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# Foreword

It is with pleasure that we contribute this foreword to *Issue II – Mātauranga and Science in Practice*.

This collection continues the mātauranga- and science-based scholarship presented in Issue I released in late 2019. It further underscores the thrilling contribution that mātauranga Māori makes to understanding and innovating our world in Aotearoa and beyond. Each manuscript unfurls an example of mātauranga-science in practice, displayed as a dynamic, flourishing, expanding and living knowledge system.

The artwork by Keanu Townsend that crowns this edition so clearly illustrates the essence of this academic collection. His artwork on the top left depicts western science, the DNA double helix adorning its puhoro; on the top right Indigenous science is depicted, the puhoro baring the poutama ascended by Tāne to obtain the baskets of knowledge.

Below, the whare wānanga portrays the middle ground, the space where knowledge systems come together in communion. Māori researchers, scientists and traditional knowledge holders find themselves represented in the green pou, possessing the ideal tools to navigate and mobilize both systems for the good and prosperity of people and their communities.

*Issue II of Mātauranga and Science in Practice* is a manifestation of what Townsend so keenly conveys in his art. The middle space symbolised by Townsend's whare wānanga has also been referred to as Te Pūtahitanga, the 3<sup>rd</sup> space, the liminal space, the interface – a space between worlds (Baker, 2012, Hutchings, 2012, Rata et al. 2012). This is often seen as a contested space of opposing worldviews; and when this space is interloped by the ignorant, these systems certainly do crash against each other, and conflict is the consequence. However, for the artful and adept, the push and pull of these knowledge systems becomes, instead, as a dance, a duo swaying against each other to the melody of the reo waiata. The authors in the issue have demonstrated what can truly be accomplished in the liminal space: theirs is the reo waiata. Our congratulations to all the contributors and the editors

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**Jessica Hutchings<sup>1</sup> and Willy-John Martin<sup>2</sup>**

for bringing this collection of writings together in one place.

This collection of writings traverses a diverse array of topics; from history, to epistemology, astronomy, education, capacity and capability development, marine science, strategy, implementation and impact, ethics, Māori sovereignty, environmental decision-making, and colonisation. This array of topics reveals one of mātauranga's true strengths: it does not respect the same boundaries as the western sciences. Instead, it draws resourcefully from diverse areas of thought in order to manifest its impact, and that impact tends to the effective, the sustainable, the complete, the long-term. While the western science system celebrates the discovery that art and the humanities super charge STEM into STEAM, Māori may be forgiven for their roll-of-the-eyes, as they applaud the teina for its discovery that the tuakana had operated from for numberless generations.

This diverse collection also foretells of a future that lies ahead. As mātauranga Māori's ever-expanding potential reaches into new spaces, places, and encounters new challenges to be solved, it may birth new discoveries that may delight, but may also disturb. How mātauranga Māori manifests in the understanding of particle physics may look very different to how it turns up in the protection of Kauri, or the control of environmental pests, or the development of high-value nutrition, and so on. We will need to be aware that an expanding knowledge system will also expand the kinds of practitioners that do its work. We should be prepared to see new kinds of Māori mātauranga-science experts emerge and be ready to challenge our mental barriers to what mātauranga Māori can create, and what its Māori practitioners might look like. That is why the articles in this issue are another very important step in our understanding of the potential and the diversity. We hope there will be many more articles to grace the pages of diverse tomes in the years to come.

A key standout when reading through this edition is the careful consideration that Māori researchers have given to their topics of investigation, the methodological standpoints, and participatory ways of conducting research. Behind the lines of these papers are the longstanding Indigenous connections that the authors have with their kaupapa of investigation as well as the communities they are working with.

To an Indigenous eye, we see the multi-layered textures of relationships, lashing together the timber of the work, holding the project waka together, conveying them to new territory in the mātauranga continuum. The distance of the research journey is dictated by the integrity of the relation-

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ships. A non-Indigenous eye has not been attuned to these obligations to working in ways that uphold who we are as Indigenous people, and it is often unseen labour.

Indigenous research is not easy, burdened with the starting point that western science methods were historically hefted as tools for colonisation. These traditions of intellectual violence still try to exert themselves to confiscate or adulterate the liminal space by demoting Indigenous forms of knowing, examining, and sense-making as non-scientific and anecdotal. We honour the austere courage of Indigenous scientists and researchers who exert the right for their indigenous science to be expressed and encourage readers to look behind the lines to see – to make visible – the unseen labor of Indigenous researchers.

This edition exemplifies Māori science excellence and impact in action. The authors have plunged into deep currents of knowledge to reveal old and synthesise new mātauranga in science. They are an envy of conceptualisation to any researcher seeking to use the current tools of the New Zealand science system to realise Māori potential.

We would advocate for more avenues where Mātauranga science like those in this issue can be supported; where research, and its benefits for communities can be amplified. Our recent work as the Rauika Māngai has sought to draw on experts to facilitate collective thinking about the Vision Mātauranga policy, and how the science sector can implement it more effectively (Rauika Māngai, 2020). The collective of Māori researchers provided an embarrassing trove of riches to help guide Māori researchers, non-Māori

researchers, and institutions alike. The most significant of these recommendations is for Ministries and research institutions to employ an engaged Treaty relationship in the science sector. We would encourage any reader with interest to read this Guide.

All contributions in this edition amplify mātauranga empowerment. It may be seen as a part of the ongoing reclamation of our right in Aotearoa to express and progress our knowledge traditions; to give our tikanga and mātauranga life in spaces including environmental and marine decision-making; in the science system; in the stars and on the waters; in the structuring of our time from year to year; and in educating our tamariki and rangatahi.

It has been a joy to absorb such a proficient articulation of mātauranga in one collection.

## References

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