



Taking taniwha seriously

Justine Kingsbury¹ 

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Abstract

Taniwha are powerful water creatures in *te ao Māori* (the Māori world/worldview). Taniwha sometimes affect public works in Aotearoa New Zealand: for example, consultation between government agencies and *tangata whenua* (the people of the land) about proposed roading developments sometimes results in the route being moved to avoid the dwelling place of a taniwha. Mainstream media responses have tended to be hostile or mocking, as you might expect, since on the face of it the dominant western scientific worldview has no place for beings like taniwha. However, in the 2020s, there appears to be an increased willingness to engage with *te ao Māori*. In this spirit, this paper proposes a way for non-Māori to begin to take taniwha more seriously, taking as its starting point the work of Dan Hikuroa on the practical usefulness of taniwha *pūrākau* (traditional narratives) in encoding information about natural hazards. The focus of this paper is narrow, but aspects of the strategy it proposes may be generalisable both to other aspects of *te ao Māori* and to other bicultural and multicultural contexts.

Keywords Taniwha · Intercultural understanding · Māori · Realism · Worldview · Natural hazards

1 Introduction

Taniwha are powerful water creatures in *te ao Māori* (the Māori world/worldview).¹ They often take the form of large eels, fish or reptiles, and tend to live at the sides or bends of rivers, in springs or in caves (Harmsworth, 2005, pp.2–3). There are many *pūrākau* (traditional narratives) in which taniwha are benevolent guardians. For example, a canoe is being swept towards Te Reinga waterfall in a flood and the taniwha Hine-kōrako, who lives below the waterfall, responds to desperate calls for

¹ Early ethnographical discussions of taniwha include Best (1962) (originally published 1929); see also Orbell (1968).

✉ Justine Kingsbury
justine.kingsbury@waikato.ac.nz

¹ University of Waikato, Hamilton, New Zealand

help and rescues those on board (Keane, 2007, p.3). Taniwha sometimes play a dual role as guardians and as monsters. For example, children are threatened with the taniwha if they swim at particular river bends. Those bends are dangerous places to swim – thus the taniwha is presented to the children as a monster but is effectively a guardian, preventing them from swimming where they should not.

Taniwha sometimes affect public works in Aotearoa.² In 2002, the taniwha Karutahi delayed the rebuilding of a section of State Highway 1 at Meremere. Karutahi inhabits a wetland area at the edge of the planned road. The local *hapū* (sub-tribe) Ngāti Naho were concerned that the proposed straightening and widening of the road would damage and pollute Karutahi's dwelling place (Harmsworth, 2005, pp.1–2). Construction was temporarily halted for consultation between Transit New Zealand and Ngāti Naho.

The issue was quickly and amicably resolved, but you would not have known it from the media coverage. New Zealand Herald headlines included “Taniwha halts work on highway” on November 4th (New Zealand Herald, 2002) and “Transit and the taniwha” on November 9th (Corbett, 2002). The BBC ran a piece headed “Māori swamp creature delays road” (British Broadcasting Corporation, 2002). The tone of the national and international commentary was mocking, and the speedy and fairly harmonious resolution was barely reported. Transit NZ issued a press release on December 19th, “Agreement reached at taniwha site,” but it was not treated as news.

In 2011, in connection with the proposed Auckland rail loop and the taniwha Horotiu, then-Prime-Minister John Key was asked whether he believed in “the Māori mythical creature.” He replied: “I’ve got to say not overly, no. I respect people’s spiritual beliefs but I’m not a great believer in them” (Field, 2011). Key’s attitude is a common one in Aotearoa. Even if Pākehā (non-Māori New Zealanders) respect the right of Māori to believe in taniwha, and individually and institutionally act in ways that accommodate such beliefs, most do not take the content of the beliefs seriously. They are at risk of being patronising towards those who hold them—saying, in effect, that of course *we* don’t believe these things, but we are prepared to indulge those who do. Even more overtly negative attitudes are in evidence in some media reports: for example, the view that that these are not sincerely held beliefs, being pulled out only when expedient.³

The government of Aotearoa New Zealand is required under the Treaty of Waitangi⁴ to recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water, *wāhi tapu* (sacred places) and other *taonga* (cultural treasures). In practice, this is done by consultation with *tangata whenua*

² ‘Aotearoa’ originally referred to the North Island of New Zealand, but is now used as the Māori name for New Zealand. See the Glossary for a guide to the meaning and pronunciation of terms in *te reo Māori* (the Māori language) used in this paper.

³ See for example:

“Taniwha are everywhere. These mythical creatures of Maori legend haunt the natural landscape to be summoned forth by any believer who wants to frighten mere mortals planning to tamper with nature.” (New Zealand Herald, 2011, editorial).

“...those who try to stop or delay a project by claiming a taniwha is in the route probably will drop their objections in return for a monetary settlement. I can’t think of too many other reasons someone would claim a taniwha lives in the way of a road or rail route.” (Farrar, 2011).

⁴ The founding document of New Zealand, an agreement signed by Māori chiefs and the British Crown in 1840.

(the people of the land) and by negotiation between *tangata whenua* and government agencies. This consultation is at least to some extent effective. In the Karutahi case the road was re-routed as a result of consultation with Ngāti Naho, and more recently, *tangata whenua* were involved from the outset in the planning of the new Huntly bypass (Leaman, 2015).

Nevertheless, public attitudes have tended to be dismissive, and it is easy to see why. Taniwha, on the face of it, only make sense within the context of *te ao Māori*. In *te ao Māori*, interconnectedness between people and all aspects of nature is recognised and valued, and a sharp distinction is not drawn between living and non-living things or between the natural and the spiritual world.⁵ In contrast, the western scientific worldview is anthropocentric and atomistic.⁶ Despite recent moves in the direction of valuing and preserving the natural world rather than merely exploiting it,⁷ the line between the living and the non-living remains firmly in place, and spiritual matters, if they are considered at all, are kept quite separate from scientific inquiry. Taniwha do not fit neatly within or even alongside the western scientific worldview that is dominant in Aotearoa.

However, there are recent signs of a positive change in mainstream attitudes to *te ao Māori*,⁸ and in that spirit, in this paper, I propose one small way in which we might begin to pursue intercultural understanding. I assume that those who are within *te ao Māori* already take taniwha seriously. Here I suggest a way for those with a different worldview to think about taniwha that would enable them also to take taniwha seriously. That different worldview is my own: I am a Pākehā (non-Māori) New Zealander who is sceptical about supernatural entities such as gods and demons, and inclined to take the natural world and the human world (which I take to be a part of the natural world) to be all that there is.

The starting point of my suggested approach to taking taniwha seriously is the work of earth scientist Daniel Hikuroa (2016, 2017, 2019). Hikuroa argues that taniwha *pūrākau* are of on-going practical use, encoding information about, in particular, natural hazards.

To head off potential misunderstandings, here are some things that I am *not* trying to do. I am not trying to change how Māori think about taniwha. I am not giving

⁵ See Stewart, 2021, pp.55–61; see also Waitangi Tribunal (1992), p.97.

⁶ See for example Sessions (1987), pp.106–108; see also Mazzocchi (2006) for one amongst many statements of this very broad-brush contrast between western and indigenous worldviews.

⁷ See for example West et al. (2020).

⁸ Use of *te reo Māori* in mainstream media has dramatically increased, and in 2021 NZ's Broadcasting Standards Authority stopped accepting complaints about the use of *te reo Māori* in public broadcasting (Hurihanganui, 2021). (This should have happened earlier, given that *te reo Māori* is the indigenous language of Aotearoa and was declared an official language of New Zealand in 1987.) Stuff, Aotearoa's most visited news website and owner of a number of local and regional newspapers, issued an apology in 2020 for its coverage of Māori issues and has changed its coverage and its employment practices accordingly (RNZ, 2020); NZME (owner of the New Zealand Herald and other news sites) has expanded the range of its digital platform Kāhu, which "showcases Maori stories and talent" (NZ Herald, 2021). Not all of these stories reference *te ao Māori*, but many do. These are mainstream media providers with high readership. Accordingly, it is reasonable to suppose that these moves both reflect public attitudes (because of the commercial imperative to maintain their readership), and are to some extent shaping them.

a revisionary analysis of the taniwha concept. Neither, I hope, am I treating taniwha as a mere metaphor, or taniwha *pūrākau* as useful fictions. I will use Hikuroa's work as a basis for regarding taniwha as real, in a way that might serve as a step towards more genuinely respectful cross-cultural engagement.⁹

My focus in this paper is narrow: I am concerned with changing the attitudes towards taniwha of those New Zealanders and those New Zealand institutions that are not immersed in *te ao Māori*. However, there are broader questions waiting in the wings. Bicultural and multicultural communities require mutual respect for the traditions of others. What does respecting the beliefs of another culture amount to? How can this kind of respect be encouraged? I hope to provide an example that might be generalisable both to other aspects of *te ao Māori* and to other bicultural and multicultural contexts.

2 Taniwha *pūrākau* as a way of communicating information about natural hazards

Hikuroa (2019) suggests that taniwha *pūrākau* are a way in which information about natural hazards is communicated across generations. He notes that “[p]ractically, taniwha serve to reduce disaster risk, acting simultaneously as warning signs and guardians.” Understanding taniwha *pūrākau* as mere stories is “an inadequate explanation of [their] importance and efficacy... in teaching, learning and the intergenerational transfer of knowledge.” Information about earthquakes, for example, might be encoded in stories about a taniwha that destroyed a village as punishment for wrongdoing. *Mātauranga Māori* (Māori knowledge) might extend the timeline for which we have information about earthquakes, floods, and other natural disasters (Hikuroa, 2017).

One of Hikuroa's examples (Hikuroa (2016) pp.6–7; see also Evans (2020)) involves the use of taniwha *pūrākau* in town planning. In 2005, there was massive flood damage in Matatā, on the east coast of Aotearoa's North Island. Many buildings were completely destroyed, and the town has even now not fully recovered. There are four *marae* (the courtyard and complex of buildings at the centre of community life) in Matatā, and all four were unscathed. The taniwha in the local river had been taken into account in choosing the sites of the marae. This taniwha has the form of a lizard, its head in the headwaters of the river, its body long and sinuous with short limbs (tributaries), and its tail (on the low-lying Rangitāiki Plains) flicking backwards and forwards. The *marae* were situated where they would not be damaged or destroyed by the moving tail of the taniwha, and thus they were not damaged by the changing path of the river. At the very least the moving tail of the taniwha *represents* the changing path of the river. Arguably, indeed, “the changing

⁹ In a different philosophical tradition, see for example Stengers (2018) on the need to do more than merely be tolerant of cultures that are not your own, and Verran (2018) for a practical attempt at respectful intercultural engagement involving designing a mathematics curriculum with the Yolngu Aboriginal community of northern Australia.

path of the river” and “the moving tail of the taniwha” are two ways of describing the very same thing.

Traditional narratives are a way of passing on important information from generation to generation in oral cultures. In many different traditions across the world, stories are told and passed on with a high level of fidelity between generations, preserving information about such things as ancestry, history, geography, which plants are edible, and which rivers are dangerous. The information is embedded in stories, the stories are entertaining, and there are specified times when the stories are told as well as expectations about the accuracy of re-telling. All of these things contribute to the successful transmission of information. Hikuroa (2019) notes that taniwha *pūrākau* are traditional narratives of this sort. He also makes an important further observation: taniwha *pūrākau* continue to be useful even now, when we have scientists to investigate flood and earthquake risk and the written word to preserve and pass on information about it. The Matatā floods, for instance, are recent, and the originally proposed route of State Highway 1 at Meremere was underwater as a result of the flooding of the Waikato River 14 months after it was changed as a result of consultation regarding Karutahi. By contrast, the revised route, chosen to avoid Karutahi’s dwelling, was not.

3 Some ontological options

Suppose that taniwha *pūrākau* do serve this kind of purpose: they encode information about natural hazards, and taking them into consideration contributes to good choices in town planning and road design. What should we say, then, about the existence of taniwha? Here are some options.

Option 1: There are taniwha, and they are just as described in *pūrākau* – water beings that act deliberately to protect and sometimes punish humans. This is a realist option that takes taniwha *pūrākau* absolutely literally. Call this *literalism* about taniwha.

Option 2: There are no taniwha, or at least we are not committed to their existence by engaging in useful practices and discourses that seem to refer to them. Just as we can use geocentric astronomy in navigation tables in order to get where we want to go without believing that the earth is the centre of the universe, so we can use taniwha *pūrākau* as indicators of flood risk and earthquake risk without being committed to the existence of taniwha. This is a non-realist option: call this *instrumentalism* about taniwha.

Neither literalism nor instrumentalism provides the basis that I am seeking for a new attitude to taniwha. Literalism takes taniwha *pūrākau* completely seriously, but it is unlikely to be a genuine option for those whose attitudes I seek to change. Supernatural water creatures that are dangerous to but in some contexts protective of humans are very distant from the posits of western science. Instrumentalism about taniwha is an option for my target audience – but since it denies that we have any reason to believe in taniwha, adopting instrumentalism would be a failure to take the content of taniwha *pūrākau* seriously.

Instead, I propose a middle ground.

Option 3: There are taniwha, but they are not in all respects as described in *pūrākau*. They are not, or not solely, powerful water beings. Rather, at least in part, taniwha are natural hazards, and the name of a particular taniwha might be a name for, for example, the propensity to flooding of a particular river at a particular point.

Option 3 is worded as a realist option: there *are* taniwha, though they are not exactly what they initially appear to be. I will consider below the objection that Option 3 is not genuinely realist. First, however, I will present an argument for adopting Option 3.

Many of those who are not within *te ao Māori* will find literalism impossible or at least very difficult to adopt. Sceptics about the supernatural cannot take taniwha *pūrākau* literally; supernatural water beings are thoroughly anomalous given everything else they believe in. These sceptics are my main target here, but people who face different barriers to belief in taniwha—for example, theists who are comfortable with ontologies populated by supernatural beings but who have no connection with *te ao Māori*—might also be amenable to this approach.

I assume that in a bicultural nation, we should try to avoid both the kind of mockery evinced in the media response to Karutahi and the merely tolerant and potentially patronising response of John Key to Horotiu. I propose Option 3 as an attitude towards taniwha that might be adopted by Pākehā who *want* to take taniwha seriously but have difficulty seeing how to do so.

The move from “The world would be a better place if we believed X” to “We should believe X” is not usually a legitimate move. What makes it the case that we should believe something, in general, is that we have good evidence that it is true. Nevertheless, I argue that we should regard taniwha as real—and the social benefits of doing so play a key role in the argument.

4 The argument, with objections and replies

As I have said, my argument is directed towards a particular audience – others will have other reasons for believing in taniwha. This situation is not unusual: when you are trying to convince someone of something, you should start from premises that there is some chance that they will accept, and what those premises are will depend upon who it is that you are trying to convince. Here is the argument:

P1. Taniwha pūrākau serve an on-going practical purpose.

P2. If taniwha pūrākau serve an on-going practical purpose, that licenses regarding taniwha as real.

P3. Regarding taniwha as real is a small step towards respecting te ao Māori.

P4. We should respect te ao Māori.

C. We should (if we can, and unless we have some other attitude to taniwha that is at least equally respectful towards te ao Māori) regard taniwha as real.

Note that P3 does not claim that regarding taniwha as real is the only way to respect *te ao Māori*, only that it is one way to do so. My aim is to propose a path towards genuine respect, in the hope that some may find it useful. I will expand upon the argument by considering and responding to some possible objections.

Objection 1: The first two premises are not doing any work. If regarding taniwha as real is a good way to respect te ao Māori and we should respect te ao Māori, then we should regard taniwha as real. Our respect for te ao Māori should not be contingent on our finding mātauranga Māori useful.

Reply: “Regarding taniwha as real” amounts to believing that taniwha exist—and people cannot simply form a particular belief because they have decided that it would be good to have it. Belief doesn’t work like that. I might think that it would be good if I believed in the Judaeo-Christian God, because a cost–benefit analysis shows that the expected utility of believing massively outweighs the expected utility of not believing. However, if I don’t see any evidence that God exists, I cannot just decide to believe in God.¹⁰ I might think that it would be good for intercultural respect in Aotearoa if everyone believed in taniwha, but even if I can convince everyone that it *would* be good, that won’t make them believe in taniwha. We believe things on the basis of evidence (though what we count as evidence, what evidence we notice, and how we weigh evidence is influenced by many factors including our worldview and our cognitive biases).

The role of the Hikuroa account of the usefulness of taniwha *pūrākau* is that, if true, it provides indirect evidence for the existence of taniwha. We believe that there are electrons because electrons are a key element of the best available explanation of why our lights come on at the flick of a switch and why our car door handle occasionally gives us a small electric shock. Electrons are explanatorily and predictively useful. Likewise, if taniwha *pūrākau* help us to predict flooding and earthquake damage, that provides some evidence that there are taniwha. It does not, of course, settle the question. I take it that the practical usefulness of a theory *licenses* regarding the entities it posits as real, but that it does not compel us to do so. In the philosophy of science, the question of whether we should be realists or instrumentalists about the entities posited by our most successful theories is a live issue.¹¹

The usefulness of taniwha *pūrākau* does not guarantee that there are taniwha—but my suggestion is that it makes it permissible for those who generally have a western

¹⁰ Pascal (1670) argues that in the absence of decisive evidence either way, we should believe in God for reasons of expected utility. Some commentators (see Hájek (2017) for an overview) have made the point that we cannot get ourselves to genuinely believe in something merely by deciding that it would be prudentially useful to do so. For my purposes, this is the key point: belief is not voluntary in this sense. That said, it is worth noting that Pascal’s view is that an unbeliever who wants to believe can take steps that will make it more likely that they will come to do so. Acting as if you believe—going to church, singing hymns—may lead in the end to genuine belief. That is to say, although belief-formation is not voluntary, we can choose to behave in ways that will make us more open to coming to believe a particular thing, and if we do come to believe it, the genuineness of the resulting belief is not undermined by the (indirect) role played by prudential considerations in its causal history.

¹¹ See for example Ladyman (2002), pp.129–130.

scientific perspective to believe that there are. That is to say, the “licensing” mentioned in P2 is important. We cannot just decide to believe in taniwha and then do so—we need reasons to believe that are grounded in suitable evidence. Those who are within *te ao Māori* already have reasons to believe in taniwha. The Hikuroa project, if successful, provides reasons to believe in taniwha for those who are not, showing along the way that taniwha do not necessarily clash with a western scientific worldview.

Objection 2: Option 3 is not actually a realist option. Someone who adopts Option 3 does not genuinely regard taniwha as real.

I will consider two versions of this objection. Objection 2a suggests that Option 3 is non-realist because it is a kind of eliminativism about taniwha. Objection 2b suggests that it is non-realist because it is a kind of figuralism about taniwha.

Objection 2a: Option 3 actually amounts to eliminativism about taniwha. Taniwha are supernatural water beings, and an advocate of Option 3 believes that there are no supernatural water beings. Therefore, they must also believe that there are no taniwha.

Reply: In other areas, an important (perhaps the most important) argument for eliminativism about the entities referred to in some discourse is that the discourse isn’t useful – see, for example, Paul Churchland’s arguments for eliminativism about the posits of folk psychology (Churchland, 1981, pp.72–76). But taniwha *pūrākau*, I am suggesting, are useful.

Consider the commonsense attitude to rainbows and to solid surfaces, in the light of scientific findings that these things are not exactly as they appear. When science tells us that rainbows are rays of sunlight diffused by water and that solid surfaces have lots of gaps in them, most of us do not cease to believe in rainbows or in solid surfaces—we just modify our view of what they are.¹² Likewise, I suggest, with taniwha. We can be neutral about whether there are any supernatural entities and still think that there is something that, so to speak, fills the taniwha role.

Objection 2b: Option 3 might instead be labelled figuralism about taniwha. If you don’t think that there are any supernatural water creatures, and taniwha are supernatural water creatures, then when you talk about taniwha you are speaking figuratively or metaphorically. Figuralism, however, is generally regarded as a non-realist position. In what sense, then, are you endorsing realism about taniwha if you adopt Option 3?

Reply: Figuralism does on the face of it seem to fit neatly with the way I am proposing to regard taniwha, but on closer inspection, it is clear that mine is not

¹² Among others, Howard Sankey ((2001), pp.42–44) defends the compatibility of commonsense realism and scientific realism.

a figuralist position. Here is an illustration of how figuralism works. If we say, “Sally made friends with the butterflies in her stomach,” we are not speaking literally. There are no actual butterflies involved. Nevertheless, “the butterflies in Sally’s stomach” refers to something—Sally’s nervousness—and the claim is true if Sally has learned to cope with her nervousness, false otherwise (see Kroon et al. (2018), pp.211–214).

The parallel story about taniwha would go like this. When we say that the taniwha at Matatā flicks its tail back and forth, we are not speaking literally: we are not making a claim about the tail of an actual taniwha. Nevertheless, “the taniwha’s tail” refers to something—the path of the river—and the claim is true if the path of the river shifts back and forth, false otherwise. The literal content of the claim is not its real content—a hearer who says the claim is false because there is no huge water creature in the riverbed flicking his tail back and forth is not understanding what is being said.

This is *not* in fact what I am saying about taniwha. To see why, consider the *kaumatua* (respected elder) who asserts that the marae must not be built just here, because if it is it will fall victim to the flicking tail of the taniwha. If the *kaumatua* takes himself to be speaking literally, no-one should dispute that he is doing so. But if taniwha talk was like butterflies-in-the-stomach talk, that would be an appropriate move—if someone thinks that when they say “I have butterflies in my stomach,” they are making a claim about insects in their stomach, then we should correct their mistake.

Again, there is a view of the relationship between the scientific and the everyday view of solid surfaces that provides a better parallel. Both views are correct. For most purposes, it is completely irrelevant that a solid surface consists of mostly empty space, and someone who objected to the claim that the tabletop is solid on those grounds would be being pedantic. We can choose which features of the tabletop to focus on, depending on our interests. Likewise in the case of taniwha. One of the features of taniwha is their connection with natural hazards. I suggest that Pākehā might choose to focus on *this* feature of taniwha, at least to start with, in the interests of beginning to come to take taniwha seriously.¹³

Objection 3: The real/unreal or fact/myth distinction is not in keeping with tikanga Māori. The ontological options presented above encapsulate a western

¹³ This approach to taniwha has some affinities with a methodological strategy suggested in Dyke (2008). Heather Dyke sets out the standard range of positions in a generic realism/antirealism debate and points out that there is an overlooked alternative:

There are many ways in which we can truly describe the world, and many of those ways are not reducible to any other ways of describing the world, but just because this relation obtains between our descriptions, it does not follow that there must be a unique feature of the world that corresponds to every true description of it.

The alternative is to see that there can be some portion of reality that can be described in many different ways... That portion of reality can be described as, for example, a collection of atoms, a collection of molecules, a living organism, a sentient being, a conscious being, an intelligent being, a rational being, a moral being, and so on. Each of these descriptions, let us suppose, applies truly to some one portion of reality, just in virtue of the way that portion of reality is. (Dyke, 2008, pp.185–186).

way of thinking about narratives and about existence. According to this way of thinking, some narratives are factual, and some are just stories, even if they are stories that we can learn from. As a result, some things referred to in narratives are real, and some are made up. However, other traditions may not draw these distinctions. If the real/unreal distinction and the fact/myth distinction are foreign to te ao Māori, isn't it a failure of respect (the very thing we are trying for) to apply them here?

Reply: It is important to note that I am not trying to impose these ways of thinking on anyone to whom they are foreign. My target audience are outside of *te ao Māori*, and I am suggesting a way of beginning to take *taniwha* seriously that they might be able to manage, despite their epistemically disadvantaged starting point (disadvantaged with respect to *taniwha* in particular and *te ao Māori* more generally).

Hauti Hakopa writes that “Māori knowledge... needs to be interpreted with a cultural lens so that it does not lose any of its *mana* (authenticity, integrity) or *tapu* (sacredness)” (Hakopa, 2019, p.11). It may not be possible, at least not straightforwardly, to do this from outside *te ao Māori*: what I am suggesting is a first step towards a partial understanding of *taniwha*.¹⁴ Even if it is successful, the outsider will not be thinking about *taniwha* in exactly the same way as someone who operates within *te ao Māori*. I hope, however, that she will have reached a level of understanding and respect that is an advance on the attitude that *taniwha pūrākau* are mere stories that we nevertheless have to take into account when planning new roads. I hope also that my strategy might move the well-intentioned outsider to a position from which ways of achieving a deeper understanding might come into view.

*Objection 4: Myths in general might be thought of as a way of passing on information – for instance, information about origins, ancestors, family relationships, personality types, food and water sources, hazards, or geography. Yet we don't think that Narcissus, who is doomed by his self-admiration, is real, nor the Sirens, who lure sailors to their deaths. Their stories are cautionary tales. We don't need to think these stories are true in order to get the message. Why should we regard *taniwha pūrākau* differently?*

Reply: One response is that there are plenty of myths that it *would* make perfect sense to think about in the same way as I am suggesting we think about *taniwha pūrākau*. Scylla and Charybdis, for example, are hazards (a whirlpool and some rocks, respectively) that sailors in ancient times needed to steer between as they navigated the Straits of Messina. The whirlpool and the rocks are real, and we know where they are. We do not now personify them, but we should still steer between

¹⁴ See also Evans and Kingsbury (2022) for a discussion of why it is difficult to achieve understanding across a cultural divide, and how nevertheless overlap between *te ao Māori* and the so-called western scientific worldview might facilitate partial intercultural understanding.

them, if we are trying to navigate the Straits of Messina. They can be regarded as real, in just the same way as taniwha can. Note, however, the absence of the kind of social reason to choose this way of thinking about them that I have suggested is present in the taniwha case. Scylla and Charybdis are not integral to the worldview of any present-day community.

Another response is that myths, considered as useful repositories of knowledge, have mostly passed their use-by date. We have psychology now, which includes and expands upon the information about personality types and the consequences of different kinds of behaviour that is contained in myths such as that of Narcissus. We have navigational charts to remind us where the rocks and whirlpools are. Hikuroa and others¹⁵ suggest that taniwha *pūrākau*, in contrast, are of current use.

Objection 5: Even if taniwha pūrākau are of current use, we have other ways of acquiring the knowledge they provide. That undermines the proposed reason for believing in taniwha. Town planners have information about flood plains and flooding patterns, gathered independently of taniwha pūrākau. When you get a Land Information Memorandum for a property you are thinking of buying, it tells you about risks such as these. One might think that all of the knowledge about hazards that we get from taniwha pūrākau is in principle accessible by present-day analysis of such things as sedimentary strata, soil type, topology, climate, and hydrology. If these risks can be predicted without the use of taniwha pūrākau, then the successful prediction of them using taniwha pūrākau doesn't give us any reason to believe in taniwha. We already believe in rainfall and topology and hydrology. If those things suffice to explain and predict natural hazards, then it is not reasonable to believe in taniwha solely because they explain the same natural hazards.

Reply: Data gathered by looking at the current state of the land and the weather does not suffice for hazard analysis. Hazard analysis also involves looking at historical information, for example about past flooding and weather patterns over decades or even centuries. Locating your *marae* by paying attention to taniwha *pūrākau* is a way of looking at the history and bringing it to bear on present-day hazards. The Matatā taniwha *pūrākau* is a distillation of the history of flooding in the area. Part of Hikuroa's point is that *pūrākau* extend our historical reach—the records kept by what used to be the Department of Lands and Survey go back to 1876, but *pūrākau* go back much further.

The case of Matatā is illustrative. The *marae* were well-situated to avoid flooding; many other buildings whose construction was not informed by taniwha *pūrākau* were not. This is one example among many: see King and Goff (2010) for a wider-ranging discussion of the contribution of *pūrākau* to knowledge of past extreme disturbances and thus to knowledge of present risks. We have knowledge via *pūrākau* that it is difficult, if not impossible, to get in other ways.

¹⁵ See for example King and Goff (2010) and King et al. (2020).

Objection 6: The evidence on the usefulness of taniwha pūrākau is not yet in.

Reply: We have looked at some examples of cases in which paying attention to taniwha pūrākau has been of practical use—the Matatā floods are one case, the enhanced safety of the rerouted SH1 at Meremere is another—and there are plenty more. Work is on-going on the project of mapping the settings of taniwha pūrākau against the locations of natural disasters (see for example King et al. (2020)).

Some taniwha pūrākau describe tsunami events that pre-date written records (King and Goff (2010); King et al. (2017)). In 2010, King and Goff (2010, p.1938) noted that “[t]he use of pūrākau to guide scientific hypotheses and geophysical research remains an important opportunity to help determine the timing, magnitude and character of extreme hazard episodes along the A/NZ [Aotearoa/New Zealand] coastline over the past 1000 years.” This promise is being fulfilled: in the New Zealand Palaeotsunami Database, maintained by the National Institute of Water and Atmospheric Research (National Institute of Water and Atmospheric Research [NIWA], 2017), taniwha pūrākau are one of the sources of evidence cited, alongside sedimentary and geomorphic evidence (Wilkinson et al., 2020). In many cases, the different sources of evidence converge, with the encoded ancestral knowledge contained in taniwha pūrākau coinciding with geophysical evidence of historical and ongoing natural hazards. Other items in the database are currently supported only by pūrākau, and this serves as an impetus and guide to further geophysical research.

Clearly there is more research to be done here, and that research is underway. However, the evidence that is already in provides some reason to take a realist attitude to taniwha, and given the potential social benefits of doing so, I suggest, provisionally, that we should. I have used the work of Dan Hikuroa on the usefulness of taniwha as indicators of risk as a way in – a first step towards taking taniwha seriously. I hope some of my readers will accompany me, and that having taken this first step, we might then be in a position to see ways of taking taniwha even more seriously, and perhaps also ways to take seriously other aspects of *te ao Māori* that have previously seemed inaccessible to outsiders. If the suggested gradual approach to changing our way of thinking works in this case, perhaps some version of it may be applicable in other bicultural and multicultural contexts as well.

Glossary of Māori terms

The pronunciation guide below is only approximate: it is intended to give a rough idea of how the Māori terms in this paper are to be pronounced. A macron over a vowel indicates a long vowel sound. “R”s are slightly rolled. Most of these definitions and pronunciations are taken, with minor modifications, from Wilkinson et al., 2020. Words in *te reo Māori* are generally pluralised by changing the surrounding definite articles, possessives etc., rather than by changing the word itself: e.g. *te hapū* = the subtribe; *nga hapū* = the subtribes.

Term	Pronunciation guide	Translation
Aotearoa	Ow-teh-a-roar	Originally referred to the North Island, now used as the Māori name for New Zealand
Hapū	Hah-poo	Subtribe, clan, section of a large kinship group
Kaumātua	Co-mah-too-a	Elder; person of status in a kin group
Mana	Mah-nah	Authenticity, integrity, authority
Marae	Mar-aye	Courtyard and complex of buildings at the centre of tribal community life
Mātauranga Māori	Muh-tow-ruh-nguh Mah-or-ree	Māori knowledge, incorporating traditions, values, concepts and world view
Pākehā	Pah-keh-hah	Non-Māori New Zealander (European descent)
Pūrākau	Poo-rah-co	Oral record or history, in narrative form
Tangata whenua	Tah-ngah-tah fen-oo-ah	The people of the land
Taniwha	Tah-knee-fah	Powerful supernatural creatures in Māori tradition, often taking the form of serpents or water monsters
Taonga	Tah-or-nga	Treasures, culturally valuable resources
Tapu	Tah-poo	Sacred
Te ao Māori	Teh ow Mah-or-ree	Māori world view
Te reo Māori	Teh reh-or Mah-or-ree	The Māori language
Tikanga Māori	Tee-kah-ngah Mah-or-ree	The Māori way of doing things (includes custom, etiquette, method, lore, protocol)
Wahī tapu	Wah-hee tah-poo	Sacred places

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