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The Impacts of Contemporary Embalming Practices on Tikanga Māori

“The problem of death is strictly connected with
the meaning of life”

(Palermo & Gumz, 1994, p. 397).

Introduction

When Māui, in the form of a mokomoko, attempted to enter the sacred portal of Hinenuitepō, the goddess of death, in an attempt to achieve immortality, but was instead fatally crushed by her thighs, we are reminded forever that death is invariably part of life. When a Māori person dies, more often than not, a tangihanga at a marae ensues. In preparation for the tangihanga, Māori have become accustomed to taking their dead to a funeral home to be embalmed. Embalming is a chemical process whereby the corpse is sanitised and preserved which allows the whānau to proceed with the tangihanga, while maintaining a *dignified image* of the deceased. However, traditional Māori death customs were very different. The tūpāpaku was positioned seated, with knees drawn up to the chest, the arms embracing the legs, head facing forward. The corpse was addressed as though still alive and the ceremonial speakers stood to speak and face the decedent directly (this is of course still the case today, though the body is reclined). Following a traditional tangihanga, the corpse was *disposed of* in such a way as to allow the flesh to rot away. The bones were

then prepared, by a tohunga, for the hāhunga ceremony where they were displayed, followed by secret interment in a cave, tree hollow, or other location. This article will first discuss traditional Māori death customs. Second, it will outline the modern process of embalming and will describe the implications of this process for tikanga Māori. Last, this article will discuss two particular cases where embalming was not employed and how the alternative techniques used relate to tikanga Māori.

Traditional Māori death customs

The word tūpāpaku is used by Māori to mean a dead body or corpse. However, the word tūpāpaku, in a literal sense, means to stand shallowly (Williams, 1971). This term really refers to the position of the corpse with the knees drawn up to the chest with the arms around the legs (Buck, 1949). When a person in Māori society died, it was the obligation of close relatives to prepare the body for the funeral rites; the body - anointed with shark oil, and sometimes kōkōwai - was bound into a sitting position with the knees up to the chin and the arms wrapped around the legs (Oppenheim, 1973). According to Elsdon Best (1934) the "...trussing of the body of the dead was a very far-spread custom - indeed, a world-wide one" (p.107).¹ With regard to the position of the corpse, Best (1934) states:

The knees were drawn up until they touched the body, then held in that position by means of a cord passed round both.² The body was covered with superior garments; the hair was combed and oiled, and arranged, being adorned with plumes. Tufts of snow-white albatross-down were used as ear-ornaments. The face would probably be marked

¹ Many cultures around the world positioned their dead in this way. Stone Age skeletons have been found in this position (Breuil & Lantier, 1965) as well as in other places such as Hawai'i (Buck, 1949).

² According to Buck (1949) to achieve this position it is likely that the body was positioned in this way before rigor mortis set in.

with red paint, and a pendant suspended from the neck. The corpse was then ready for the lying in state - or, rather, it was a sitting position that the trussed body was placed in (p. 107).

Cruise (1921[1823]) comments on a corpse seen in 1821 in the Bay of Islands:

The body was at first enveloped in mats, but Korokoro raised it out of the canoe and stripped it. The temples were bound with a chaplet of leaves and the hair was ornamented with the feathers of the albatross; the knees were gathered up and the head rested upon them; the abdomen had collapsed and the intestines had evidently been removed though no mark of an incision was visible and the limbs were much shrivelled from the process that had been adopted to prevent putrefaction, of which, though the person had been dead for some time, there was not the slightest appearance (p. 40).

Oppenheim (1973) argues that what Cruise describes with regard to the preservation of a corpse may be a result of the natural process of desiccation. However, Reischek (1930) provides an account of a corpse being preserved by being packed with dry seaweed and then smoked. Polack (1838) mentions the case of the corpse of a child being stuffed with flax as a means of preservation. Furthermore, Tūhoe academic, Te Wharehuia Milroy argues that tūpāpaku were in some cases preserved by smoking after removing and burying the organs, and by storing the body in certain types of tree hollows (W. Milroy, personal communication, 5 September, 2013). Polack (1838) gives the following description of a corpse in a northern area from the 1830s:

A chief after his decease is seated in state on a kind of trestle or in a canoe. Everything in the vicinity is strictly tapued [*sic*]; the body is decorated with handsome mats, reaching under the chin, that have been sent expressly by neighbouring relations. The head is richly decorated with feathers, the hair turned up, crammed into a bunch and tied with a parre [*sic*] or native riband the whole well soaked in train oil. A garland of native flowers encircle the head in the form of a coronet. Sometimes the face is covered but it is generally left exposed. It retains for some days its natural colour and shine with native rouge and oil. The posture is generally that of sitting. If the deceased has been a principal chief, sometimes the skulls [*sic*] and bones of his ancestors are honourably placed in a canoe or platform raised from the ground, and placed near the defunct, and the ossified remains of his enemies, taken in battle, at the feet (p. 72).

In terms of the display of a corpse and the objects that may have accompanied it, Best (1934) maintains:

The weapons of the deceased would be laid by his side, also any presents brought to show respect for the dead, such presents being known as *kopaki*.³ The body would be kept in this condition for days, while the mourning ceremonial was practically continuous, as parties of mourners kept arriving

³ With regard to precious objects, Best (1934) maintains: Objects of value, such as weapons and ornaments, were sometimes placed with the dead. In some cases such objects were recovered, as at the exhuming of bones of the dead. In other cases they were so deposited for ever, and such objects will occasionally be found in these isles for long centuries to come (p. 108).

from other parts of the district. Each party as it arrived would march into the village in column, and, halting in front of the body, would proceed to *tangi* for the dead. This procedure consisted of copious weeping, the emitting of mournful wailing sounds, and, with some individuals, swaying movements to accompany the wailing (p. 107).

With regard to the display of the *tūpāpaku*, Oppenheim (1973) asserts that there seems to have been a range of ways to display the remains. Rutherford, whose account may be from around 1816 (Drummond, 1908), writes about the display of a corpse in the following way:

The corpse was first removed to an unoccupied piece of ground in the centre of the village, and there placed with a mat under it, in a sitting position against a post, being covered with another mat up to the chin. The head and face were anointed with shark oil, and a piece of green flax was also tied round the head, in which were stuck several white feathers - the sort of feathers which are here preferred to any other. They then constructed round the corpse an inclosure [*sic*] of twigs, something like a birds [*sic*] cage, for the purpose of keeping the dogs, pigs, and children from it; and these operations being over muskets continued to be fired during the remainder of the day to the memory of the old woman (Craik, 1830, p. 192).

Both Cruise (1921) and Kenny (1956) claim that in some cases a temporary shelter was erected to contain the corpse, or that it was placed in a canoe. More frequently, however, the dead, especially chiefs, were displayed on the *mahau* of their respective houses (Oppenheim, 1973). In contrast, in one case

noted by Heaphy (cited in Oppenheim, 1973), following a battle at Waikanae in 1839, a dead chief was placed on the marae, while only the lower ranking people were placed on the mahau of their houses.

With regard to the tangihanga of my fourth great-grandfather, Peraniko Tahawai,⁴ ariki or high chief of Ngāti Manawa from 1864 until his death in November 1877 (Binney, 2009), Gilbert Mair (1923),⁵ who went to pay his respects to his friend Peraniko two years following his death, had the following to say, in *Reminiscences and Maori Stories*, about his experience:

Lifting my eyes to the front of the carved house, imagine my feelings on being confronted with my deceased friend Peraniko, who had been exhumed from the grave wherein he had lain for two years.⁶ The body had been carefully washed; his jet-black hair, which had grown very long, was oiled and ornamented with rare plumes of the huia and white crane. He was seated on a high structure plentifully adorned with choice mats, while his cold hand still grasped the family talisman, a greenstone mere. Death had wrought no change, nor was there the slightest odour. He had always been remarkable during life for his high

⁴ Peraniko was known as "...the renowned leader of the Ngati-Manawa tribe which joined forces with the Royal troops under Captain Gilbert Mair against the Hau Hau uprising of the Te Kooti era" ("Haere ki o Koutou Tipuna", 1961, p. 3). According to Crosby (2004), Peraniko had also been a soldier in Gilbert Mair's pursuit of Te Kooti from 1869 to 1872.

⁵ Gilbert Mair is best known as a soldier, but he was also a land surveyor; land purchase agent; te reo Māori interpreter and tikanga Māori expert, unrivalled amongst Pākehā; and one of the very few Pākehā to lead a Māori fighting unit (Crosby, 2004).

⁶ Both McBurney (2004) and Boast (2008) comment that some scepticism exists around the story of Peraniko's exhumation. However, this scepticism may come from a lack of understanding around Māori death customs and preservation techniques of that time period.

complexion, rivalling that of a half-caste, and it still appeared perfectly natural, except for slight dark rings under the eyes, which were closed as though asleep.⁷ At his feet were the faithful widow bowed in an agony of grief, and with her were the children.⁸

Hatless and with bowed head I stood for nearly three hours, deeply moved by the affecting strains of the tangi (pp. 65-66).⁹

Following the tangihanga, the flesh from the corpse was left to rot away using various means such as suspension in a tree, burial in the earth, swamp or beneath a sand dune,¹⁰ or in whatever way deemed appropriate. The bones were then cleaned and prepared for the hāhunga ceremony. Best (1934) states:

In many cases the body was buried, and every few years a *hahunga tupapaku*, or exhumation of the

⁷ According to Wharehuia Milroy (Personal communication, 5 September, 2013) in some areas like Murupara where there is an abundance of pumice in the soil, bodies were sometimes stored and preserved in the ground where the pumice acted as a means of preservation; when a body needed to be resurrected for tangihanga proceedings - which could last for weeks, months or years, depending on the rank of the deceased person - the body was removed from the earth and placed again on the marae.

⁸ I descend from the union of Peraniko and Mamae, through their daughter Riripeti. Mair (1923) stated that: "Two of their [Peraniko and Mamae] children had been baptized Te Mea and Riripeti (Elizabeth) after my parents" (p. 64). ('Te Mea' is probably a transliteration of 'Mair').

⁹ Mair (1923) noted that after much haka (posture dance) and feasting, he had been asked to join a small group of elders who carried Peraniko away to a temporary burial place, until he was taken to his final resting place.

¹⁰ In terms of sand dune burial, Best (1934) asserts: One of the easiest and most effective modes of burial was adopted in some cases by coast-dwelling folk. A body was placed at the base of a sand-dune and the loose sand rolled on to it; no burial was easier or more effective (Best, 1934, p. 108).

dead, took place. On these occasions a number of dead were exhumed - that is to say, the bones were taken up, cleansed, and taken to the village. There they were placed upon an elevated platform, and a considerable amount of ceremonial speech-making and feasting was indulged in. Different sections of a tribe would assemble at such gatherings, which were not occupied with ceremonial affairs alone, for social pleasures also entered into the programme. At such meetings also were discussed any political matters that chanced to be prominent at the time (p. 107).

With regard to the final disposal of the bones following the hāhunga ceremony Best (1934) opines:

As to the final disposal of the bones of the dead, they were conveyed to some cave or chasm far from the haunts of man,¹¹ or placed in a hollow tree. On several occasions I have come across such remains in hollow *pukatea* trees (p. 108).

This article will now outline contemporary embalming practices and will comment on the implications of these practices for tikanga Māori.

Contemporary embalming practices

Mayer's (2012), *Embalming: History, theory, and practice* is the key text on embalming used here. Mayer (2012) states that embalming has been practiced in various forms around the world for at least the last 5500 years. The modern embalming

¹¹ With regard to the secret interment of the bones, Best (1934) states: The Maori had ever a keen dread of enemies tampering with his dead. Where bitter enmity existed between two peoples, it was considered a fine thing to obtain bones of the enemy's dead, and from such bones were fashioned fish-hooks, spear-points..." (p. 108).

process, he opines, is the chemical treatment of the tissues of a dead human body as a means of preservation and sanitation. According to the American Board of Funeral Service Education, embalming is "...the process of chemically treating the dead human body to reduce the presence and growth of microorganisms, to retard organic decomposition, and to restore acceptable physical appearance" (cited in Mayer, 2012, p. 32).

When a person dies, enzymes - which come from body cells (autolytic enzymes) or bacteria (bacterial enzymes) - cause the decomposition of proteins, fats, and carbohydrates in the decedent (Mayer, 2012). Embalming chemicals deactivate body enzymes and destroy both pathogenic and non-pathogenic bacteria (Mayer, 2012). The sanitisation of the body occurs when proteins in the tissues react with embalming chemicals:

Embalming preservatives and germicides interact primarily on body proteins. The colloidal nature of the protein changes by establishing many cross-linkages that were not formerly present between adjacent proteins. The chemicals and the proteins combine to form a latticework of inert material - the embalmed tissue - that can no longer be easily broken down by bacterial or autolytic body enzymes (Mayer, 2012, p. 32).

There are four classifications of embalming: vascular or arterial; cavity; hypodermic; and surface. This article will discuss the implications of these four types of embalming for tikanga Māori.

Vascular or arterial embalming

Vascular (arterial) embalming is the use of the blood vascular system of the body to accomplish

temporary preservation, sanitation, and restoration of the dead human body; this is accomplished through injection of an embalming chemical solution into the arteries and drainage of the blood from the veins. This method of embalming can be used to preserve the entire body, large body sections, or localized body areas (Mayer, 2012, p. 33).

For tikanga Māori, vascular embalming presents a number of issues. For Māori blood, or toto, is tapu. When blood is drained out of the body, it is disposed of in the sewerage system. To remove the blood of a dead human body and to dispose of this via the waste water system is a serious breach of tikanga that has become normalised through the perceived need for embalming. However, what other options might exist? I have heard of two separate occasions where the blood from a tūpāpaku has been reserved in a plastic container and 1) transported on ice with the tūpāpaku where it has remained on-site at a marae but away from the main tangihanga proceedings and then buried with the corpse; 2) transported to the urupā before the burial of the tūpāpaku and buried. Reserving the blood and burying it in the earth with or near the tūpāpaku seems to satisfy the demands of contemporary tikanga as the blood, as part of the body, is treated with respect and dignity. Thus, the elements of the body are united in the vicinity of the urupā or public cemetery.¹² A further significant problem is that the toxicity of the embalming chemicals - and indeed most commercially available coffins - leaching into the environment, and in particular to the water table, impacts negatively on Papatūānuku and te taiao, which in turn impacts negatively on humankind as all are connected.

¹² I am unaware of the legal implications of burying a vessel containing human blood in a public cemetery. Exploring the legalities of this is beyond the scope of this article.

Cavity embalming

Cavity embalming is the direct treatment, other than vascular injection, of the contents of the body cavities (thoracic, abdominal, and pelvic) and the lumina of the hollow viscera; it is usually accomplished in two phases (aspiration and injection) using a long, hollow instrument called a “trocar” (Mayer, 2012, p. 33).

The trocar is used to aspirate gases and fluids from the body cavities. These fluids, like the blood drained from the body through vascular embalming, are disposed of via the waste water system. Some of these fluids may contain blood, which is tapu, and which therefore constitutes a breach of tikanga. I would argue too that any fluid or other materials from a corpse are highly tapu and therefore require special containment and care.

Hypodermic embalming

Hypodermic embalming is the injection of embalming chemicals directly into the tissues of the dead human body through the use of a syringe and needle (for small areas) or a trocar (for large body areas). This is generally a supplemental embalming procedure used when tissues in the adult body cannot be treated sufficiently by vascular injection (Mayer, 2012, p. 33).

Hypodermic embalming does not seem to breach tikanga Māori as such. However, the toxicity of the chemicals used in embalming procedures does contribute to the violation of

Papatūānuku, our ancient mother, from an environmental point of view.

Surface embalming

Surface embalming is preservation of the body tissues by direct contact with embalming chemicals. Preservative gels or surface packs of absorbent materials saturated with preservative chemicals can be directly placed in contact with the body tissues. Surface embalming is considered a supplemental treatment to vascular injection and is used when vascular injection is unsuccessful or impossible (Mayer, 2012, p. 33).

While the application of substances on the body does not in itself breach tikanga Māori, the toxicity of the chemicals used in embalming contributes, from an environmental perspective, to the defilement of Papatūānuku.

Embalming of an autopsied corpse

An autopsy is an invasive procedure. During this process the arterial system is damaged to the point that full-body vascular embalming is not possible. Alternatively, the body must be embalmed in sections. The process for embalming an autopsied corpse is much more complicated than for a non-autopsied corpse. The principles behind the procedure - preservation and sanitation - remain the same. The organs of the deceased are handed over to the funeral home in a plastic bag placed inside the corpse. These organs are aspirated with a trocar or cut into smaller pieces to release gases and fluids, and treated with embalming fluid (Mayer, 2012). Before the organs are re-bagged and placed again inside the body, the internal surfaces of the abdominal cavity are treated with preservative gel; preservative

powder may also be used inside the cavity prior to suturing the opening (Mayer, 2012).

With regard to tikanga Māori, flushing of blood (and other bodily fluids) into the waste water system is problematic.

To embalm or not to embalm?

I can think of no better way of celebrating the continuity of creation than becoming part of a tree in a piece of countryside destined to become a woodland, full of wild flowers, wildlife and bird song forever and ever, Amen (Bellamy cited in Inge, 2014, p. 181).

In Lynda Hannah's (2002) *Living legacies: A family funeral handbook for an evergreen world* she outlines the reasons for and the processes around natural burials. The main requirements for a natural burial is: that the body is not embalmed; that the body is buried at a shallow depth with a layer of active soil; that the body is buried in natural fibres; and that if the body is to be buried in a coffin that it is constructed of untreated, sustainable wood (Hannah, 2002).¹³

In outlining the preparation of the body Hannah (2002, pp. 78-85) presents the following processes:

- Position the body before rigor mortis sets in and if the person wore a Pacemaker, have this removed as it may explode if the body is to be cremated;

¹³ With regard to coffins, Hannah (2002) opines: From an environmental perspective coffins are something of a disaster. They are made of either man-made wood (wood pulp) materials held together by toxic glues and chemicals, or native or exotic hardwoods, which reduce the natural habitats of many species of plants, birds, insects and animals (including people), some of them at great risk of extinction. All of them contribute to climate change by their loss, and all of them (except for the burial of untreated timber coffins) add to the pollution of the air or the Earth by their destruction (p. 49).

- Empty the bladder by gently pushing just above the pubic bone, which may also result in leakage from the bowels; alternatively the orifices may be plugged with cotton wool and/or nappies, incontinence pads, and towels may be used to absorb leakages;
- Wash the body and hair carefully and anoint with essential oils such as frankincense or other blends;¹⁴ dress the body in clothing that is easy to remove as the body will need to be washed and anointed a number of times;
- Clean the teeth and wash the face, turning the head to one side to drain the fluid out of the mouth; close the eyes by holding the eyelids or placing coins on the eyelids; close the mouth by supporting the chin with a rolled-up cloth or by tying a scarf around the head and jaw;
- Be aware that the body may move or make noises;
- Use ice (melts and causes wetness) or dry ice (does not melt but rather evaporates; because of the extremely cold temperature of dry ice it may cause dampness) to reduce decomposition; place dry ice under the head, chest, abdomen, and pelvis, and also place a piece of dry ice on top of the abdomen wrapped in cloth; depending on weather conditions as much as 10kg of dry ice per day may be required; keep the room as cool as possible.

The case of Warwick Stanley Broadhead

Alex Hotere-Barnes (2015) writes of the funeral of his uncle Warwick Broadhead (1944-2015) - known to his family as uncle

¹⁴ Hannah (2002) suggests using a combination of frankincense and mandarin essential oils. However, some Māori may prefer not to use essential oils from potential food sources such as fruits from both a tikanga Māori point of view, and perhaps even from a psychological perspective in terms of the association with the scent of mandarins and a corpse.

Wow - on his blog, *Pūhā and Pākehā: Culture-arts-ideas-transformation*. Broadhead had practiced Tibetan Buddhism in one form or another for over three decades; health issues had meant that he was in mode of "...constantly contemplating the dynamic interplay of life, death, suffering and everyday beauty" (Hotere-Barnes, 2015, n.p.). In death, Broadhead's wishes were: to not be embalmed; to be dressed in white and wrapped in a shroud; to be buried at two to three feet deep; and for a kauri tree to be planted on his grave (Hotere-Barnes, 2015).

A means of superficial preservation close friends and family treated the body with natural oils such as tea tree and coconut; he was adorned with kawakawa leaves and incense and essential oils were burned (Hotere-Barnes, 2015). Hotere-Barnes (2015) states: "I realised how industrial the West has become in dealing with the dead" and that "...I and those around me are insulated from the decay of humans, and the life it provides..." (n.p.).

Without the deep, penetrative level of preservation that can be achieved with formaldehyde-based chemical embalming, coupled with hot weather, Hotere-Barnes (2015) writes that the body began to decay quite quickly and that "...it was only frankincense and myrrh that was most effective in addressing the odour of death" (n.p.). Indeed, for Hotere-Barnes (2015) this experience was "...one last teaching [from his uncle] about the impermanence of life and death" (n.p.).

Hotere-Barnes (2015), his family, and close friends of the decedent, stayed with the body for five days in Broadhead's home. He states:

Meditating and observing his body decay was amazingly transformational. I will never experience the living of the dead in the same way. Ever. It has changed how I look at my living body and those around me. The microbes, and ecosystem of the body is amazing. When we die our body become a place for other things to live. Uncle Wow wanted us

to observe this. He also wanted us to transform the attachment we had towards him. As the shock and grief oscillated inside me, I began to disassociate “his being” from his corpse. On another level, working through his wishes also meant my relationships with family and his close friends reached a new level of respect, reverence and appreciation. It was transformational (Hotere-Barnes, 2015, n.p.)

The case of Malcom Murchie

In the January-February 2018 edition of *Organic NZ* magazine a story entitled *The coolest tangi* was featured. Here, the Murchie whānau, the children of the late Malcom Murchie - Oriwia, Rehu and Winsome - recount the story of their father’s tangihanga with particular consideration given to the techniques used to temporarily preserve the body without the need for clinical embalming. The Murchie whānau followed the recommendations featured in Lynda Hannah’s (2002) *Living legacies*.

Malcom passed away in June 2017. The family washed and dressed him: “He was given an overall wash and then rubbed with Skin Kai (a blend of rongoā and oils)” (Murchie whānau, 2018, p. 56). The Murchie whānau (2018) used nappies to contain bodily excretions but they found that none were present during their father’s entire tangihanga; a rolled-up scarf was used to support his chin and coins were placed on his eyelids to keep them closed. At night Malcom was placed on ice, and each morning the body was rubbed with a mixture of coconut, lavender and tea tree oils, with a few drops of tea tree oil being placed into the mouth (Murchie whānau, 2018). “The rubbing on of the oil was an activity shared by whoever was present. His great grandchildren watched and also helped” (Murchie whānau, 2018, p. 57).

On the day of the burial “Dad was oiled and wrapped, mummy style, in two old sheets that had been torn into strips - Dad saw

no need for new material to be bought and then wasted” (Murchie whānau, 2018, p. 57). Malcom’s mokopuna dug the grave, following the instructions of their koroua that the grave be a shallow one to allow worms access (Murchie whānau, 2018). Malcom was buried by his whānau: “There was only a slight mound where he was buried. Four months later I have been informed that this mound has since disappeared and the ground is now level” (Murchie whānau, 2018, p. 57). According to the Murchie whānau (2018):

The healing part of the process started at its onset. Through holding, washing, Dad and final preparations for burial, everyone involved was able to grieve whenever they needed to. The right thing to do seemed to materialised along the way. Stories shared and waiata sung were all part of the healing process, and allowed us to honour our father in the way we loved him. One of his mokopuna said it was the ‘coolest tangi’ and we agree (p. 57).

In both of the cases above, alternative techniques were employed to temporarily preserve the dead bodies for an extended period of time. In first case, the corpse show signs of decay fairly quickly due to summer weather conditions. However, philosophically and religiously, the state of decay was accepted by family and friends as a way of detaching from the life of their loved one, and as a means of realising the natural state of a dead human body and its life-giving potential for other lifeforms and for the soil. In the second case, the use of ice at night slowed-down the decomposition of the corpse for the entire length of the tangihanga. In both cases whānau and close friends participated in the anointing of the corpses, which contributed to their collective healing. In my view, the techniques used in the two cases above are completely in harmony with tikanga Māori. My only concern might be to ensure that whatever oils are used to anoint the body are not

commonly associated with kai such as mandarin or orange for example.

It is clear that contemporary embalming practices present a number of problems for tikanga Māori especially with regard to the disposal of the blood and other bodily fluids into waste water systems which ultimately find their way into natural bodies of water, compromising the tikanga that surrounds water. In Palmer's (2015), *Separation and land based treatment of mortuary and funeral home fluid wastes*, he discusses ways of containing funeral home wastes in specially designed septic tanks, and shipping these wastes to be treated at a site located in a cemetery, thereby containing the tapu of these fluids and keeping them out of the water ways. Treating funeral home waste in this manner may be way of mitigating the breaches to tikanga Māori in respect to the ways in which bodily fluids are disposed of.

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¹⁵ I have used 'Murchie whānau' here to refer to three of the late Malcom Murchie's children, Oriwia, Rehu and Winsome, who shared their thoughts about their father's tangi with Organic NZ magazine.

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