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Thana-technology and māori grieving protocols: mapping changes and forecasting disruption in Aotearoa New Zealand

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ABSTRACT

Aotearoa New Zealand possesses distinct death cultures that include introduced norms of European burial customs and the preservation of Māori tangihanga. This research set out to explore the impact that emergent grief and bereavement practices mediated and performed online are having on customary values and practices (tikanga). Set against traditional wisdom and knowledge that values connection as manifested through shared experiences, physical presence, and mutual vulnerability, Aotearoa has observed an increasing post-pandemic tolerance and acceptance of digital participation and virtual presence, representative of global cultural adjustments to grief and memorialisation practices. Our project sought a barometer of small nation attentiveness to the creep and coloniality of death tech and thana technological advances for the challenges they pose to domestic and digital sovereignty. This paper explores how thana-tech promotes practices that for tangata whenua (people of the land), alter and relax what has traditionally been considered tapu (sacred and subject to strict protocols).

KEYWORDS

Tangihanga; images; taonga; tikanga; data sovereignty; digital afterlife

Introduction

While colonisation brought European funeral practices to Aotearoa New Zealand superseding Māori death practices such as environmentally sustainable urupā tautaiao or natural burials (McNeill et al., 2022), culturally and spiritually informed tangihanga or 'process of mourning' (Moorfield, 2001, pp. 88–89) did prevail empowering Māori to maintain tikanga (customary values and practices). Described as the 'ultimate form of Māori cultural expression' (Nikora et al., 2010, p. 400), tangihanga represents a 'complex of culturally defined mourning practices and rituals' (Nikora & Te Awekōtuku, 2013, p. 170). The types of manaaki (care and support) performed in response to the 'rupturing of community and disruption to wellness caused by death' (Edge et al., 2011, p. 2) to this day remain intimate, involving whānau pani (bereaved community) in post-mortem care of the tūpāpaku (deceased) in protection of their wairua (spirit) until nehu (burial) (Higgins, 2011). Tangihanga incorporates a broad range of social rituals that accompany loss and

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grief, such as 'pōwhiri (welcome ritual), tangi [weeping], whaikōrero (oratory), haka (posture dances), waiata (song, dirge), whakapapa (genealogy), poroporoaki (farewell speech) and karakia (prayer)' (Nikora et al., 2010, p. 401). Additionally, hākari (feasting) remains an essential part of tangihanga, allowing whānau pani (bereaved relatives) to be welcomed back into everyday life among the living.

Beyond immediate funerary rites, tangihanga also comprise an extended range of grieving processes such as those observed in takahi whare (cleansing rituals for the home and possessions) or hura kōhatu (unveiling of the headstone). Some iwi (tribes) practice kawe mate (carrying of the dead) beyond the occasion and event of a burial. This can include the practice of bearing the wairua (spirit) of a kaumātua (respected elder) at subsequent tangihanga or hui (gatherings) giving them a lived presence in these moments while also allowing open expression of the ongoing nature of grief. Pertinent to the research presented in this paper, in this rite, the wairua of the mate (deceased) is often perpetuated via the mauri (spiritual essence) of a person held in a photo (Pene, 2025). Likewise, tangihanga traditionally take place on marae (community grounds and forum for social and ceremonial practices) utilising the wharenui (ancestorial meeting houses) which display images as 'revered repositories that … reveal much about their owners, those owner's families, and the histories of [Māori] people, preceding and subsequent' (Malcom-Buchanan et al., 2012, p. 50). Such displays exemplify ancestral presence in the world of the living that are treated as taonga (treasure) 'to be spoken to, wept over, and cherished by people with genealogical connections to them' (Lythberg, 2015). This research set out to explore how images function as 'tools that culturally mediate the experience of death and the elaboration of grief … contributing to meaning-making and the maintenance of a personal and social bond with the deceased' (Jiménez-Alonso & de Luna, 2002, p. 107). In doing, so, we set out to explore any impact the evolution of image culture is having on Māori death practices in light of the increased acceptance of processed computational photography (beyond optical capture), democratised image production and heightened levels of connectivity.

While Māori have adopted and developed distinct photographic practices, separate from those first introduced by European settlers as part of colonisation (discussed below), this paper holds a concern with the ongoing sacredness of images in the face of cultural globalisation and the routine and unfettered nature of image capture, sharing and manipulation (Hancock, 2020), and conversion of digital data within thanatechnological digital resurrection (e.g. conversational grief bots to interactive avatars; Cheng, 2025). We ask if mātauranga Māori (intergenerational knowledge systems) and mana motuhake (self-determination) are at risk from the affordances of digitisation and digital colonialism, with particular reference to emergent grief practices conducted online and increasing digital replication options on offer to the bereaved. The comprehensive adoption of pae pāpāho pāpori (social media) has been, on the one hand, assessed positively as a 'virtual marae' (Green, 2021; O'Carroll, 2013) sustaining kinship relationships, language and cultural practices, while others still remain cautious of digitising cultural knowledge, so it becomes editable, interactive, open and distributed (Kallinikos et al., 2010) creating risks of misappropriation and misuse (Broklehurst, 2014). Our research examines the increasingly complex relationship between indigenous knowledge and customary (bereavement) practices in light of the enchantment of te ao mariko (virtual world) that requires accounts of the manner 'Māori identity, language, culture

and tikanga … [are moving] with Māori as they navigate these new spaces' (Sciascia, 2016, p. 5).

The spiritual power of images

Commonly in te ao Māori (the Māori world) the practice of capturing and using a person's image demands thoughtfulness, courtesy, and respect, as it 'holds the mauri [life force or essence] of the person or object within it, making it tapu (sacred)' (Pene, 2025, para. 2). Robertson (2017) contends that Māori concepts of selfhood, and the connections between all beings are what differentiate whakaahua (photography) from the 'Eurocentric notion of photography that is sometimes segmented off from its referent' (para. 1). She explains the difference via the morphology of the word for photography:

> Whaka activates āhua. Whaka calls the word that comes after it into becoming, or being. The activity inherent in the term āhua, and expressly in whakaahua, asserts from a Māori perspective, that photographs are not dead or lifeless objects but are constantly in a process of becoming form as things with their own agency and interconnected relations in the phenomenological world which is carried by someone in front of their body. (p. 47)

Complementing traditional oral formats of knowledge recall, transmission, and transfer[1] (McRae, 2017; Mead & Grove, 2001; Tāwhai, 2013), language activist Huirangi Waikerepuru (cited in Robertson, 2017) asserts that photographic images have assumed a crucial role in performing and safeguarding cultural identity alongside 'writing stories, recording stories, recording history', adding that 'mana rangatiratanga [self-determination] is now photographic'. In making this claim, it is important to draw a distinction between (1) the early settlers' lens that 'documented colonial progress' (Wanhalla, 2024, para. 11) producing damaging 'photographs evoking romanticized ideas of Māoridom' (Thode Arora, 2018, para. 17) that fed and supported colonial agendas, and (2):

> Māori agency [that] counteracted Pākehā [NZ European] perspectives by focusing on the mana (a religious concept from Oceania which roughly translates as [supernatural] power, authority, prestige), whakapapa (genealogy) and taonga (valued heritage from the ancestors) aspects of the photographed (Thode Arora, 2018, para. 27)

Ao waho (outside world) semiotician Christian Metz (1985) identified how photographs of the deceased carry a double 'dialectically articulated signification' by recalling the dead while also reinforcing their state (of being). For Metz, the affordance of photography enables it to 'suppress' 'from its own appearance the primary marks of "livingness", and nevertheless conserves the convincing print of the object: a past presence', (p. 85). Whakapapa (genealogy) is 'firmly embedded in the Māori psyche' (Te Rito, 2007, p. 4) embodying the 'continuous lifeline from those who existed before to those living today, encompassing everything that is passed from one generation to the next' (Rameka, 2018, p. 389). This value is accompanied by a conceptualisation of time that does not leave the past behind but holds it at the forefront of consciousness where ancestors are ever present (J. Patterson, 1992; Walker, 1996). As Aikman (2015) has explained:

> When descendants gather in their [Marae] wharenui [meeting house], they are literally sheltered within the bosom of their ancestors. The internal walls of the wharenui are usually

> decorated with images of recent and distant ancestors, mapped out genealogically from whānau [family] to whānau. Upon entering … the walls are adorned with photographs of nannas, poppas, aunties, uncles, and cousins who have passed beyond the veil of death. (p. 25)

In contrast to the initial discomfort and harm caused by colonial photographic portrayals of tāngata whenua (people of the land), such as those that perpetuated the tropes of 'dusky maiden'[2] or a 'dying race', positive accounts have been offered of Māori acculturation into portraiture (Blackley, 2018). As Dudding (2003) notes, Māori first viewed photography with distrust out of 'fear that a person's mauri [life force] would be captured or damaged in the process' (p. 8). However, she explains that Māori went on to commission portraits precisely due to their retention of the subject's mauri leading to portraits becoming 'treasured items to people who know the subject, especially after their death' (p. 8). Blackley (2018) also highlights how Māori patronage of studio photographers produced formal portraits that have gone on to assume the status of ancestral treasures (taonga tuku iho) which are passed on with care from generation to generation (Ellis & Robertson, 2018). It is also the case that indigenous photographers have developed 'distinctive understandings of the power dynamics of image making, questioning who holds the camera' (Ellis & Robertson, 2018, p. 240), in doing so asserting visual and photographic sovereignty beyond colonisation.

Material images that occupy the status of taonga are now incorporated into the aesthetic systems of traditional marae wharenui (meeting house), thus demanding care and preservation[3] (National Library, 2025). Despite the vulnerability of the materiality of photographic prints, the Marae constitutes a culturally safe spaces as 'physical manifestations of identity and belonging' (Lee-Morgan et al., 2023, para. 2). In wider Aotearoa New Zealand culture, there are examples of protocols being developed for public sites (e.g. museums) that also give expression to cultural identity in order to avoid colonial imagination and impulses (Hills & Middleton, 2023) dictating exhibition, on the one hand, and avoiding neglect of the cultural, spiritual and historical significance of images as taonga vital to spiritual wellbeing, on the other.

Rangiwai and Enari (2023) have outlined a Māori worldview perspective on post-mortem photography in light of the widespread habituation and presence of camera-enabled technologies and increased tolerance for live streaming funerals (O'Carroll, 2015; Riley et al., 2024). They reinforce how, in te ao Māori (the Māori world), tangihanga increases tapu (spiritual restrictions) requiring a 'change in behavior from the observers or participants in a ceremony' (Mead, 2003, p. 65). Under such conditions, Rangiwai and Enari (2023) claim 'post-mortem photography among Māori is, almost universally, unacceptable' (para. 12). Studies conducted on Aotearoa's death cultures conducted during the now elapsed era of organic social media and a human-centric web concluded that not only does tangihanga 'offer healing pathways at times of crises and death for both Māori and Pākehā [NZ European]' (Ritchie et al., 2013, p. 121) but also recommends the reclamation of death from 'funeral homes back into communities where people lived and celebrated life' (Nikora & Te Awekōtuku, 2013, p. 171). Indeed, O'Carroll (2015) research on virtual tangihanga went on to reveal how the 'pararitual' (Flynn, 2023) can leave mourners disconnected or 'spiritually empty' citing a participant who was 'unable to feel or connect to the *wairua* of the deceased through the computer' (p. 204). Beyond

virtualising of traditional protocols, tangata whenua are also facing unprecedented levels of cultural penetration and contraventions to tikanga, which not only require new agreed 'normative systems' (Mead, 2003, p. 6) but also wider protective measures given the 'threat of data colonialism posed by corporate digitization projects' (Spano & Zhang, 2025, p. 167). As Karaitiana Taiuru (2025) observes:

> The Treaty [of Waitangi] relationship between Māori and the Crown provides a constitutional foundation for Māori governance over digital taonga. However, current AI development largely excludes Māori participation and disregards tikanga Māori and Te Tiriti [the Treaty]. (para. 6)

Our research set out to explore the perspectives and experiences of bereaved New Zealanders for their experience in light of the increasing scope of contemporary digital griefscapes now mediating grief, together with awareness of developments in providing 'ongoing relationships with the dead' (Bassett, 2022, p. 1).

Methodology

The research focused on emergent online death practices by exploring the extent to which they replace, intersect, and/or supplement more established traditional, cultural, or industrial grieving practices in Aotearoa. We focused initially on gathering data on existing levels of participation and utilisation of social networking sites (SNS) in grief, exploring the 'role of social media in democratising death' (Schafer, 2016, para. 5). Participants were selected for inclusion on the basis of whether SNS (tūhononga ā-ngahau) had played a role in a recent bereavement experience (e.g. learning of a death via social media, or using it as a platform for digital tributes or an enduring memorial space). Furthermore, the platform vernacular (Gibbs et al., 2015) of SNS digital communication (functions on transmission of images, text, and audio-visual content) created an opportunity to extend our investigation to assess participant readiness for future applications of digital remains, such as digitally reconfiguring past realities (working from the indexical nature of a photograph) to animate the dead or algorithmically informed conversations with grief or death bots impersonating the dead. Central to our concern is the way images 'culturally mediate the experience of death' (Jiménez-Alonso & de Luna, 2002, p. 108), but how they may now also be employed with the intention of continuing new bonds with the deceased. In the case of the latter, we were interested to learn whether AI resurrection has the potential to flatten the 'rich texture and variability of Indigenous thought' (Lewis et al., 2020, p. 4) within a distinct sovereign territory. Aotearoa New Zealand, like many world nations, 'lack the ability to shape AI system development and deployment at the scale of the United States or China — [and therefore] risk becoming permanent renters of external infrastructure' (Taylor & Tan, 2025, para. 2).

The appropriation of everyday online networks, activity and digital content for the purposes of mourning and memorialisation was examined via in-depth semi-structured interviews ($n = 15$) with recently bereaved (within the last 2 years) individuals (ages ranging between mid-20s to mid-60s) all based within the Waikato Region of Aotearoa, New Zealand. The sample included digital leaders and innovators from the Māori community, a grief counsellor and a funeral celebrant who were able to draw on a broad range of community experiences associated with grieving rites and the digital

realm. Our focus throughout interviews centred on experiences of the mediation of grief via pae pāpāho pāpori (social media) and the prospect of the introduction of other emergent grieving practices (e.g. synthetic dynamic engagement) for the extent to which they meet cultural expectations around maanakitanga (respect and care), whanaungatanga (relationship, kinship, sense of family connection) but also notions of tapu (as discussed above). The relationship between the two lines of questioning was based on the manner in which current thana-technological advances typically draw on data from the unparalleled levels of identity expression that social media users generate.

In the context of Aotearoa New Zealand, we contend that digital afterlives demand attention for the cultural significance of digital or synthetic repositioning of the dead back 'within the flow of everyday life' (Gibbs et al., 2015, p. 257) as social actors. As Lavoie and Dempsey (2004) observed, the preservation of digital heritage is more than a technical process of 'perpetuating digital signals over long periods of time'; it is a social and cultural process that requires thorough examination.

Discussions with the bereaved

While Spelman and Dieriks (2025) reinforce 'the holistic, interconnected nature of Te Ao Māori [Māori worldview]', Sullivan (2012) argues that using and maintaining tikanga daily still poses a challenge as a 'Māori position cannot simply be plucked from history or tradition. It must be discovered' (Munn, 2024, para. 11). In reconciling these positions, our research sought to explore the experiences of the bereaved and how they may raise questions as to what feels tika (correct) in accordance with beliefs.

As expected, participants confirmed the ubiquity of social media use among tangata whenua. As one participant exclaimed, '*social media is quite a big communications platform for Māori whether you agree with that or not, or whether you like it or not it, it just is*'.[4] Comments of this nature, while not equating social media directly with settler colonialisation were connected to an awareness of the risks of digital colonisation, the extraction of user data, and the intrusion of Western cultural and algorithmic standards. Indeed, kaupapa Māori research and development (conducted by, for and with Māori) has led to the creation of *Tōku Whānau* (Walbaekken & Walbaekken, 2025) a social media app for Māori designed to combat the forfeiture of data and potential future loss of access to information. For Māori, this also relates to the understanding that: 'We know mauri exists in everything. And technology has a mauri. Data has mauri, code has mauri, because it's imbued with the mauri of its creator' (Te Whenua Walker, 2024, para. 12). The self-determination (tino rangatiratanga) to shape te ao matihiko (the digital realm) is therefore considered critical by many (e.g. organisations such as Te Matarau, Te Hapori Matihiko, Tokona Te Rakias) as it centres Māori cultural values and seeks 'equity for future generations' (Te Hapori Matihiko, 2025, p. 17).

When discussing the benefits and drawbacks of social media during the grieving process, experiences were shared of online death announcements (ODA), findings that diversify and enrich the existing research of Murrell et al. (2021). One participant drew a distinction between immediate or reactive expressions of loss or grief and an ODA by the family. As they explained:

> the official statement from the family, in my case, was via social media. But that tends to be a few days later. So we found that people would find out from like very simple things like a picture with like a broken heart emoji or like a dove emoji, they would find out from people posting on my [deceased spouse's] timeline, and they'd be saying, like, that they missed him and stuff

Public expression of bereavement in a social media context has been characterised as 'simultaneously public and private, individualistic and communal' (Murrell et al., 2021, p. 426). For our participants, the immediacy of posting as a reaction or response to news of a passing can appear unsanctioned, undermining of the authority of the immediate family to formally announce a passing and untimely in terms of the community's ability to begin 'emotional, spiritual, and psychological healing' (K. Patterson, 2015, p. 22). Private posts with public propositions spark inquisitiveness leading to social media sleuthing:

> in my experience, the ones who have died suddenly, especially young people, it becomes an investigation. If I see a picture, I will then go to their page, see when they were last active, look at their partner or their family or whoever to see what they're posting and start to see what the heck's happened

While the experiences described are conceivably common to social media users from other cultures, the implications were evaluated in terms of protocols and whānau expectations, for example:

> when I've had a phone call from a family member to say someone's passed, you have to automatically go into whatever role you take and that grieving process for that, you know, for your whānau. Whereas social media, you can kind of start to get a bit more information beyond just whatever you're told and and really process that in your own time before reaching out.

The above quotation relates to Nikora et al. (2012) outline of how in grieving processes, 'customary practices function to draw extensive networks of extended families (whānau) together' (p. 401). They outlined how culturally prescribed roles and responsibilities are assigned to whānau members immediately following a death. Once the whānau gather (hui) and reach decisions on key matters and arrangements, 'everyone [then] has a place, a duty and a responsibility' (p. 402) with 'genuinely representing the whānau's plans rather than their own personal interests' being a fundamental intention. A key issue identified by participants in our study addressed how social media accessibility and immediacy quickly accelerate notification processes, giving little time to arrange a kanohi ki te kanohi (face-to-face) communal grieving processes, for example:

> posts started coming in before immediate family were told, so the impetus to start posting to him or posting on his wall was almost immediate before we could reach the family and tell them directly.

Participants drew the investigation's attention to examples of how the use of social media for ODA activity has been imbued with greater levels of legitimacy by Māori communities in order to initiate the 'mobilization of community networks and resources as well as tangi proceedings' (Nikora et al., 2012, p. 402). In doing so, they also shifted social media use away from individualistic, person-based choices (Mayer et al., 2020), a concern raised by O'Carroll (2013) in her research on the use

of social network sites by rangatahi (young people). As one of our participants explained:

> we created a Facebook page called Ngā Tangihanga o Tainui Waka,[5] which is the funerals within the family boundary lines, so it covers from Te Kuiti all the way to Auckland. Hauraki right out to Kawhia. A wide, a wide network. But it was enough for people to understand that that was a source of where you could get information about people that have passed.

Regulation of social media use and access via administered private groups also seeks to mitigate the 'accessibility' granted to weak ties that social media fosters (Donath & boyd, 2004). For the bereaved, social media exposed positive reframing of past damaged relationships, for example:

> It's a very strange . . . to kind of spread out all these comms to the person who's lost [contact] and to see the dynamics happen in a space knowing the reality of those relationships . . . people who like there were arguments that happened and people didn't speak to him for a long time. Who were probably the most vocal on social media and continued to be. And so I would witness people trying to re not retrace what's the word where they're trying to kind of fix the relationship

Emergent practices

In the negotiated spaces of te ao matihiko (the digital realm), examples were offered of the thinking and approaches that uphold principles such as whanaungatanga (positive relationships and interconnectedness) during heightened grief processes. In the context of discussions around ODA, our celebrant (participant) remarked that:

> There's thoughts around the mihi [a formal acknowledgement or introduction used to connect people] that goes on to [an ODA] social media post or a certain photo that will be used. There's, there's requests that are made that no one else puts photos up for the time that someone is grieving for their loved one . . . Live stream has become a must at tangihanga as a space in place, for whānau to be able to reflect on the tangihanga and also private pages for them to hold on to those memories

Te Ipu Aronui (meaning vessel of knowledge) is a resource and support website designed to 'strengthen whānau capabilities regarding Māori end of life care customs' (para. 1) connected to the end-of-life research led by Tess Maoeke-Maxwell. Despite the uncertainty and differing views on the conceptualisation of anticipatory grief (Reynolds & Botha, 2006) in Western-centric research literature, *Te Ipu Aronui* outlines how:

> Whānau can experience grief at different times and phases during the older person's end of life. Particularly as the older person's illness progresses; each new loss, little and big, is mourned. For example, loss is experienced when kaumātua [elders, knowledge keepers] become unwell and can no longer work or they lose their independence and cannot drive. Whānau may experience a sense of loss when the older person can no longer enjoy their favourite foods, lose physical mobility, or suffer from mental incapacity (as with dementia). (para. 8)

In support of the meaning assigned to loss at the end of the cycle of life, our participants also highlighted social media's capacity to accommodate and acknowledge final stages of life, as the following interview excerpt illustrates:

> We're starting to adapt the process of preparation too. Facebook Group pages will go up [as] a karakia [prayer or incantation] space for certain person. When those post and those pages go up, that's indicating to the wider whānau time is coming close. And so, the name of that page will change from colloquial uplifting to 'in loving memory of' and usually that's the … that's become the assumed process that whānau have in terms of [initiating] the discussion around who lets the panui [notice or announcement] out … Who's going to write the mihi [honour the deceased]

Opening up grief spaces

The extension of camera lens technologies and the contexts to which they are now applied and circulated raised interesting considerations for our participants when considering the heightened ability to digitally tārua (duplicate) taonga, store images on the cloud, live stream events (traditional rites and rituals) and potentially grant proxy agency to synthetic agents to represent data imbued with the mauri of its subject/creator (to paraphrase Te Whenua Walker, 2024, para. 12). While all these considerations are significant, the capacity to manage and regulate them appeared to differ considerably. Consider:

> if I look at marae, specifically wharenui, where we do have photos of our, of our ancestors and deceased in the wharenui. That's, that's definitely part of our tikanga right, and the interesting thing so, so that's definitely memorial, memorialisation. That's us remembering those who have passed and we're putting up a picture of them in our important wharenui on our Marae and that's all well and good but you know, if you think about that tikanga … depending on where you're from, like what iwi, what hapū [sub-tribe], what Marae you're from will determine whether or not it's OK to take pictures of those pictures

> you go to any wharenui and any marae in the country and they will tell you "this is how, these are the rules, the tikanga, this is the process. These are the rules. That's it". "Oh, yeah. Cool. All right, sweet as" that's it.

Enactment of tino rangatiratanga [sovereignty/self-determination] at a local level appears fundamentally different from the potential impact of 'emergent global culture' (Bird & Stevens, 2003, p. 395) on everyday individual practices that imperceptibly reinforce 'cultural homogenization, language loss, and the commodification of … cultural heritage' (Taçain, 2025, para. 1). Our participants were able to identify the pervasiveness of networked and virtual media and how it has become a 'basic human right' and a vital human communications resource. One participant expressed concern that:

> whānau are not deep into thinking about where does their data get stored. Is it in the cloud or whatnot

and

> you could think about Google Drive and the various sharing, file sharing platforms that we use currently and there could be some really important taonga you know, that are sitting in these cloud infrastructures or these accounts there we need to access for whatever reason, and we just can't

At the same time, social media had recognised benefits during grief to manage and regulate communication:

> it's a way for me to let people know that I'm OK, but also to create a bit of a boundary of people not needing to knock on my door

But at the same time, there is acknowledgement that:

> when you're posting on a social media platform, you're fitting within that, the regulations of that platform, how it works, how you engage with people is a specific way. That what you're actually doing is having to adapt your cultural practices and your tikanga into that platform. And so I wouldn't say that it is genuine in that sense because it's always having to adapt and fulfil into this model

A similar dynamic was evident in the adoption or tolerability of filming and streaming tangihanga, a necessity in response to Covid-19 restrictions around attendance (well documented by Moeke-Maxwell et al., 2020; Rangiwai et al., 2021) that has maintained a level of acceptability post-pandemic as an acceptable alternative to attendance. Participants noted the substantial shift in tolerance from:

> Recording on urupa [burial]. In the past, never, never would that be ok. In the past, we'd never ever consider anyone taking photos or videos of the tupapaku itself of the deceased one.

Whereas today:

> if I'm asking them if they're OK for their loved one to be seen on a video camera on the live stream, it never comes as a delicate discussion anymore and the past, prior to COVID, I don't even think I'd ask that question

A reason for the increased tolerance was expressed as:

> I think that there's someone that's going to be highly affected if they don't get to see that face.

The above comment signals how the occasion of a tangi invigorates and spiritually replenishes the bereaved by being present and in communion (Nikora et al., 2013). Nikora et al. (2013) outline a Māori cosmological perspective, emphasising how death leads to renewal in 'spirit gathering spaces' (Nikora et al., 2013). The 'spiritual work' of a tangi therefore invites the living to assist in transitioning the spirit on its journey, in doing so, participating in the 'rhythmic and infinite process of creation' (p. 4). However, prior to the introduction of virtual tangihanga, Nikora et al. (2013) were already expressing concern with 'a certain passivity amongst our people and increases in "sideline witnessing" of ritual instead of involved participation' (p. 6). For many iwi [tribe], the restrictions placed on tangihanga attendance during Covid-19 lockdowns required whānau [family] to 'navigate cultural practices alone and some simply don't know what to do' (Wilson, Ngāti Rangi, in Wright, 2020, para. 3). For some, virtualisation appears to contribute to a further disconnect from enriching rites and rituals. Our research, however, did reveal a perceived benefit of interacting with those in virtual attendance. For our celebrant, it provided an opportunity to narrate ceremonial proceedings, adding meaning and knowledge of the customs and rituals being streamed:

> there's great opportunity to explain tikanga practices and why we do it. Why do we go to the urupa [burial ground]. Why do we go back to the marae and, and have a kai [food], so you know, just talking about the transition of state. I think if people are not mindful of it … the closure's tough

and

> I'm very aware that once we come off the mountain or come out of the cemetery and we're recording, I'm conscious to let people know go and have a kai go and do the whakanoa process,[6] and as much as, you know, you don't know if they're doing it or not

However, apprehension was detected between the broader responsibilities of community leaders regarding community health and wellbeing and the more immediate needs of grieving families, when it comes to determining the virtual extension of presence. As it was explained:

> who decides who live streams the tangi to any platform, whether it be Facebook or whatever … who makes that decision, makes the call. It's not the Marae, it's not the hapū, it's the family of the deceased. So, … they're quite different, right?

Beyond the communal journey of tangihanga, kawe mate or hura kōhatu (discussed above), participants revealed a level of uncertainty and concern with hangarau nui (big tech) platforms that acquire the power of kaipupuri (holders of taonga) over digital assets and their subsequent accessibility, addressing the balance of cultural rights against individual data ownership. To a large degree, emergent memorialisation technologies, such as AI-resurrection, posed far less of an immediate concern to participants compared to already pervasive social media and cloud storage via globalised platforms:

> really shouldn't have whakapapa anywhere … think about Google Drive and the various sharing, file sharing platforms that we use currently and there could be some really important taonga you know, that are sitting in these cloud infrastructures or these accounts there we need to access for whatever reason, and we just can't

> If we're consistently sharing them and taking them around, in terms of the data, yeah, … we're not there that terms of who owns it or how do we hold it and how can we store it, we're still at the part where "I just joined". We've just joined the discussion

Ngata et al. (2012) define the 'taonga-ness of an object, digital or otherwise' (para. 25) as the quality of the relationship. In this understanding, taonga comes from knowing and/or being 'part of its history and kinship networks'. They explain that when taonga has become detached from their stories and whakapapa, their energy diminishes 'until these connections are re-animated and the object is restored as the living face of those relationships' (para. 25). The intrinsic connection between taonga (treasures/artefacts) and their creators or originating communities demands access, yet collective rights are rarely acknowledged in data ownership policies.

Notwithstanding the sustainability and longevity of digital assets, there was recognition of the evolving nature of taonga:

> at the other end of that spectrum or the other end of the conversation is, this is a wonderful way for us to you know, provide a means for future generations to, connect in with their tūpuna, their ancestors

Interviews also revealed how recordings of a livestream or funeral videography also held a 'rewatch' value to those who were in attendance but were fully occupied in tangi[7] engaged in 'tangible symbols of grief … metaphorically "wrapped in love"' (Dawes et al., 2021, p. 524), such as 'shedding roimata (tears)' and other outward signs of respect for the

deceased and their family (H. Smith et al., 2023, p. 2). Consistent with Riley et al. (2023) who have explored varying responses and perceptions on revisiting a funeral via recording, our participants also noted a reprocessing or reconstruction of the *tangi* that occurs with watching a record of the event:

> I've touched base with the whānau and I said, "hey how's the stuff? You fullas watching it?" and they're, they're happy, you know, they're joyful about it. They're joyous. They didn't realize how beautiful things were because in the state they were at the tangi is different to coming out of it

> I requested [the tangi] was recorded . . . but that was solely for us to use as memory and more for my son to have if he wanted to, because he was too young to remember it. And also for me as well, it became something privately that when reality floated away, that I could watch and remember what happened

> during the time you're not really present. So they're able to identify people who were there, they're able to look back on words that were shared, and they're able to release little bit each time they watch it. But yeah, when does it end, and who ends it?

However, what facilitates a health grieving process for Māori (such as viewing the tūpāpaku) can become a complex matter with time:

> I've discussed with funeral homes around, there's pages that they've created on behalf of the family, and they asked the question when do you want the page to be closed? After the unveiling,[8] which is 12 months later? And that, that discussion with the whānau was, was difficult for them to, to approve of the closure. And so four years later, the page is are still floating. Four years later, you can see the face of a loved one in their casket.

Positive commentary did however circle back to the establishment of videography practices that are non-intrusive and discreet. In the case of tangihanga it was found that:

> most of it is determined by tikanga process. So if it's a karakia [prayer], they'll, they'll live stream it, but it's very rare for them to live stream nothing . . . If there's a performance, they'll live stream that, but if it's just, ha, sorry for the pun, if it's 'dead air', you know that that doesn't go anywhere. So that, that's one aspect, I guess, where we're able to have a sense of control.

Finally, in the context of the sacred duty to protect the dead and their wairua (spirit), the research received commentary on the need to honour the spiritual journey to final rest:

> that's been a part of a discussion with the kaumātua [elders] around, when do they get to rest? When do they get to be at peace? If we're consistently allowing for their funeral service to be replayed . . . We, we haven't really figured that out

This research acknowledges and directly benefits from the important mahi of thoughtful research on Māori cultural expression and community responses to grief that has undertaken the complex task of elevating Māori tikanga (customs) and kawa (protocols), in doing so, 'constructing or reconstructing a culture based on an already colonised view of what that culture was' (L. T. Smith, 1999, pp. 223–224). Based on this platform of mātauranga (knowledge) revitalisation, our research interviews were able to explore ways in which participants are exposed to the profound cultural differences between ao mariko (virtual world) and the 'pervasiveness of digital systems in local and global society' (Karamercan et al., 2023, p. 760). Of note, is the manner in which localised implementation of digital systems stands in contrast with how mātauranga has traditionally developed 'in

response to exploring, theorising and understanding at local whānau, hapū and iwi levels' (Broughton & McBreen, 2015, p. 83) – emphasising 'experiential systems' and relationship-based learning where aspects of tikanga are 'ontologically woven into the dynamics of culture' (Vercoe, 1997, p. 42). Participants in this research variously acknowledged how social media platforms, digital taonga (subject to jurisdictional risks) and disembodied presence and mediated social connection (e.g. via streaming) intersect with and affect subjectivities (Carlson & Frazer, 2020, para. 2).

Participants in this study openly discussed emergent tikanga practices associated with the use of SNS leading up to, and following, a bereavement. This was evident in reflections on the impact of sudden, unrestricted and unfiltered ODAs and commentary on conscious efforts to coordinate posts and prepare for a death while a whānau member is between two realms (Yates, 2023). Examples were also provided of how platform affordances were being exploited to utilise closed or specialist SNS groups to create authentic channels for genuine information sharing within iwi or regions. Similarly, with streaming or videography practices, examples were provided of tikanga that 'ensures tapu … that ensures mauri, so spirit is still spirit, and so [Māori] are still Māori in this shifting world' (Keepa in Harawira, 2021, para. 3). It has been important for this research to acknowledge how tangihanga tikanga can be different for different iwi and hapū, and note how some of the biggest challenges remain associated with whānau adoption and incorporation of SNS communication and identity expression. For researchers like Wiremu Manaia (2026) the concept of 'digital divide' is being reconsidered as 'no longer just about access to devices or the internet. Increasingly, it is behavioural, emotional, cultural, and psychological – shaped by how technology affects attention, relationships, identity, and wellbeing' (para. 28). While Ka'ai-Mahuta (2019) has argued that Māori 'embrace new opportunities to ensure cultural continuity and the intergenerational transmission of knowledge' (p. 25), its individualistic (over collectivist) values demand caution for its potential to supplant modes of communal interaction and cultural transmission.

Conclusion

Māori digital leaders are performing important mahi (work) in drawing public attention to how Māori communities might be being 'left behind' with the speed and proliferation of AI application and use, producing a 'double skills gap' associated with both understanding and adoption (Timutimu, 2024, para. 2). While AI is beginning to shape thana-technology globally, offering interactions with data-driven synthetic personas, our research took an important step back to focus on the status of image and data as taonga and explore the implications of incorporating social media practices to announce and mobilise community (Murrell et al., 2023) and perform virtual memorialisation.

Distinct from the many collective accounts of Māori cultural perspectives that can offer generalised accounts of Te Ao Māori (Māori worldviews) overriding localised iwi-specific approaches and generational differences, this project is grateful to our participants for sharing their personal experiences and perspectives on their encounters with emergent grief practices and their willingness to also voice tensions caused by increasingly individualised mediated practices that empower

individuals to bypass traditional invitation, direction and protocols. As Te Whenua Walker (2024) has commented with respect to technology, Māori 'bring values and world views to the discussion that aren't always considered' (para. 5) addressing what Lewis (2020) has described as a 'lack of epistemic diversity within the technological milieux' (p. 17). While there is little hope of reversing the conditions for present-day creation and circulation of images, there is increasing recognition within smaller nations for modes of technological sovereignty which places the deployment and control of mauri as data 'hands of domestic actors' (Chavez, 2025, para. 7).

Notes

1. Ranging across *whakataukī* (proverbs), *maramataka* (lunar calendars), *karakia* (incantations), *pepeha* (self-introduction), *whakapapa* (genealogy), kupu whakarite (metaphors), *kōrero* (prose), *pūrākau* (narratives that contain philosophical thought and worldviews) and *waiata* (song and chant)
2. Describing the ways 'Polynesian women have been framed as objects of desire and as access points to the appropriation of land and resources' (J. Smith & Nalangi McDougall, 2015, p. 146)
3. Image formats range widely from daguerreotype, silver gelatin prints, hand coloured, albumen prints and opaltype (or milk glass).
4. Given the close nature of the community from which participants were drawn, participant views are not labelled with identifiers that may disclose individuals.
5. Other similar pages can be found on Facebook grouped by *iwi* (e.g. *Ngā tangihanga o Tūhoe*, indigenous to the *Te Urewera* region in the eastern North Island) or confederation of Māori iwi (tribes) found within a particular region of Aotearoa New Zealand.
6. *whakanoa* refers to a spiritual cleansing ritual in order to remove *tapu* (sacredness). Because death is heavily associated with the spiritual realm, the deceased and the cemetery are considered *tapu*; *whakanoa* rituals lift this sacred restriction so the bereaved can return to everyday life safely
7. As H. Smith et al. (2023) explain, *tangi* is an emotive verb, meaning to weep, to cry in grief, or to mourn (p. 2).
8. Reference to the formal unveiling ceremony (*hura kōhatu*) of a headstone that marks the end of an official mourning period (*te tau*)

Author contributions

CRediT: **Gareth Schott:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing; **Alroy Walker:** Writing – review & editing; **Missy Mooney:** Investigation, Methodology, Writing – review & editing.

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