Physical therapies in 19th century Aotearoa/New Zealand: Part 3 – Rotorua Spa and discussion

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ABSTRACT

This is the final paper reporting on a historiographic study of physical therapies in 19th century Aotearoa/New Zealand. Here we focus on the development of the Rotorua Spa in the final decades of the 19th century and follow the methodological framework of the first two papers by exploring the physical therapies and practitioners that were associated with the spa. The paper examines how the spa also represents the embodiment of changing attitudes towards Māori, the role of central government, and the value of centrally organised healthcare. The second half of the paper provides a discussion of the main questions raised by the study, and considers the role that luxury and surplus may have played in the development of physical therapies in 19th century Aotearoa/New Zealand.

Nicholls, D., Harwood, G. (2017) Physical therapies in 19th century Aotearoa/New Zealand: Part 3 – Rotorua Spa and discussion. New Zealand Journal of Physiotherapy 45(1): 9-16. doi: 10.15619/NZJP/45.1.02

Key words: Rotorua, Spa, Physical therapy, Aotearoa/New Zealand, Balneology, Luxury, Surplus

INTRODUCTION

This paper is the third to report on a study undertaken to examine why it appears that the physical therapies (massage and manipulation, electrotherapy, hydrotherapy and remedial exercise), were some of the most popular therapies in Europe and North America during the 19th century, but were almost completely absent from Aotearoa/New Zealand before 1900. In the paper, we explore the development of the first organised centre for physical therapies in Rotorua in the last decades of the 19th century. Although the spa would not be formally opened until 1908, plans to exploit the Thermal Springs region's abundant natural resources were in place long before the Te Arawa tribe were coerced into becoming tenants on their own lands in November 1880. We look at the people who were instrumental in developing Rotorua along with the three other government-run spas at Hanmer Springs, Te Aroha and Waiwera, and consider what their actions reveal about people's attitudes towards the physical therapies. Throughout the literature, it is evident that little attention was paid to the therapies themselves. As in Europe and North America, where spas had become phenomenally popular among the leisured classes, the emphasis was on the myriad ways in which it was possible to 'take the waters,' and the properties of the water itself were considered paramount. In images from the time, it is the way in which the water is delivered (through drinking, plunging, spraying, douching, etc.) that is important. Often the physical therapeutic practices and practitioners themselves are entirely subsidiary. The exception to this is the balneologist, who played an increasingly important role in defining the culture of the spa. This was nowhere truer than at Rotorua, where the government ran a decade-long campaign to find the right 'medical man' who could be the face of the new spa. We consider how these changes relate both to traditional Māori cultural practices, and also to the atomistic, fiercely individual political and social context within which the Rotorua Spa was developing. We conclude the paper with a broad discussion of the role that luxury and surplus may have played in defining the physical therapies in Aotearoa/New Zealand in the 19th century.

In the first two papers in this series, we argued that physical therapies were practised by Māori long before colonisation, but that these practices fell into decline after 1860 and the New Zealand Wars. In the second paper we showed that colonists adopted a pattern of settlement that emphasised autonomy and independence at the expense of strong social bonds and organised centres of population. As a consequence, formal health care services, and specifically the physical therapies, were almost entirely absent from the Aotearoa/New Zealand landscape in the 19th century. If a person suffered a serious injury – as was often the case in the gold fields, timber yards and farms throughout the country – there was no opportunity for physical assessment, rehabilitation or treatment. The physical therapists that did offer therapeutic services often did so by working across a range of sectors and offering a range of services. It is likely that many offered services without registering their business or obtaining any formal qualifications.

The exception to this was at Rotorua where, for the first time, the country's government saw value in formalising the provision of physical therapies, not only to the broader public, but also to overseas visitors, who might bring with them valuable investment. The development of the spa represents evidence of a sea-change in attitudes towards the role that government might play in Aotearoa/New Zealand, and points towards the highly interventional policies of the Liberal government that came into power in 1891 under Premier John Ballance,

and would remain in power until 1912. During this time, government policy turned on its head and laid the foundations for the radical welfarist policies that would shape the country for the next 60 years. This change in attitudes would lead to the training of physiotherapists beginning in Dunedin in 1913; the deployment of masseurs to front-line service in World War I; the development of post-war rehabilitation, and advances in the management of medical and surgical care of victims of influenza, polio and tuberculosis; the incorporation of physiotherapy into the welfare state formalised by the first Labour government of 1935; and ultimately the formalisation of the profession in the 1949 *Physiotherapy Act*, which gave the profession protection of title and protected access to patients within the public health system. It is hard to imagine that any of these changes would have been possible without the particular opportunities to showcase the physical therapies that the Rotorua Spa offered. So even though the spa itself did not formally open until 1908, the efforts to establish a centre of physical therapy in Rotorua prior to 1900 are significant in defining what was to follow. To begin with then, we will trace a broad timeline of events leading to 1900 and the creation of the world's first Department of Tourist and Health Resorts,[1] which would take over the management of the 'Hot Lake District' and attempt to turn the spa into a world-leading centre for physical therapies.

A BRIEF HISTORY OF THE ROTORUA SPA BEFORE 1900

Like many of the areas in the North and South Island where geothermal water erupted, Rotorua and its surrounding environs had been widely used by Māori long before travellers began exploring Aotearoa/New Zealand's hinterland in the early 19th century. The Te Arawa tribe had long held prestige and authority over the western Bay of Plenty region, including its lands, people, hot springs, fisheries, flora and fauna. Initially opposing Te Tiriti o Waitangi, the tribe came to believe that an alliance with the crown in the 1860s would hold the best protection for their rawa (ancestral assets). Many Te Arawa men fought on the government's side during the Aotearoa/New Zealand wars, but this did not prevent legislation that turned most of their assets into crown property after the end of the war in 1872.[2]

The antecedents to the acquisition of valuable Te Arawa land can be seen much earlier, however, in the early journals, reports and diaries of colonial missionaries and travellers through the Rotorua region after 1840 (Anon, n.d.; Blomfield, n.d.; Corkill, 1888; Gisborne, n.d.; Hill, n.d.; Hoschetter, 1863; Inglis, n.d.; Johnson, 1847; Tiffen, n.d.). Accounts of Māori using the waters for cooking and washing, and the water's remarkable healing properties, began to appear in regional newspapers (McGauran, 1862), and soon the region around Rotorua with the biggest concentration of thermal springs began to be promoted as the 'Hot Lake District,' after its English counterpart. The natural wonders that were the Pink and White Terraces (Otukapuarangi and Te Tarata) drew tourists from all over the world, particularly after Prince Albert's visit in 1870. In 1874, one year after stepping down as Premier, William Fox toured the region and bathed in 'the thermal waters of Orakei-Korako and felt as if he were in 'paradise.' The warm water covered his body with 'an exquisite varnish . . . as smooth as velvet' and made him feel the most polished person in the world' (McLure, 2004, p. 1). Fox was charmed by the beauty of the Terraces, but feared that they would be blighted by tourism. He realised that 'wealth … could be earned from the construction of a sanatorium in the region and the crowds who could be lured there', but '[t]orn between the potential earnings and the risks of exploiting nature, he returned home and urged the government to take on the roles of developer and protector of this landscape' (McLure, 2004, pp. 1-2).

Visits from notable writers like Anthony Trollope and Mark Twain only enhanced the appeal of the region, now becoming more easily accessible after the end of the New Zealand Wars. Combined with the growing popularity of European and North American spa centres, some began to see the advantages of the country as a tourist destination. The Union Steam Ship Company began offering luxury tours of Australasia after the Suez Canal was opened in 1869, and travel times from England were reduced from between three and six months to just seven weeks.

Conscious of the need to control the land surrounding Aotearoa/New Zealand's abundant hot springs, the parliament of 1881 passed the *Thermal Springs District Act* to 'to codify the process it had already begun in Rotorua, legislating on the principle of reserving thermal districts for the use of the nation (*Thermal Springs District Act,* 1881, p. 14).' Within a year of the act, bathing pavilions began to emerge on Rotorua's best spa sites. In 1885, the Blue Baths ('the largest natural swimming bath in the Southern Hemisphere') and a 12-bed hospital (or sanatorium) were opened by writer George Sala.[3] The baths included single sex facilities: a 'boon' for women (McLure, 2004, p. 17). The first formal medical appointment was also made to

[1] To be entirely accurate, the Department of Tourist and Health Resorts was created in 1901. Although one year after the end of the 19th century, we will use this as a landmark date because it concludes one part of the trajectory begun in 1870 with Prince Albert's visit to the Pink and White Terraces, and growing interest in exploiting the region's resources.

[2] The 1865 *Native Land Act* created individual land titles that were easier to acquire and sell, effectively breaking apart collective governship of land common to Māori. Much land was simply stolen, while other areas were acquired by sharp trading, with pākehā taking advantage of conflict and uncertainty to drive a wedge even between Māori families (Binney 2009).

[3] The hospital built in 1886 was destroyed by fire in 1888 and replaced by a larger 21 bed sanatorium, with the government stipulating that 'the patient shall be able to show that his case is one likely to be benefited by the use of the baths, and that he is unable to pay the usual hotel or boarding-house charges'(*Mineral Waters of New Zealand* 1892). The 'tarrif' to stay in the hospital was approximately £1 per head per week. Patients were allowed to remain for three months with a second period possible if needed. The Official Yearbook of New Zealand from 1892 reported that 'A low tariff of this kind will enable the Charitable Aid Boards of the country to send up for treatment a class of patients who would not otherwise be able to avail themselves of the springs, and at the same time will in no way interfere with the private enterprise of hotel and boarding-house proprietors' (*Mineral Waters of New Zealand* 1892).

accompany the new sanatorium and spa. Dr Alfred Ginders was employed as medical superintendent, and served from 1885 to 1899.

Between 1885 and 1891, Ginders published a range of different reports on the thermal springs district, including hints on cases that might benefit from spa treatment, accounts of leprosy among Māori, and statistics on the various other thermal springs in Aotearoa/New Zealand, including Hanmer Springs (Ginders, 1885, 1889, 1890a, 1890b, 1891, 1892). Ginders helped establish a range of baths centred around Sulphur Point, moving vast loads of topsoil from more fertile areas of land to create what would later become the Government Gardens (Werry, 2011, p. 19). Ginders' work concentrated on taming the various fumaroles, ngawha and boiling mud pools, and creating artificially controlled environments that he assumed would be more palatable to overseas travellers and tourists.

The untamed and abundant nature of the Hot Lakes was nowhere more apparent than at Whakarewarewa, an area adjacent to the main Rotorua Spa site controlled by the hapu (sub-tribe) Ngāti Whakaue, who were coerced into selling some 157 acres of land to the crown, whilst retaining a foothold on 58 acres, which they subsequently made available 'to tourists who seem never tired of watching the peculiar customs and manners of the "Māori at Home"' (McLure, 2004, pp. 19-20).

Soon after the 1886 Tarawera eruptions, the government appointed French engineer Camille Malfroy to work as Resident Engineer at the spa. Malfroy had worked for some years designing hydraulic pumps in the West Coast goldfields, and used his experience to develop some world-leading innovations in the control and management of geysers. Malfroy studied the behaviour of the geysers in Rotorua and began to realise that their unpredictability was a function of atmospheric pressure rather than the direction of the wind, as had previously been thought. Experimenting with cold water injected into the head of the geyser tube, he was able to command the geyser's eruption almost at will, boasting in 1893 that he could command the massive Puhutu geyser at Whakarewarewa 'for eminent visitors at a few hours' notice' (2004).[4] Malfroy agitated with others for the government to take a more scientific approach to spa management, arguing that it was the method by which the water was applied, as much as the water itself, that was important; an argument that echoed John Johnson's belief fifty years earlier that it was probably 'their uniform heat [that] is the most active agent in the cure' (Johnson, 1847). Malfroy died prematurely in January 1897 from complications associated with pulmonary tuberculosis, but not before it had been decided that a European trained 'medical man' was now needed to develop the spa further and consolidate it as a world-leading centre for the physical therapies.

THE SEARCH FOR COMPETENT MEDICAL MEN

Some time before the Minister for the Education Department, Thomas Mackenzie, advised the Hon. William Pember Reeves (Minister of Labour) that the government should appoint 'a more up-to-date medical man at the Rotorua Sanatorium in the interests of suffering humanity (Parlimentary Gossip, 1895),' it had come to be believed that Alfred Ginders had been an efficient officer and Camille Malfroy an ingenious engineer, but that 'a medical man who is an expert respecting medicinal springs, should be obtained from Europe.' 'If this were done' it was argued, 'it would increase the utility of what was one of the colony's greatest assets' (Parlimentary Gossip, 1895). Camille Malfroy had himself been arguing that 'we have long recognised the desirability of having a thoroughly competent masseur established here. The difficulty has been to secure the services of a man who has had the necessary training and experience (Mollinghead 1894).' But he believed that 'This want has now been met, as Mr. H. Roth resides at Rotorua, during the summer months, with the sanction of the Government, and treats those at the Priest's Bath Pavilion, who desire his services' (1894). Herman Roth was not a trained doctor, however, and his prestige as a mere masseur was not in line with the government's aspirations.

Much of the delay in finding the right European expert lay in the government's laissez-faire approach to regulation, which had allowed the spa to develop in a piecemeal fashion, lacking the necessary commitment and leadership to fully realise its potential. A report by Inspector-General of Asylums and Hospitals, Dr Duncan MacGregor, highlighted the fact that the spa was only equipped for people who could not afford better private facilities and was unsuited to more affluent tourists. MacGregor argued that 'entirely new arrangements must be made to meet in a comprehensive and systematic way the needs of the rapidly increasing invalid visitors' (Dr MacGregor's Report, 1896). MacGregor pushed to develop the bathing facilities first, followed by the appointment of an 'experienced and specially skilled medical expert in balneology' and a female attendant (Dr MacGregor's Report, 1896).

The government responded by offering Dr Karl Grube – head physician at the springs in Neuenahr in Prussia – an initial salary of £500, but a contract could not be agreed, and ministers had to accept the necessity of raising the salary to £800 if they were going to attract a suitable candidate.[5] The *New Zealand Herald* reported that the man appointed 'must be not only a highly-trained specialist, thoroughly acquainted with the character of the different spas in Europe, but a man of such high reputation in European circles that his reports on our mineral waters will at once command attention,' and that 'It is in England and on the Continent of Europe, and in America, that we want our mineral

[4] Upset with his tampering with natural forces, local Māori tampered with Malfroy's plumbing at the Pohutu geyser in their turn while he represented Aotearoa/New Zealand at the 1890 Paris Exhibition, restoring the geyser's unpredictability (2004, p. 21).

[5] It is worth noting that at the same time, the job of NZ Inspector of Prisons was being offered for £700 per annum; the Secretary of Agriculture £550; The Commander of the Forces £700, and his staff officers £300. So an £800 annual salary for a government balneologist was a considerable national appointment and worth approximately $150,000 today (source: http://www.rbnz.govt.nz/monetary_policy/inflation_calculator/) ("The Estimates," 1898).

waters made known, and to do that we must pay the necessary figure' (Notes and Comments, 1898). The paper argued that it 'would be money well spent, and would be more than recouped to the colony by the expenditure of the class of invalids and tourists that would be found making use of our sanatoria' (Notes and Comments, 1898).

In 1900, there were fewer than 4,000 annual overseas visitors to Aotearoa/New Zealand, however (Bassett, 1998, p. 112), and only a handful of the country's residents had experienced the pleasures of European spas, so the decision to invest heavily in Rotorua was a bold one. Added to this, internal travel within Aotearoa/New Zealand was arduous, and there were few facilities available for tourists. This did not prevent ministers under Richard Seddon's reformist Liberal government from dreaming of a spa centre that would be the envy of the world. Principal among these ministers was Joseph Ward who was instrumental in the search for a European balneologist. It was Ward who, in his first term as Premier in 1901, created the world's first Ministry of Health and Tourism and became the British Empire's first Minister of Public Health. Ward 'convinced himself of Rotorua's curative powers, and he and his wife became devotees, never missing an opportunity to visit the region (Bassett,1998, p. 113). It was Ward who finally appointed Dr Arthur Wohlmann as Government Balneologist in 1902 (Johnson, 1990). Born in Hertford, England in 1867, Wohlmann was 35 years old when he was brought to Rotorua, having graduated from Guy's Hospital in 1891, and having worked at the Royal Mineral Water Hospital in Bath, England since 1894. Wohlmann has been credited with bringing a much-valued scientific approach to the study of Aotearoa/New Zealand's spas.[6] He published a number of books on the mineral compositions of Aotearoa/New Zealand's many natural spas, most notably *The mineral waters and spas of New Zealand (Wohlmann, 1907)*. In this book Wohlmann describes 'Accessory' physical treatments: massage, electrical treatment, medical gymnastics, light and heat. Massage, he argues;

> *constitutes one of the most important—perhaps the most important—forms of accessory treatment. In the Government spas true massage is given by prescription, and under medical direction only, thus eliminating that element of quackery that appears to be so all-pervading where massage is in question (1907, p. 30).*

Wohlmann's innovations, however, came mostly after 1900 with the formal development of the Rotorua Spa. Prior to Wohlmann's arrival, most of the 'medical' treatments of patients at the spa were conducted by masseurs, most notably Hermann Roth. Roth arrived in Aotearoa/New Zealand in 1893 and was appointed masseur at the government sanatorium in the following year. In 1895 he is reported in the *New Zealand Herald* as having made arrangements 'for the erection of a private hospital at Rotorua, suitable for the accommodation and special treatment of invalids, where assistants—both male and female—will be in attendance, and a masseuse for ladies' ("Local and General News", 1895). A few weeks later, the newspaper reported that the opening of the railway line from Auckland had had an immediate effect on the popularity of the spa, with 'All the hotels and boarding-houses…taxed to their utmost, in fact visitors have difficulty at times to secure accommodation, even by putting up with beds in billiard-rooms and tents.'

> *The Sanatorium Hospital, too, is full, not one vacant bed… The bath returns for the last month show better than ever, thus December 1894: Number taken 2890: amount, £56 5s 9d; 1893, number taken, 1608 amount, £34 4s 6d. Increase, 1282, £22 1s 3d. The above figures only refer to the Priest, Rachel, and Blue baths ("Country News", 1895).*[7]

Details of Roth's practices are sketchy, but it is known that he may have ventured into cosmetic medicine as well as more conventional physical therapies. In 1896, for instance, the editor of the Auckland-based newspaper the *Observer* suggests contacting Herman Roth in response to a health problem raised by a correspondent from Cambridge in the Waikato, because 'He has made the removal of superfluous hairs on the face a special study, and he guarantees a permanent cure' ("Our Letter Box", 1896). Beyond this, we can infer some details of his massage practices from the services available at the spa.

The original site of the government spa had been a series of small natural pools on the west side of Lake Rotorua in an area originally known as Oruawhata, and later Sulphur Point. The first two pools developed for commercial activity were the Madam Rachel Baths, named after a London cosmetician who claimed that the silicated water could 'make the plain pretty…make the beautiful exquisite, and…make the age of golden youth return' (Rockel, 1986, p. 20). A pool further south originally called Te Pupunitanga came to be known as the Priest's Bath after a priest from Tauranga (60km to the north of Rotorua) had reportedly been cured of crippling arthritis after a period spent bathing in the pool. Other pools were named after local settlers or for their specific properties, like the Coffee Pot Pool in which the bathers hung from a rope suspended between manuka trees to immerse themselves in its thick brown mud (Rockel,1986, p. 21).

In the 1880s small awnings covered most of the pools, but there were only dressing 'boxes' for people to change in. There were no showers to remove the residue after bathing, which became a significant issue after bathing in the Priest's Bath, since its main constituent chemical was sulphuric acid. In 1885, a small wooden bathhouse was built over the Oruawhata spring and called the Blue Bath, and this offered women-only bathing for a few hours each week. In the following year, Camille Malfroy coordinated the construction of the first proper building over

[6] Arthur Wolhmann served with the New Zealand Medical Corps as principal Medical Officer of the King George V Military Hospital, Rotorua and was subsequently awarded an OBE for his services. Unfortunately, it appears he was never entirely accepted in New Zealand and had to change his surname to Herbert in 1917 because of anti-German sentiment mistakenly associated with his name.

[7] £56 in December 1894 would be equivalent to $10,400 today (source: http://www.rbnz.govt.nz/monetary_policy/inflation_calculator/). Based on the spa's stated throughput, this would equate to an income of $3.60 per visitor to the spa's three main baths. No breakdown of costs for specific physical therapies are given.

the Priest's Bath, incorporating a wooden clock and wooden nails that would not corrode in the acrid steam rising from the pool. A further building was constructed closer to the sanatorium grounds in 1896 called the Postmaster's Bath. This needed to be open to the air because it emanated so much hydrogen sulphide (1986). what does this refer to?

In the *Official Yearbook of New Zealand* published in 1892, Alfred Ginders describes some of the conditions commonly treated at the spa. Having established that hot water was no cure for '[a]dvanced phthisis [pulmonary tuberculosis], chronic Bright's disease [kidney disease], spinal caries [decay], and psoas abscess' (*Mineral Waters of New Zealand*, 1892), Ginders argued that incapacity, severe pain or the difficulties of accessing the spa by coach before the completion of the railway line, need not be deterrents: 'We have many instances on record of patients who, on arrival, required the aid of crutches, or to be actually carried to the bath, and yet went away enjoying the full use of their limbs' (*Mineral Waters of New Zealand,* 1892). Ginders was admirably conservative about the ability of the hot pools to regenerate nerve tissue in severe paralysis, and restore joints deformed by osteoarthritis and rheumatism; '[s]uch cases may improve in general health, gain weight, and lose pain, but there the improvement ends' (*Mineral Waters of New Zealand,* 1892).

Common to the practice of many physicians of the time, accounts of successful treatments were used to illustrate the benefits of particular therapies. With today's more critical approach to evidence-based practice it is easy to dismiss illustrative case studies of this sort as untrustworthy, but their use was nonetheless widespread and their implications for the value of particularly conservative therapies like hot water bathing, electrotherapy and massage are interesting. Ginders illustrates a successful case to highlight the virtues of a stay at the spa:

> *C.H., aged forty-nine…Got his first attack twenty years ago—sub-acute rheumatism of the feet. The attacks recurred every winter, each being more severe than the last. The ankles, knees, elbows and hands became affected. For the last nine years he has spent six months of each year in bed. On his arrival at Rotorua his appearance was that of a man of seventy; his hair white, his complexion pale and anæmic, his back bent, liver sluggish, bowels torpid, appetite bad with slight enlargement of knees, elbows, and knuckles. He commenced taking two acid sulphur-baths daily, and during the first month improved wonderfully. [Following an acute relapse]…serious costiveness*[8] *set in. Having in vain tried other remedies, as a last resource I tried faradism. All serious symptoms at once disappeared. He rapidly gained strength, resumed his bathing, and, after spending three months with us, considered himself in better condition than he had been for ten years (Mineral Waters of New Zealand, 1892).*

Similar cases are reported for the treatment of paralysis, skin diseases and neuralgia. It is likely that Herman Roth and his assistant worked closely with Ginders and the other medical superintendents who operated between the sanatorium and the spa itself, although how their roles overlapped is unclear. In all likelihood, Roth operated under some degree of medical direction, although this would not have been the case in his own private practice in Auckland and Wellington, suggesting that he had some degree of latitude to apply and adjust treatments according to his own observations.

By 1899, plans were in place for an ambitious expansion of the spa, including a new building to be designed by the notable architect B. S. Corbett, decorated in 'the Victorian decorative vernacular of leisured luxury' (Werry, 2011, p. 22), withwooden parquet floors, conservatories, fountains and statuary, Minton tiled rooms and Royal Doulton bathtubs. The image of Rotorua as a therapeutic and leisured resort for a better class of invalid (Notes and Comments, 1898) reached its apotheosis in 1908 with the construction of the new bathhouse. By the time of its completion it had cost £80,000 – 'a vast (and controversial) sum even in an era of bold public works investment' (Werry, 2011, p. 22). Ultimately, it would prove to be a failed investment. By 1918, the spa was losing £20,000 per year, by 1930-31 this had risen to £112,000. The Blue Baths never appear to have made a profit and finally closed in 1982 (Bassett, 1998, p. 115).

Although the Baths have now been partially revived as an exhibition, the question of the role of the physical therapist in the history of the Rotorua Spa remains obscure. Much of the focus of the available literature falls on the facilities and services offered in the 50-year period when the spa was at its most dynamic. Much is known about the politics of the spa; the role taken by its principal medical and administrative leaders; the management and constitution of the waters; and the cultural appropriation of Māori customary rights. Much less is known, however, of the physical therapists and their practices. And so, if Rotorua represents the most concentrated example of physical therapy practice in 19th century Aotearoa/New Zealand, we must conclude that little evidence exists for physical therapies in Aotearoa/New Zealand. How then might we explain this lack, given the popularity of these approaches to health care in Europe and North America in the same period?

DISCUSSION

The physical therapies were some of the most popular and widely used therapies in 19th century Europe and North America (see, for example, the detailed account of 19th century physical therapies in Krusen, 1969). Prior to the discovery of germ theory in the 1880s, many doctors had been physical therapists, routinely using massage and manipulation, electrotherapy, hydrotherapy and remedial gymnastics in their treatments (Ottosson, 2010, 2011). Physical therapies had become popular among the leisured classes, partly as a result of growing anxieties about the pace of life, but also as an expression of one's cultural sophistication and urbane elitism. Only those with surplus time and money, for example, could afford to engage a

[8] Meaning constipated, slowness, or being unforthcoming. It can refer to speech and general demeanour as well as bodily functions.

masseur at home. This was, it must be remembered, before a time when physical therapies were widely available through an organised public health system.

In Gilded Age America, physical therapies and dietetics had become a mainstay in the management of conditions like hysteria, nervous exhaustion and neurasthenia (Williams et al., 2004), while other patients with conditions as diverse as sciatica, obesity, talipes, melancholia, anorexia, dropsy and fractures were routinely massaged.[9] Those who could afford it, relieved their weariness by travelling to Bath, Baden-Baden or Aix-les-Bains to spend months 'taking the waters;' sitting in pyretic baths; Bergonie Chairs; or being rejuvenated with galvanic and faradic batteries.

Why then, was so little of this seen in Aotearoa/New Zealand? It is reasonably clear from the available evidence that Māori used physical therapies in much the same way that the settler population knew, but that the ready availability of seemingly free therapeutic resources (such as geothermally-heated water), and the potential to exploit these for profit, proved too seductive for colonialists who were quick to acquire land and establish restrictions around access to services. Progress in developing nation-wide therapeutic services was also extremely slow. War, isolation, and the settlers' fierce individualism may have served to facilitate individual claims to Aotearoa/New Zealand's abundant resources, but it did little to develop a sense of community or build infrastructure that could have been to the betterment of the whole population. Until 1891 and the election of the first Liberal government, little collective enterprise had been considered in Aotearoa/New Zealand, so there were few opportunities for organised health care to become established.

There were few metropolitan centres to sustain physical therapists before 1900, and most people were employed in primary industries (gold mining, timber milling, farming, etc.). Migrants who were skilled ancillary workers were not encouraged, and few opportunities were created (through the building of hospitals or community clinics, etc.) to allow them to prosper. Those that did offer therapeutic services did so as part of a range of other occupations (Matthew Guinan, for instance), or operated across a range of different locales (see, for example, Herman Roth). It would not be until the creation of the four main spa centres, and the concerted shift towards welfarism taken by the Liberal Party after 1891, that the physical therapies would become anything other than an occasional luxury for those who could afford the treatment.

By comparison with attitudes that followed World War I, the thousands of people who were injured in workplace accidents before 1900, or who became ill as a result of community-acquired infection, were expected to fend for themselves or fall back on family and friends. If someone fell down a sinkhole at the Gabriel's Gully goldfields and broke his leg, he would have no formal health care to fall back on, and there would certainly be no post-surgical rehabilitation, paid leave or workplace compensation. These innovations would only come into effect after 1918, around the same time that professions like physiotherapy were becoming registered health professions.

One of the characteristic features of health care in the 20th century was the realisation that many individuals could not adequately prepare for all of life's adversities on their own, and that 'the state' was responsible for causing many social ills. The welfarism pioneered internationally by successive Aotearoa/New Zealand governments after 1891 made it possible for those people who could not otherwise afford physical therapy to obtain it through the public health system. However, no such vision existed prior to 1900. Thus, the answer to the question 'why was there so little evidence of physical therapy in Aotearoa/New Zealand before 1900' may well lie in an agglomeration of all of these cultural, environmental, political and social issues, resulting in the creation of very few opportunities for physical therapy to prosper.

Our data points to the fact that for physical therapy to prosper, it requires either:

1. A culture in which physical therapies are freely available (Māori culture before colonisation);
2. A significant population of people with enough surplus time and money to afford the luxuries of massage, spas, and galvanic baths; or
3. A public health system that can share the burden of cost among the whole population.

Our evidence suggests that without one of these three elements in place, physical therapy remains a relatively marginal social function. This is not to say that people do not engage in physical therapies in their own homes, or in other informal situations, only that we have found that it cannot elevate above these levels without the necessary cultural paradigms identified above.

As Aotearoa/New Zealand and many other developed economies complete the process of dismantling the welfare state and embrace neo-liberal values of individual autonomy and self-sufficiency, it will be interesting to see how these economic, political and social transformations may affect physical therapy practices in the future. For much of the 20th century, physical therapies have been formalised into powerful occupational identities (*physiotherapy* in Anglo-centric countries, *physical therapy* in North America). These professions have received considerable legislative protection and valuable access to the public sector. Millions of patients have received physiotherapy as a result of these ideologically informed structural arrangements. With the demise of the welfare state, it is possible that professions like physiotherapy will find themselves operating in a cultural context not dissimilar to Aotearoa/New Zealand in the 19th century. Here, physical therapy will be available to those who have the surplus time and money to afford it, and those who cannot will have to make do as best they can. Having become a profession that was able to serve the whole community, regardless of ability to pay, physiotherapy might find itself being a profession only able to service a population of what Barsky called the 'worried well' (Barsky, 1988). Moves by physiotherapy programmes internationally to develop graduate

[9] See the work of John Harvey Kellogg – the founder of the Kellogg company – and the work undertaken at the Battle Creek Sanatorium, for instance (Schwarz 2006)

entry programmes and accelerate pathways to specialist status appear to be pre-figuring this shift. How physiotherapy will meet the needs of the vast populations of people with the worst, most complex, co-morbid health and lifestyle problems – characteristically those least able to afford physical therapy – has yet to be addressed by the profession.

LIMITATIONS

There are a number of limitations we should consider in presenting our analysis of these data. Firstly, we are aware that the primary data search concentrated on nationally available archives. No trawl was undertaken of resources available in the regions. This will have limited some of the specificity of the overall project, and certain sites (particularly Hanmer Springs, Te Aroha, Waiwera, and a number of other significant population centres), have been under-represented as a result. Furthermore, the findings represent only a snapshot of the full archive of data available.[10] Isolating back pain and fractures from the full panoply of Māori physical therapies, for example, not only imposes a reductive 'western' taxonomy on what were otherwise embodied and environmentally-connected assemblages of practices, but it also reinforces the idea that the most appropriate measure of validity for Māori healing practices is one that satisfies European and North American cultural norms. This is plainly an unfortunate consequence of the necessity to present historiographic data in a form that can have meaning for a particular readership. It would be useful in future to do further work on the archive and explore different therapeutic practices in a manner that best reflects their individual ideologies and epistemological presuppositions. Finally, much of the data and subsequent reporting is heavily gendered. As with many accounts of 19th century cultural life, men appear as society's principal architects. Women's roles in 19th century Aotearoa/New Zealand are almost entirely absent from formal accounts of practice, legislation, government and social reform. Yet we know that many women were influential healers and therapists, missionaries, nurses, teachers, counsellors, advocates, organisers and activists (Heggie, 2015; Macgregor, 1973). Their relative absence from formal accounts of 19th century Aotearoa/New Zealand mirrors many similar historiographic accounts which tend to privilege white, male, straight, affluent and Eurocentric accounts of events. As two white, male, straight, Eurocentric authors, we are conscious of our privileged position in writing this account and have attempted to be sensitive to it throughout.

CONCLUSION

Over the span of these three papers we have sought to examine the role that the physical therapies played in Aotearoa/New Zealand in the 19th century. Knowing that physical therapies were very popular in Europe and North America and were widely practised by Māori, we wanted to examine why it seemed that massage and manipulation, electrotherapy, hydrotherapy and remedial exercise were largely absent from official accounts of the period. The study explored whether evidence existed of widespread physical therapy practice in 19th century Aotearoa/New Zealand, and concluded that there was little evidence of any significant physical therapy practice undertaken in the century before the physical therapies became organised as the physiotherapy profession. We have speculated that this is because Aotearoa/New Zealand settler systematically marginalised many of the free therapeutic practice of Māori, but offered little to formally replace them, leaving most people to fend for themselves. It was only the introduction of welfarism that followed the election of the Liberal government of 1891 that provided the necessary foundations for the kinds of physical therapies familiar to most readers. With the demise of the welfare state and a return to a neo-liberal emphasis on autonomy and independence, it will be interesting to see whether evidence from Aotearoa/New Zealand in the 19th century can provide valuable insights into the challenges being faced by physiotherapists in the 21st century.

KEY POINTS

1. The development of Rotorua Spa represents the first attempt to provide centrally-organised physical therapy services in Aotearoa/New Zealand.
2. The spa drew on many European and North American influences and embedded colonial values in its design and organisation.
3. Physical therapies were really only available to those with enough surplus time and money to afford them, and as such were slow to develop in Aotearoa/New Zealand prior to 1900.

DISCLOSURES

This study was supported by an Auckland University of Technology Faculty of Health and Environmental Sciences Summer Research Award (CGHS 10/14).

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[10] The full dataset will be made freely available through Physiotherapy Aotearoa/New Zealand's website www.100yearsofphysio.co.nz.

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