou katoa.

¹ Nick Cave and the Bad Seeds, ‘Push the Sky Away’, Bad Seeds, 2013.

4. Report by the Chief Executive, Paul Atkins

I would like to welcome everyone and acknowledge the 23 new Fellows joining this extraordinary Academy and its amazing people. It is a privilege to be in this role, and to be able to welcome you all. The Academy is a fundamental part of the Society and thank you all for being part of it. I joined the Society at the end of November and have now been here five months. For that reason I am limited in what I can say about the 2021 year, which saw 4 CEOs over that 12-month period including Andrew Cleland, who is here today, Dame Cindy Kiro, who became our new Governor General, and my colleague Roger Ridley, who was the Acting CEO before me. I also acknowledge our new president, Brent Clothier, and offer my thanks to the past president Wendy Larner for the support you've given me.

At my powhiri, in November, I talked to the staff about the challenges and imperatives facing our societies globally being greater now than they have ever been. Johan Rockstrom (Director, Potsdam Institute for Climate Impact Research) has remarked that this decade is likely to be the most decisive decade in human history. Of the 17 sustainable development goals of the United Nations, each one is a wicked problem, if not a multiple of such problems, and presents to us the challenges that makes action in this decade so important. I am reminded of what Dame Cindy said a year ago: "What's the point of having expertise if we don't contribute to the challenges we face". Within our Society we have a wealth of expertise that offers an extraordinary opportunity for us to be an important part of finding solutions to these challenges.

A year ago, this organisation initiated a process of longer-term strategic planning, looking out to 2040 and the role the Society should play over that timeframe. Due to covid and personnel changes this work was put on the back burner, but the question remains, what should our organisation be focussing on and doing in the coming years? I have the opportunity to pick up this strategic planning process now and am conscious of how important it is that we use the potential we have within this Fellowship and our broader membership to add value and made a difference to our nation and the world. That potential is in significant measure due to the excellence you represent and, as a collective, our deeply rich and diverse Academy. The new Fellows' presentations we enjoyed earlier today were an example of that richness and diversity within which lies the great strength of our organisation that we will draw on for the future.

Quoting from Sir Peter Gluckman's address to the plenary of the Science Summit to the United Nations 76th General Assembly:

"To make impactful progress on many of the challenges we need a genuine approach to transdisciplinary research and to promoting social science and systems-based approaches. The word transdisciplinary is frequently misunderstood. It is not simply getting scientists across disciplines to combine their findings; it is a very different modality of thinking and research. It means ab initio framing the question through multiple lenses simultaneously, and generally that means from the social sciences and humanities alongside the natural sciences. It means engaging stakeholders from the outset. Such research is very different as it is not linear as is the nature of most research, but it is likely the only way we will make real progress with policy makers and citizens on many of the issues we now face."

Diversity isn't always easy, and putting it together in a transdisciplinary way can be challenging, and sometimes leads to controversy, as we know. But in diversity there is strength, and in this approach our future lies. The meeting of the Academy on 13 April was another step along the way of us all learning from and with each other, a welcome opportunity for people to get together and talk. I look forward to continuing working with you, and welcome your continued engagement with me.

In finishing, I quote from Glenn Colquhoun's "The art of walking upright":

The art of walking upright here
is the art of using both feet.
One is for holding on.
One is for letting go.

5. Report by the President, Dr Brent Clothier FRSNZ

I would like to provide a retrospective of the last year and highlight the challenges and opportunities ahead. The year 2021/22 has been another out-of-the-ordinary year for Aotearoa New Zealand, and the world more generally: covid, climate change, equity and justice issues, and now Ukraine.

For the Society, Te Apārangi, it has also been a year of great change. The end of February 2021 saw Dr Andrew Cleland complete his seven-year tenure as Chief Executive of the Society. Professor Dame Cindy Kiro came into the role, only to be announced as the next Governor-General of New Zealand in May. Dame Cindy is the first wahine Māori to take up this head-of-state position. Dr Roger Ridley, Mātanga Rangahau Director Expert Advice and Practice, stepped in as Tumu Whakarae Acting Chief Executive to lead the Society, until Paul Atkins could begin the role in late November.

Professor Wendy Lerner finished her three-year term as President of the Society at the end of June. As the incoming President I feel a sense of great privilege and also a strong sense of duty and enthusiasm to continue the Wendy's mahi. Wendy's threefold strategy was based on supporting Early Career Researchers (ECR), strengthening relationships with Māori researchers and Te Ao Māori, plus building equity, diversity and inclusivity.

We are continuing with these and our strategic themes are:

1. Strengthening diverse and inclusive relationships, in particular with Pacific researchers and Pasifika communities
2. Growing the reservoir of research and knowledge, and in particular we are beginning to work with the Royal Society of Canada and the Australian Council of Learned Academies on science and connections with the indigenous knowledge systems of First Nations peoples
3. Communicating and sharing knowledge
4. Recognising excellence - like we are doing here today.

As we emerge from COVID, during 2022 we have been dealing with the challenges posed by a letter "In defence of science" published in the Listener by seven academics, three of whom were Fellows of our Society. In response to complaints we received, we were duty bound under confidentiality, through our Complaints Procedures to set up an Initial Investigation Panel. The results of the Panel's findings have now been released. Two weeks ago, we had a meeting with Fellows to discuss these, and related issues. We have listened, we will be receiving a report from the facilitators, and consequentially the Council will take appropriate actions. We are committed to giving agency to the Fellowship, plus supporting science and abiding by the principles of free speech, as well as through recognising how multiple domains of knowledge can be woven together to provide an intellectual thread of greater strength.

I would like to highlight to two examples of how we are implementing our purpose of "knowledge enabling action".

The Te Tapeke Fair Futures project, led through our Expert Advice team, has highlighted many challenges that our nation faces. Te Tapeke focussed on health, housing, justice, and poverty. These topics were viewed

through an equity lens and painted a clear picture of the challenges we face, along with expert commentaries from panel members that further illuminated how we might begin to give different groups in New Zealand a "fairer go". The knowledge from our deep well, our matapuna, has provided signalled pathways for future actions for fairer futures in Aotearoa.

Another focus of the Society's work programme during early 2022 was responding to Te Ara Paerangi - Future Pathways Green Paper, released by the Ministry of Business, Innovation and Employment in October. This Green Paper sought wide-ranging feedback about how the future of New Zealand's research, science and innovation system can be better shaped and resourced by the government and stakeholders.

Indeed, the Society used four wells of deep knowledge to provide submissions on the Green Paper. The Marsden Council provided suggestions, as did the Academy and our Early Career Researchers' Forum, along with a submission from Te Apārangi itself. It was heartening to receive a note from the Chief Executive of Science New Zealand who said, "I particularly liked how you identified the key need to determine what we are doing science for, and what kind of future for New Zealand are we trying to create; and therefore, how should the system be organised".

Yes, there are challenges ahead, and there also opportunities.

He ra ki tua - better days are coming. Now with you, our new Ahurei, the Society can better play a significant part in shaping those better days.

6. General discussion

Key points from the discussion included:

Expert advice

- An observation was made that there would be merit in the Society doing more expert advice. The Office of the Prime Minister's Chief Science Advisor was currently producing a lot of advice, and connections with the Prime Minister's Chief Science Advisor needed to be strong.
- The Fellowship were invited to send in any ideas they had for possible topics for expert advice.

Special meeting of the Academy

- It was noted that the report from the meeting's facilitators would be shared with the Fellowship, after it has gone to the Society's Council the following week.

Strength in diversity

- The point was made that given the high proportion of Asian academics in New Zealand's universities, nominations of Asian researchers should be encouraged for the Academy's medals, awards and Fellowship, and efforts made to engage with Asian communities.

Draft Statement on the Ukraine

- A draft statement in support of the Ukraine was presented to the Forum. A show of hands was taken showing support for the Society putting out the statement.
- In terms of commentary on the text, it should include that the statement is from New Zealand, take out specific examples of collaborations with Ukraine researchers, and use term 'researchers' rather than 'scientists'.
- Consideration would also need to be given in solidarity with researchers in other conflicts in the future.

Structure of the Society

- A 'wiring' diagram of the structure of the society was made available, along with a short history of the Society's governance, produced by Andrew Cleland.

In closing, Charlotte thanked everyone for attending in person, and on-line, as well as Marc Rands for his support to the Academy in his role as Academy Executive Officer.