









Commentary: Respectful relations between science and Māori knowledge

Georgina Tuari Stewart^a , John Perrott^b , Hannah L. Buckley^b , Sarah Burli^b , Pare Keiha^a, Leilani Walker^b , Dion Henare^c , & Kowhai Wilkie^b

^aTe Ara Poutama, Auckland University of Technology, Auckland, New Zealand; ^bSchool of Science, Auckland University of Technology, Auckland, New Zealand; ^cSchool of Clinical Sciences, Auckland University of Technology, Auckland, New Zealand

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ABSTRACT

We are calling for discussions based on respectful relations or ‘mana ōrite’ between science and Māori knowledge. Greater understandings of the history and philosophy of both science and Māori education are necessary in order to understand the call for mana ōrite as ‘time up’ for the invalid denigration of Māori knowledge.

KEYWORDS

Mana ōrite, Māori knowledge, Philosophy of science, Respectful relations, Science education

This paper grew from discussions among the authors, who all work at Auckland University of Technology (AUT), about how to encourage more open and productive discussions among our colleagues about the relationship between science and Māori knowledge. This relationship has been hotly debated for decades in Aotearoa New Zealand (Dickison, 1994; Lomax, 1996), reflecting larger global debates about the nature of science and its place in society (Rosenberg & McIntyre, 2019).

In the School of Science at AUT we have recently introduced changes in our Bachelor of Science (BSc) programme, a scenario that makes a useful example of how the relationship between science and Māori knowledge is becoming more important in the university teaching function. A BSc is the standard undergraduate science degree taught in universities throughout the Anglophone academy, including in Aotearoa New Zealand. Almost without exception, working scientists in Western countries start their post-school studies with a BSc. Our updated BSc includes a new Year 1 paper, *Science in Society*, and a new Year 2 paper, *Vision Mātauranga*. Student feedback on these new courses has been mostly favourable. Early in the development phase, there were some negative staff discussions about the *Vision Mātauranga* course, but plans went ahead, with a pilot running in 2023 and a full class in 2024. According to the Head of School:

It’s very well received by all students, domestic and international, Pākehā and Māori. We’ve opened it up so staff can view all the lectures and resources, and it’s been well received by staff



too. I would like to make it mandatory training for all our staff and postgraduate students. (H. Buckley pers.comm.)

The updated BSc has catalysed lively discussions among the academic staff of the School of Science. In this context, reference to the word or idea of ‘racism’ is like a bomb going off: dangerous and causes lots of collateral damage. Views of non-Māori/Pasifika academic and teaching staff in the school range widely, from those who are active allies, to those with entrenched oppositional beliefs to the effect that science is a-contextual and therefore a-cultural. This latter view holds that science is ‘pure’ knowledge and not responsible for social problems. Of course ‘science’ is not directly responsible for social problems, but as ethical science educators we cannot ignore inequities in our outcomes. Why not consider what we could do to ameliorate those inequities?

The requirement for academics to demonstrate cultural competence has encouraged many staff to seek support from the Māori and Pasifika staff of the school, who have held workshops for teaching staff, plus many one-to-one meetings to support individual academics. In these ways, the burden of attempting to overcome the effects of a history of Eurocentrism in science and the university falls back on the staff who represent social groups harmed by those effects.

Caught in the crosshairs of this hotly-argued debate, students (not only Māori/Pasifika students) say they are being impacted by the views shared in class by staff who oppose the changes. Some students report feeling that they are in a racist learning environment. The views in question are being shared more openly by some staff reacting against the steps the School has taken in updating the BSc programme to become more pro-active about Māori/Pasifika student success, and the School’s obligations to Te Tiriti o Waitangi (Stewart, 2024a).

Lack of knowledge of the philosophy of science as well as lack of knowledge of Māori/Indigenous knowledges combine to cause difficulty for some people in considering Indigenous knowledges as complex knowledge systems. An understanding of philosophy and history of science would mean scientists were aware of the always hypothetical, possibly transient nature of scientific theory. We are mindful that we cannot raise up Māori knowledge by denigrating science. It is important for Māori/Pasifika commentators not to speak about science in the highly-publicised ways that some scientists and academics have spoken about Māori/Indigenous knowledge. This observation crystallizes the purpose of establishing a discussion group on respectful relations between science and Māori/Indigenous knowledge. We are interested in engaging teaching staff whose views on these matters are undecided, or in the middle of the spectrum, in an attempt to facilitate and build more reasoned and collegial discussion of these topics.

We need a new narrative about science that is more open and inclusive to people and other knowledge systems. It will take courage to admit that science and the other disciplines historically excluded Indigenous knowledges in order to consolidate themselves. This process was completed in the 18th century in the establishment of the academic disciplines (Herrnstein Smith, 2005). It will take the courage of humility to admit that science is only as good as the people who dare to call themselves scientists, and that examples abound of bad science, where people have sold out to greed and profitmaking (Marks, 2017; Proctor, 2012). It will take personal courage to think deeply about the ethnic inequities for Māori and Pasifika students in the courses we teach and about our own responses to these inequities.

A critical aspect of the ‘pure knowledge’ claim of science originates in the fact/value dichotomy where, in the 18th century, the bifurcation of fact from value was used to separate science (fact) from literature (fiction), in the process freeing science from ethical responsibility for its effects (Proctor, 1991; Putnam, 2004; Richardson, 1990). This move allowed science to claim control of truth. Science is extremely specialist, so each scientist has a small domain of expertise, which helps dilute the ethical significance of their work. But so far as we know, no other culture except the modern Western culture, influenced by science, separates facts from values. Māori (and Indigenous) ethical

concepts are both facts and values at the same time. This means that truth according to Māori (Indigenous) worldviews is both factual and ethically value-laden. This is one way to explain why Māori knowledge is not science.

The concept of ‘mana ōrite’ (equal mana) is a useful rendering in te reo Māori (the Māori language) of what we mean by ‘respectful relations’ between science and Mātauranga Māori. A call for equal mana is a call for the ending of the denigration of Māori knowledge in mainstream discourses. Knowledge of those discourses, as well as of the history and philosophy of science, makes it clear why we might want to talk about ending the disrespect of Māori knowledge (Stewart, 2023). But as a result of the specialist nature of science, few if any scientists have even a basic working knowledge of either the philosophy of science or of Māori knowledge. Hence many scientists display intensely negative reactions to any suggestion that Māori knowledge is of any scientific value. The debate has been cast as a simplistic, yes-no question: Is Māori knowledge science? But the wide brief of both science and Māori knowledge make this question meaningless: a provocation or conundrum, not a question with an answer in the ‘scientific’ sense (Stewart, 2019).

In equating ‘mana ōrite’ with ‘respectful relations’ we are strongly and purposefully disputing the views expressed in a recent letter published in the top-ranking journal *Science* (Ahdar et al., 2024) by a group including authors of similar recent pieces (Abbot et al., 2023; Clements et al., 2021). This letter cites the ‘mana ōrite’ principle and writes it off as meaningless at the start of a long chain of argumentation that ends in wild claims about how “the political climate in New Zealand has stifled open, facts-based debate, which is crucial to determining the merit of integrating these distinct forms of knowledge into curricula” (Ahdar et al., 2024, p. 151). These authors claim that this one phrase – mana ōrite – demonstrates the intended/imminent destruction of the national knowledge system of Aotearoa New Zealand, despite the fact that national science research and funding systems are still operating well. To present such extreme and inflammatory claims with flimsy reasoning and no evidence is poor scholarship, and amounts to starting a moral panic (Stewart, 2022, 2024b). This letter demonstrates how the self-proclaimed ‘defenders of science’ continue to hide behind the wall of academic freedom in order to gain points and power.

In contrast, to understand the concept of ‘mana ōrite’ as a call for ‘respectful relations’ between science and Māori knowledge is to recognise the potential of bilingualism and inter-cultural relationships for lateral thinking and cognitive flexibility. We hope to stimulate wider discussions and reflections across the spectrum of views on this topic. If you’ve read this far, we hope you will join us in those discussions. Kia ora mai tātou katoa (Greetings to all).

Declaration of interest

Nothing to declare.

Notes on contributors

Professor Georgina Tuari Stewart (Ngāpuhi, Pare Hauraki) is Professor of Māori Philosophy of Education in Te Ara Poutama and author of the book *Māori Philosophy* (Bloomsbury, 2021). Currently leading Marsden research on Māori learning spaces, and led development of resources about Māori knowledge of animals on the Science Learning Hub.

Associate Professor John Perrott is Associate Head of School Māori in the School of Science, and leads the MAISci network for Māori and Indigenous staff. Leads the new paper *Vision Mātauranga* (SCIE606). John has professional and whakapapa links to multiple Iwi groups and agencies and education providers.

Professor Hannah L. Buckley is Professor of Ecology and Head of School of the School of Science, in which role she has led the development of the new BSc degree programme. Hannah’s current focus is on how better understanding of biological diversity can enhance the functioning of human-modified ecosystems.



Dr Sarah Burli grew up in Switzerland and completed her PhD in Plant Ecology and Conservation, studying rare plants in the Botanic Garden of the University of Bern. At AUT, Sarah has been working as a post-doctoral researcher on the AUT Living Laboratories project from May 2023 to November 2024.

Professor Pare Keiha (Te Whānau-a-Taupara o Te Aitanga-a-Māhaki, Rongowhakaata) is Pro Vice Chancellor of Māori Advancement, Tumuaki of Te Ara Poutama and Dean of the Faculty of Culture & Society at AUT. He has also previously held the positions of Pro Vice Chancellor for Commercialisation and Pro Vice Chancellor for Learning and Teaching. In 2008 he was made a Companion of the Queen's Service Order (QSO) for his services to business, education and Māori.

Dr Leilani Walker (Te Whakatōhea) is a Senior Lecturer in the School of Science at AUT and the Entomology Curator at the Auckland Museum. Leilani is a behavioural ecologist focusing on terrestrial invertebrates. Her research interests also encompass entomology and arachnology more generally, and equity in higher education and science.

Dr Dion Henare (Ngāti Whātua) is a Lecturer in the Department of Psychology, a cognitive neuroscientist who studies how attention works in the brain. Following his PhD at University of Auckland, Dion was a post-doctoral researcher in Germany before being appointed at AUT. He won a Marsden Fast-Start research grant in 2023.

Kowhai Wilkie (Ngāpuhi, Ngāti Hine) coordinates student engagement programmes for the School of Science at AUT. Kowhai has previous experience of youth work in community-based programmes and delivering courses to students in secondary school environments.

ORCID

Georgina Tuart Stewart  <https://orcid.org/0000-0001-8832-2415>

John Perrott  <https://orcid.org/0000-0002-6023-8622>

Hannah L. Buckley  <https://orcid.org/0000-0002-4170-080X>

Sarah Burli  <https://orcid.org/0000-0002-5774-1331>

Leilani Walker  <https://orcid.org/0000-0003-3193-5258>

Dion Henare  <https://orcid.org/0000-0003-3193-5258>

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