Tensions in the Toolbox:

The Meaning of Western Acupuncture for New Zealand Physiotherapists

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Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of any other degree or diploma of a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgements.”

Dated:

……

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Abstract

Physiotherapists in New Zealand are increasingly learning and practicing Western acupuncture. Western acupuncture as a new and different tool is enhancing and yet challenging physiotherapists practice. This study explores the meaning behind Western acupuncture practice to further understand the implications of its development and possible future direction.

Hermeneutic methodology was used because it facilitates the exploration between that which is familiar and that which is unfamiliar. Seven New Zealand physiotherapists qualified to practise Western acupuncture were interviewed about their practice experiences. The data in relation to the phenomenon of inquiry was analysed thematically.

The findings revealed a complex array of tensions within physiotherapy because of the differences Western acupuncture brings to physiotherapists' practice. Western acupuncture is a new and useful tool in the physiotherapists 'toolbox'. It is congruent with other physiotherapy practices in that it shares the same scientific neurophysiological foundation. However, the association of Western acupuncture with traditional Chinese acupuncture causes it to be viewed as a complementary medical practice and thus, not completely legitimate as a part of physiotherapy. These tensions are further confounded because the technical rationalist paradigm, upon which physiotherapy is based, values evidence-based practices. The best evidence is perceived to be that gained from the randomised controlled trial. I argue that the randomised controlled trial is poorly suited to the evaluation of complex practices such as Western acupuncture. Such insights also challenge physiotherapy, as a whole, because the available 'evidence' does not acknowledge the complexities of practice involving individual practitioners, their colleagues, the profession, other healthcare professions, patients and the public.

The tensions encountered in physiotherapy and Western acupuncture practice have led to a number of recommendations in education, practice, research and legislation. Overall, they suggest a need to develop a more inclusive model of practice development. Western acupuncture is a potentially valuable tool. In order to maximise

use of this tool physiotherapy practice understandings need to be extended. This in turn, will assist development of the profession as a whole.

Key to transcripts

The following have been used in the presenting of the research findings:

Italics	Identifies the actual transcribed words provided by a study participant.
Names	All names of participants are pseudonyms.
[ ]	Researchers explanation of terms provided to enhance clarity.
…	Denotes removal of original text or data.
‘ ’	Indicates words or ideas emphasised by researcher.
p.	Page number.

List of Abbreviations and Acronyms

ACC	Accident Compensation Corporation
AUT	Auckland University of Technology
BAcC	British Acupuncture Council
CRC	Brand name of mechanical lubricant
HDC	Health and Disability Commission
G.P.	General Practitioner
HPCAA	Health Practitioners Competence Assurance Act
MACCAH	Ministerial Advice Committee on Complementary and Alternative Health
NCAHF	National Council against Health Fraud
NIH	National Institutes of Health
NZHIS	New Zealand Health Information Service
NZPB	The Physiotherapy Board of New Zealand
PAANZ	Physiotherapy Acupuncture Association of New Zealand
PAPMA	Physiotherapy Acupuncture and Pain Modulation Association

Prologue

One evening a new patient dragged herself in to the physiotherapy clinic where I was working. She could barely walk, such was the pain in her back and one leg. She demanded acupuncture treatment: “I am travelling overseas tomorrow. I need to be fixed, acupuncture fixes my back pain. You are open tonight and you do acupuncture”. I was flabbergasted; in all of the literature and my considerable physiotherapy experience, back pain of the intensity she displayed could not be fixed in one session. It would take time, ongoing physiotherapy treatment and patience. I assessed her back problem. She thought that was unnecessary, as all she needed was acupuncture. I treated her with Western acupuncture, to the best of my ability, having been practicing acupuncture for only one year. I specifically acupuncture needled the distribution of the nerves most afflicted. I offered to get her crutches to improve her ability to walk, such was my lack of faith that the acupuncture could affect the miracle she expected. She was having none of that: “One treatment of acupuncture and I will be fine, I have experienced this before”.

Twenty-five minutes later, I removed the acupuncture needles. She refused lumbar mobilisation treatment but listened to exercise and back care advice. She got up, got dressed, came out and paid her bill. She was painfree and walking normally. I phoned after she returned from her travel to find the pain had not returned after the treatment.

‘Miracles’ such as this are not reported in the literature. Nor are they often experienced in practice. However, every now and then something absolutely unexpected, incredible and fantastic happens in practice because of acupuncture treatment. This is not to say that Western acupuncture does not significantly impact upon my everyday physiotherapy practice, because it does. The use of Western acupuncture has changed my practice and as a result, a number of the other tools in my ‘physiotherapy toolbox’ have been discarded.

Chapter One: Introduction

This research explores the meaning of Western acupuncture as it relates to physiotherapists practising Western acupuncture in New Zealand. It offers a hermeneutic phenomenological interpretation of the narratives of seven New Zealand Registered physiotherapists educated in and currently using Western acupuncture.

As a physiotherapist who practises Western acupuncture, I am interested in what motivates other physiotherapists to study and to use a treatment modality that is currently considered to be complementary or alternative medicine (Ernst & White, 1999; Paterson & Dieppe, 2005; Stener-Victorin, Wikland, Waldenström, and Lundeberg, 2002). I chose to research this topic because I was interested in exploring and further understanding the meaning behind the practice of Western acupuncture by physiotherapists. My aim is to research the taken-for-granted meanings that are embedded in the practice of the physiotherapist practising Western acupuncture. Gaining greater knowledge of this experiential reality will further the understanding of Western acupuncture and its potential to enhance physiotherapy practice.

Western acupuncture is a comparatively recent mode of treatment. 'Western acupuncture' does not delineate a geographical acupuncture identity. Both Western acupuncture and traditional Chinese styles of acupuncture are practised in both the 'Eastern' and 'Western' geographical regions (Lewith & Lewith, 1983). The term Western acupuncture began in order to differentiate a new style of acupuncture practice, i.e. the "scientific application of acupuncture as a therapy following orthodox clinical diagnosis" (Filshie & Cummings, 1999, p.31). Although Western acupuncture originated from traditional Chinese acupuncture, it has fundamental differences from traditional Chinese acupuncture's philosophical and theoretical basis (Filshie & Cummings, 1999).

The profession of physiotherapy has developed under the premise of technical rationalism (Schon, 1983). Schon (1983) argues that the model of technical rationality is based upon the principle that rigour in professional activity is demonstrated by the use of scientific theory and technique in problem solving.

Subsequently this has tended to promote a mind/body dichotomy of practice in that physiotherapists have developed a tradition of treating a diagnosed 'condition', thus separating the clinical condition from the person as a whole (Bassett, 1995; Jorgenson, 2000; Nicholls & Larmer, 2005). The model of technical rationality also has links to Cartesian notions of practice, where the body is regarded as a physical phenomenon separate to the influence of the mind (Russell, 1961/1996). Therefore both technical rationality and Cartesian thinking exemplify a separation of the 'mind/inner' person from that of the 'physical/external' person.

Physiotherapy is based upon the interaction of people, usually that of physiotherapist and patient, to facilitate the repair of a physical condition. Physiotherapists are required to be able to interpret the signs, symptoms and language of a person in order to implement appropriate treatment. To facilitate the physical health of the patient, the physiotherapist can choose from a wide range of modalities. The primary modality of the physiotherapist is his or her hands. Hands are integral to the provision of treatments that use touch. These treatments include massage, manual therapies and the facilitation of movement and posture. Therefore the physiotherapist is seen to repair the patients' 'physical body'.

Over time, physiotherapy practice has evolved from a skill based craft to a profession that uses techniques grounded in empirical research (Carpenter, 1997; Schon, 1983). Physiotherapy education has developed as research based, scientific and clinical training within a University structure. This has created a greater knowledge and familiarity with how to 'do' research and thus enhanced research activity within the physiotherapy profession (Scrymgeour, 2000). However emphasis on research that is primarily quantitative (Scrymgeour, 2000) does not provide answers to questions such as: How do physiotherapists know what they know? And: What makes physiotherapists do what they do? Physiotherapists practising Western acupuncture report that acupuncture enhances their patients' recoveries. Yet this perception is not currently supported by research, nor is it present in evidence-based guidelines for practice.

Western biomedical research and practice exemplify Cartesian thinking (Polkinghorne, 2004). In physiotherapy, research generally focuses on the cause and effect measurement of bodies and their responses. It also relies on numbers of subjects to show validity and generalisability of findings (Vickers, 1995). The

contribution of qualitative research has been under acknowledged in physiotherapy (Carpenter, 1997; McPherson & Lord, 2000). Such research enables insight into the perceptions of experience and response. It engages the mind's perspective of the body rather than excluding the mind from bodily responses. Crotty (1998) argues that people are integrated beings in context because "truth, or meaning, comes into existence in and out of our engagement with the realities of this world. There is no meaning without a mind" (p.8).

Interpretive research has been derided by those who believe it lacks objectivity (Koch & Harrington, 1998). Yet interpretation is an integral part of professional practice. Interpretation of experiential understanding can be examined using hermeneutic and phenomenological approaches. This enables the study of subconscious aspects of knowledge, experience and practice. The exploration of these qualitative aspects of Western acupuncture practice in physiotherapy can facilitate understanding and development of professional physiotherapy and acupuncture practice.

In order to gain deeper understanding of physiotherapists who practise Western acupuncture, I have chosen to explore and describe this experiential reality using a hermeneutic approach. Hermeneutics is a philosophical paradigm that enables the exploration of experiential meaning. Interpretation comprises analysis of experience based upon what information is available and how that is perceived. The trustworthiness and validity of such research is dependent on the interpreters' capacity to integrate experiential knowledge and apply it to the matter in hand. The processes of used to achieve trustworthiness and validity in this study will be discussed in greater depth in Chapter Three.

Acupuncture is an emerging procedure in Western medicine. Traditional Chinese Acupuncture can be traced back in history to the Stone Age (Beijing, Shanghai & Nanjing Colleges of Traditional Chinese Medicine & The Acupuncture Institute of the Academy of Traditional Chinese Medicine, 1980). In contrast emergent practitioners of Western acupuncture such as Mann (1993), and Baldry (1989) and Ulett (1992), as cited in Filshie & Cummings (1999) began developing a Western approach to acupuncture in the late 1980s. Western acupuncture was formally introduced to New Zealand physiotherapists as recently as 1999 (Portrait, 1999).

However Western acupuncture in a modified approach has been taught by PAANZ [Physiotherapy Acupuncture Association of New Zealand], formerly known as PAPMA [Physiotherapy Acupuncture and Pain Modulation Association], from 1983 to New Zealand physiotherapists (P. Larmer, personal communication July 7th 2005).

Because Western acupuncture practice by physiotherapists is a relatively recent phenomenon, a hermeneutic approach enables the gathering of the 'best understanding' of the meanings inherent in this practice modality (Laverty, 2003). Hermeneutics facilitates the exploration of what is familiar in our lives along with that which is not familiar, or previously contemplated (Gadamer, 1976). Acupuncture is a relatively unfamiliar mode of practice, the Western strand even more so. Therefore Western acupuncture merits philosophical investigation as informed by van Manen (1997), Gadamer (1960/2003) and Heidegger (1927/1962) to establish a basis of knowledge in this field.

Physiotherapy in New Zealand

Physiotherapy is a relatively 'modern' field of practice. Its origins trace back to England in 1894 when the British Society of Trained Masseuses was founded (Scrymgeour, 2000). In New Zealand physiotherapy has undergone significant change from its original basis in massage. This is evidenced by the current General Scope of Practice of physiotherapists in New Zealand which states: "Physiotherapists are registered healthcare practitioners educated to apply scientific knowledge and clinical reasoning to assess, diagnose and manage human function. They promote mobility, health and independence; rehabilitate; and maximize potential for activity" (The Physiotherapy Board of New Zealand (NZPB), 2004b, p.8). This differs considerably from the experiential reality of my physiotherapy practice in the early 1980s when I qualified as a physiotherapist. For instance Bassett (1995) defined physiotherapy as:

> An orthodox medicine profession, which assesses, treats and educates individuals who have problems with function and mobility utilising manual and movement therapies and medical electricity. These methods

> are based on physical and physiological principles and are known to affect the individual physically, psychologically and spiritually. Using the clinical reasoning process methods are selected so that they are suitable for the individuals needs and applied in a manner which is both culturally sensitive and gender appropriate for the individual, taking into account their social environment (p.10).

This definition was adopted by the profession and became the basis of the Competencies and Learning Objectives Document (NZPB, 1999). The Physiotherapy Board of New Zealand later altered the descriptor to include the application of scientific knowledge. The search and development of new techniques and information underpinned by research evidence had become imperative for the critical evaluation of the profession as a whole (Vujnovich, 1996). So began an era of evidence-based practice and critical appraisal of clinical physiotherapy practice.

The changing 'face' of New Zealand physiotherapy

New Zealand physiotherapists currently study at one of two Schools in order to achieve the minimum qualification of a Bachelor degree in Physiotherapy. This four-year University programme has superseded a three-year Diploma of Physiotherapy as the standard for registration (Scrymgeour, 2000). In New Zealand physiotherapy curricula focus on core principles of practice guided by objective subjects such as anatomy, kinesiology, biomechanics, physiology and pathology (Nicholls & Larmer, 2005). Physiotherapists practise in a variety of settings. They assess, diagnose, treat, report and/or give advice using the knowledge, skills, attitudes and competence required by The Physiotherapy Board of New Zealand.

Exercise has always been a mainstay of physiotherapy treatment (Copeland, 2002) and it continues to be so, particularly after research promoting its efficacy, for example: Campbell, Robertson, & Gardiner (1999); Fransen, Mc Connell, & Bell (2002); Moffat (2004); Schoo, Morris, & Minh Bui (2004). Electrotherapy was another common treatment modality used in the 1970s and 1980s (Copeland, 2002).

However, differences in physiotherapy practice are demonstrated if one compares the treatment note written by Mulligan (1974), advocating exercise with short-wave diathermy or microwave diathermy to the Mulligan Concept as advocated in Mulligan (2004). The difference reveals a shift of current physiotherapy knowledge and practical application from electrotherapy as a primary modality to a more 'hands on, movement orientated' style of practice. Physiotherapy practice is changing in regard to electrotherapy use but electrophysical agent education continues in undergraduate physiotherapy education (Laakso, Robertson & Chipchase, 2002).

Physiotherapists treat a wide range of human physical conditions. They use a broad variety of clinical tools in a wide variety of physical settings and in a changing environment of practice. Western Acupuncture is but one of many treatment modalities available for the physiotherapist to use.

Education for registration as a physiotherapist

To maintain registration, as a physiotherapist in New Zealand under the Health Practitioners Competence Assurance Act (HPCAA) (2003), ten competencies relating to physiotherapy practice must be demonstrated (NZPB, 2005). Following registration each physiotherapist is responsible for continuing to upgrade his or her skills and knowledge base as required and assessed by The Physiotherapy Board of New Zealand. Evidence of 120 hours continuing professional development over three years is now the minimum requirement for maintaining an Annual Practicing Certificate of Physiotherapy (NZPB, 2004a). Continuing professional development is "a range of learning activities through which professionals maintain and develop throughout their career to ensure that they retain their capacity to practise safely, effectively, and legally within their evolving scope of practice" (NZPB, 2004a, p.2).

Acupuncture has been confirmed by The Physiotherapy Board of New Zealand as being within the scope of physiotherapy practice under the HPCAA (2003) "following appropriate training" (NZPB, 2004c, p.9). However this 'appropriate acupuncture training' is unspecified in terms of levels of acupuncture qualification, practice and ongoing education.

As the New Zealand Health sector becomes increasingly more regulated through the HPCAA (2003) the scope of physiotherapy practice will become more clearly defined, with more conclusive definitions of the individual therapy competencies required. The HPCAA (2003) states that The Physiotherapy Board of New Zealand must set standards of clinical competence, cultural competence and ethical conduct to be observed by practitioners of physiotherapy (NZPB, 2004a). However acupuncture, as a profession in its own right is unregulated under the HPCAA (2003). Consequently it is not recognised as a health profession by the Health and Disability Commission (HDC) and Accident Compensation Corporation (ACC) (R. Paterson, HDC, personal communication to G. Campbell, May 18th 2005). Acupuncture organisations in New Zealand have joined forces and are currently forming a proposal for submission to the Government for the consideration of Acupuncture as a profession with its own Registration Authority under the HPCAA (2003). Should this proceed, as envisaged, then acupuncture will be recognised as a formal health profession in New Zealand. In order to practice acupuncture, practitioners will have to meet defined standards, notably in education, qualification and safety. At present anyone can call him or herself an acupuncturist and practice acupuncture regardless of their knowledge, practice, training and experience.

Apprehension regarding acupuncture practice

Currently, apprehension exists regarding physiotherapists' ability to practice acupuncture. Appropriate levels of education and ongoing competency requirements for New Zealand Registered Physiotherapists practising acupuncture wait to be determined. This sense of unease is compounded through several avenues, these being:

- The practise of acupuncture is not a taught as a compulsory component of the physiotherapy undergraduate programme.
- Some physiotherapy acupuncture practitioners have not acquired or maintained appropriate levels of acupuncture education as determined by PAANZ [the acupuncture special interest group of the New Zealand Society of Physiotherapy Inc].

- Differences between traditional Chinese acupuncture and Western acupuncture physiotherapy practitioners can be substantial, creating tension as to whose acupuncture practice is the most legitimate.
- Acupuncture is not regulated as a profession due to the lack of a registration requirement to practise in New Zealand. As previously mentioned, this allows any physiotherapist or person to set up and purport to practise any form of acupuncture without requirement or proof of acupuncture training.

Acupuncture and the different acupuncture paradigms

Acupuncture is generally known as treatment in which needles are inserted into the body to effect healing. For many, such procedures seem strange or esoteric (Griffiths & Taylor, 2005). Some people consider this akin to the practice of the occult (Fergusson, 1999). However acupuncture is increasingly being accepted as a treatment medium throughout the Western world. There are currently 270 physiotherapists with PAANZ membership; this acknowledges a body of physiotherapists practicing acupuncture in New Zealand (personal communication, P. Greenheld, July, 31, 2005). This number is only an approximation of all the physiotherapists who practise acupuncture in New Zealand, because physiotherapists practicing acupuncture do not have to belong to this special interest group.

The two main acupuncture paradigms utilised and taught formally in New Zealand are traditional Chinese acupuncture and Western acupuncture. The British Medical Association acknowledged the difference between traditional Chinese acupuncture and Western acupuncture in 1986 (Payne, 1986). There are many differences between the paradigms. The most significant differences are the rationales used for reaching a diagnosis, the diagnosis itself and the Western search to explain the treatment effects scientifically (Filshie & Cummings, 1999).

Traditional Chinese acupuncture is an integral modality of traditional Chinese Medicine (Filshie & Cummings, 1999; Stener-Victorin et al 2002). Filshie & Cummings (1999) describe traditional Chinese medicine as initially being developed “within the philosophical and cultural framework of Taoism…to submit

to the spontaneous impulses of one's own essential nature and to achieve unity with the Tao ['way'], the underlying pattern of the universe" (p.31). Qi [pronounced as chi] is postulated to balance all life. Its vital energy is integral to traditional Chinese Medicine; it is the metaphorical life-blood of traditional Chinese Medicine. It is the balancing of qi that keeps the person well. Traditional Chinese acupuncturists access qi through needling specific body sites to promote health and cure illness. In contrast, the Western acupuncturist takes a regular biomedical history and examination to make a conventional Western medical diagnosis. Some literature refers to this form of acupuncture as 'medical acupuncture' (Filshie & Cummings, 1999; Hodges & Maskill, 2002). A clear distinction in acupuncture diagnostic and practice methods is required because some Western trained practitioners may make a Western style diagnosis, but then apply traditional Chinese acupuncture principles to the treatment of the condition. For the purpose of this study a Western acupuncturist is defined as one who makes a conventional Western medical diagnosis and then utilises acupuncture needles to treat known anatomical and neurophysiological structures and systems relative to the problem (Ernst & White, 1999). The Western acupuncture approach has arisen in order to recognise that nerve endings and thus the nervous system is stimulated by acupuncture needle insertion, rather than hypothetical energy being moved in channel-like meridians (Ross, White and Ernst, 1999; Wood, 1993). The continued association of Western acupuncture to traditional Chinese acupuncture is inevitable. Western acupuncture is a discipline derived from the scientific explanation of traditional Chinese acupuncture. Practitioners use the same 'tools' and to the untrained eye are often perceived to be practising the same form of acupuncture.

Integration of acupuncture and physiotherapy in New Zealand

New Zealand physiotherapists are recorded as having practised acupuncture as early as 1972, when a member of the New Zealand Society of Physiotherapists laid a complaint about another physiotherapist for practicing acupuncture (Rapson et al, 1997; Scrymgeour, 2000). PAPMA, the acupuncture special interest group of the New Zealand Society of Physiotherapists was formed in 1982 and in 1998 was renamed PAANZ (Scrymgeour, 2000). In 1984, The Physiotherapy Board of New Zealand accepted acupuncture as a physiotherapy modality. The New Zealand

Society of Physiotherapy further acknowledged this later that year when PAPMA was formally recognised as a special interest group of the New Zealand Society of Physiotherapy (Rapson et al, 1997). Formal education courses in acupuncture run by PAPMA, for New Zealand physiotherapists commenced in 1983. These initial three two-day weekend courses have subsequently developed into a 150-hour education requirement to gain 'registration' as a physiotherapist practicing acupuncture (Scrymgeour, 2000). Registration is conferred by PAANZ as demonstrating advanced acupuncture knowledge and practical experience. PAANZ demonstrates rigour in its education programme by having many of its courses independently assessed by the New Zealand College of Physiotherapy.

Auckland University of Technology (AUT) has offered a Postgraduate Certificate in Western acupuncture since 1999 (Portrait, 1999). A University level Postgraduate Certificate of Acupuncture course at Otago University has recently superseded the PAANZ introductory education programme (Fincham, 2005). Both courses teach a balance of traditional Chinese and Western acupuncture, although the Auckland course is oriented strongly toward Western acupuncture education. A Postgraduate Certificate in traditional Chinese acupuncture is also offered through AUT. This course teaches traditional Chinese acupuncture concepts and is open to any practitioner with a relevant qualification. Although acupuncture is not taught as a curriculum subject in undergraduate physiotherapy programmes it can be studied through an elective course at one of the two physiotherapy schools (P. Larmer, personal communication, July 25, 2005). This provides a basic outline of Western acupuncture theory and practical knowledge (P. Larmer, personal communication, July 25, 2005). Physiotherapists may also study other acupuncture programmes such as New Zealand Qualifications Authority level of National Diploma of acupuncture. These courses are not developed specifically for physiotherapists. They are also available to 'lay practitioners', that is people without a Western biomedical background.

Selecting between fields of acupuncture study can pose a dilemma for the physiotherapist. Questions arise such as: Which is the most appropriate form of acupuncture for my practice? Or: Which is the 'right' acupuncture?

Lovesey, Taylor, Ellis, Liggins and Mokone (1997) have discussed some of the tensions associated with integrating acupuncture into physiotherapeutic practice. Lovesey noted she had difficulty in embracing the Chinese philosophical basis, which to her appeared an "elaborate story around the area concerned" (Lovesey et al, 1997, p.147). Yet she argued that with her knowledge of anatomy and physiology, acupuncture was very complementary to her other physiotherapy skills. Physiotherapists have found acupuncture to significantly improve community-based patient treatment outcomes. They also note that acupuncture equipment is far more portable than other physiotherapy equipment (Hopwood, 1993; Lovesey et al, 1997). Hopwood (1993) has suggested that orthodox Western medicine combined with acupuncture could become a "powerful tool" in physiotherapy practice (p.100).

Difficulties associated with the regulation of acupuncture in physiotherapy have centred on ensuring adequacy of training and safety (Rapson et al, 1997). Consequently many countries such as New Zealand, Sweden and the United Kingdom have worked to establish undergraduate elective physiotherapy acupuncture training (P. Larmer, personal communication, July, 25, 2005; Rapson et al, 1997). Interestingly traditional Chinese acupuncture theory appears to form the basis of acupuncture training in four of the six countries discussed by Rapson et al (1997).

> To some the discussion of traditional Chinese medicine is controversial… traditional Chinese medicine was not the background for its [acupunctures] official approval in Sweden…traditional Chinese medicine is only used as an introduction. The main purpose of these courses is an understanding of the neurophysiology required to be able to approach the acupuncture field" (Rapson et al, 1997, p.170-1).

Physiotherapists are beginning to acknowledge that Western acupuncture has a place in physiotherapy practice. It is complementary to other modes of physiotherapy treatment, particularly in the fields of musculo-skeletal pain and the promotion of soft tissue and nervous system healing (Rapson et al, 1997).

Supporting this notion, Bradnam (2003) proposed the 'Layering method' for Western acupuncture practice based on scientific knowledge of acupuncture physiological theories. She describes this method as underpinning clinical decision-making in Western acupuncture practice, thus endeavouring to determine treatment choices using a systematic approach. Therefore Western acupuncture practice in physiotherapy is based upon clinical decision-making, congruent with other physiotherapy practices. New Zealand physiotherapists are encouraged to critically appraise research evidence; prior experience, learning and one's own value judgements when making treatment choices (Lord 2005). However the available research evidence for Western acupuncture treatment is not yet considered to be definitive (Hay-Smith & Mercer, 2001).

Further tensions

The World Confederation for Physical Therapy was requested in 1989 by PAPMA to "accept acupuncture as a modality of physiotherapy" (Scrymgeour, 2000, p.137). This was to assist acupuncture practice rights for physiotherapists from countries where acupuncture was restricted to practice by the medical profession only (Scrymgeour, 2000). Some doctors were concerned that physiotherapists would not limit their acupuncture activities to their physiotherapy 'scope of practice'. They also had misgivings about physiotherapists piercing the skin (Hopwood, 1997; Rapson et al, 1997).

Acupuncture has been the subject of much debate in New Zealand and for some in the medical field, there is only grudging acceptance of the "deviant insiders" practicing acupuncture within their biomedical capacities (Dew, 2000, p.1792). The increasing cost of medical care and an ever increasing and aging population requiring care, has demanded the rationalisation of health services. Bury (1996) argues that health care "quality mechanisms and purchasing decisions should be based on sound evidence not on opinion, past practice and precedent" (p.75). As a result evidence based medicine is seen as a way of differentiating the 'good, effective, proven' treatment practices, from those perceived to be less so.

ACC as a major healthcare purchaser of physiotherapy in New Zealand has commissioned a systematic review of the effectiveness of acupuncture treatment in musculo-skeletal accidental injury (Hodges & Maskill, 2002). The outcome of this systematic review was that there was insufficient evidence given the small number of trials [six] and their heterogeneity, to draw any strong conclusions about the effectiveness of acupuncture treatment for musculo-skeletal injury. This leaves acceptance of treatments such as acupuncture in physiotherapy very open to debate. Purchasers such as ACC continue to seek for research-based evidential material to support the payment for treatments of 'alternative medicines' such as acupuncture. Because these trends toward evidential research are likely to continue, it is important that acupuncture demonstrates its efficacy in terms of the traditionally accepted format within research.

In the meantime New Zealand physiotherapists practising Western acupuncture are using prior knowledge of anatomy and physiology, learning from scientific literature and experiential practice in order to make their treatment choices.

Clinical decision-making

Edwards, Jones, Carr, Braunack-Mayer & Jensen (2004) argue that clinical reasoning is an important part of physiotherapy decision-making. Rothstein (2004) considers clinical reasoning as the ability to consider all of the relevant facts in order to determine and implement appropriate patient care.

Fifty years ago 'recent' advances in physiotherapy practice involved the use of ultrasound, a development from medical electricity (Wedlick, 1955). Wedlick, (1955) noted that use of modalities such as ultrasound would enhance physiotherapy practice only if the physiotherapist had an understanding of the value and limitation of the modality, in relation to the whole of physiotherapy. Accordingly to make appropriate physiotherapy decisions one must have all the known facts at one's disposal. Physiotherapy leaders, educators, outstanding clinicians, and 'gurus' have largely based their clinical decisions on practical experience and knowledge, underpinned by the scientific facts of the time. This provided much of the physiotherapy education prior to the advent of rigorous

structures of research, (Edwards et al, 2004; Rothstein, 2004). This is exemplified by Wedlick (1955) who wrote the following about ultrasonic therapy:

> A host of extravagant claims has done as great a disservice to this form of treatment as was done during the early development of ultra-violet therapy. It has a place, but a limited place in the scheme of physical therapy as a whole…ultrasonic therapy undoubtedly has a therapeutic effect and will sometimes succeed where all other forms of physical therapy fail…it has proved more than useful as a method held in reserve and used where other forms of physical therapy fail rather than as a routine or 'bread and butter' method of treatment (p.152).

The use and popularity of ultrasound as a means of effective physiotherapeutic treatment has exceeded the expectations indicated by Wedlick (1955). Therapeutic ultrasound appears to be the most commonly used and researched electrophysical modality used by physiotherapists (Chartered Society of Physiotherapists, 2002). ter Haar, Dyson, & Oakley (1987) showed that 20% of all physiotherapy treatments in the British National Health Service departments in 1985 involved ultrasound and 54% of all private treatments. Notwithstanding, the use of ultrasound as a physiotherapeutic tool is declining as the literature and personal evidence to the effectiveness of ultrasound remains to be provided (van der Windt et al, 1999). The question that the history of ultrasound development raises is: could Western acupuncture be the physiotherapy equivalent of ultrasound in the future?

Evidence-based practice and physiotherapy research in New Zealand

Prior to the mid-1990s the need for research to show the efficacy of physiotherapy treatment was not recognised (Scrymgeour, 2000). The turning point was the 1996 ACC publication: 'Low Back Pain Guide', where physiotherapy was challenged by ACC as being largely ineffective in the treatment of most low back pain problems (Scrymgeour, 2000). Physiotherapists then embraced the need for research to provide evidential proof that physiotherapy treatments were effective and therefore

worthwhile. In 1997 the New Zealand Society of Physiotherapists appointed a research officer whose two primary roles were the promotion of research activity and evidence-based practice in the profession (Lord, 2005). Evidence-based practice integrates current best evidence with expert clinical skills, integrating these two concepts appropriately for client centred care (Lord, 2005). However the scope of physiotherapy practice covers a wide range of conditions for which evidence is not always available (Scrymgeour, 2000).

Quantitative research methods have been the primary means by which physiotherapy research develops best practice. Scrymgeour (2000) considers that quantitative research, including the randomised controlled trial, has dominated physiotherapy research because of a "perceived need to be taken seriously in scientific circles" (p.81). Between 1997 and 2002 the value of physiotherapy led research was acknowledged outside the physiotherapy profession and physiotherapy research activity increased threefold (Lord, 2005). However physiotherapy research into acupuncture in New Zealand does not yet reflect the general 'threefold increase' as cited by Lord (2005). The effectiveness of Western acupuncture in physiotherapy remains open to challenge unless it is explored in a rigorous methodological capacity.

Physiotherapy, Western acupuncture and hermeneutic analysis

Physiotherapy developed through standardised training programmes based on the biomedical model, emphasising the combining of theoretical knowledge with practical skills (Nicholls & Larmer, 2005). The rationale for treatment focuses on the form and function of the individual, defined by the condition (Nicholls & Larmer, 2005). In physiotherapy, the injury or illness defined the person's presentation, rather than the characteristics of the person themselves. It is the treatment of the condition that is of interest to the physiotherapist and so it is the effect of the condition on a population that is of most value to the physiotherapist conducting research. Current research in physiotherapy values quantitative measurement, with emphasis on findings constructed from the researcher's perspective. This results in findings that focus only on the condition, rather than taking into consideration other factors that could affect the results. Rothstein

(2004), discussing the integration of science and experiential evidence into physiotherapy, argues “it is the behaviour of the physical therapists that takes them beyond the level of automaton…humanistic practice has been the hallmark of physiotherapy since the profession began” (p.310).

The desire to reveal the practice meaning of acupuncture from the physiotherapists’ point of view is the basis of this study. Engaging in interpretive analysis facilitates exploration of a new treatment modality and its impact on physiotherapy practice.

The pre-understandings that I bring to this study

Fourteen years ago, I attended two two-day acupuncture courses. A defined philosophy of practice was not then highlighted, but a rudimentary knowledge of acupuncture, basic needling skills and some ‘recipes’ to treat certain conditions were provided. Such education was commonplace in England where I first studied acupuncture (Campbell, 1990; Lovesey 1994; Zollman & Vickers, 1999). The need to better understand this esoteric, formulaic practice became increasingly obvious as my physiotherapy practice expanded. Recognising that my knowledge was insufficient, I enrolled in the Postgraduate Certificate of Western Acupuncture course at AUT. This programme comprised of three papers, the Specialist Practice subject area (40 points), a supporting Science paper (20 points) and a supporting Knowledge paper (20 points). I studied these part-time over eighteen months.

The challenge of new learning, given that I had graduated seventeen years prior to re-entering formal physiotherapy study, was very apparent. Time had seen a change of direction in learning. There had been a clear move to develop academic qualifications based on research as opposed to the apprentice style model previously in place (Vujnovich 1996). Studying Western acupuncture was valuable both in developing my practice and in increasing the confidence with which I could use the newfound knowledge and skills. The biomedical basis of Western acupuncture resonated strongly. Any claims to balancing one’s yin and yang, or enhancing the postulated substance of qi belonged in my mind with mysticism and folklore. As a result I came to this project with a belief in the superiority of Western acupuncture over traditional Chinese acupuncture.

A number of important pre-understandings form the basis of this study:

- I believe Western acupuncture to potentially be a Western scientific reconstruction of traditional Chinese acupuncture.
- I believe that Western acupuncture is a very useful physiotherapeutic tool.
- I believe that evidence-based practice based on the randomised controlled trial ignores essential elements of human individuality, choice and variation in practice.
- I believe evidence-based practice should draw knowledge from both quantitative and qualitative methodologies.

Laverty (2003) reminds that: "A hermeneutic approach asks the researcher to engage in a process of self-reflection…the biases and assumptions of the researcher are not bracketed out or set aside, but rather are embedded and essential to the interpretative process" (p.17). Pre-understandings create bias. A researcher cannot entirely remove his or her self from the research process, but through awareness of bias and engaged questioning the truth in the text can be made visible (Gadamer, 1960/2003).

In wanting to put a Western 'spin' on traditional Chinese acupuncture philosophy, I realised that my values reflect the technical rationalism and evidence-based philosophy which permeate the education and practice of physiotherapy in New Zealand. As a result throughout this project, I am conscious that I must remain aware of the nuances, spoken and unspoken texts that may elucidate different understandings.

I appreciate that success in postgraduate study has strengthened my confidence. I have greater understanding of physiotherapy, acupuncture, research and the world of practice. Consequently I believe my skills and practice as a physiotherapist are now more reasoned and effective. This is another pre-understanding that I bring to this study, yet I know it does not necessarily mean that such expertise can only be gained through higher learning.

According to Crotty (1998) the "justification of our choice and particular use of methodology and methods is something that reaches into the assumptions about reality that we bring to our work" (p.2). In being reflexively aware of my assumptions prior to the commencement of research and continually scrutinising

their effect on the analysis of data I will be able to draw on the notions and meanings expressed by the participants. Therefore the findings describe the understandings of the participants who represent New Zealand physiotherapists practicing Western acupuncture.

Definition of terms

- Western acupuncture is described as "the insertion of dry needles into the body at specially chosen sites for the treatment or prevention of symptoms and conditions" (White & Ernst, 1999, p.1). The site selection for the acupuncture needles insertion is based on anatomical, neurophysiological and pathological reasoning of the patient's condition. This is based upon a Western medical diagnosis to facilitate neurochemical and neurophysiological healing of the condition.
- Acupuncture - this term relates to the insertion of fine pin-like sterile needles into a persons body in order to facilitate a healing effect. This may be either traditional Chinese acupuncture or Western acupuncture. In Chapters 3 to 5, acupuncture refers to the Western acupuncture which the participants of this study practice.
- Western – as based in science, which has derived from predominantly Western geographical [European and North American countries] scientific knowledge.
- New Zealand physiotherapists – all of the participants in this study are New Zealand Registered physiotherapists who have studied Western acupuncture in New Zealand. Their understanding of Western acupuncture practice is based in the New Zealand practice model.

Overview of chapters

In Chapter One I have set the scene for this study both historically and culturally. Without background understanding of the factors influencing New Zealand physiotherapy practice, accurate interpretation of experiential meaning is compromised.

A justification for the use of hermeneutic-phenomenological methodology has been provided along with a preliminary discussion of relevant literature. I have also outlined my professional background and identified the pre-understandings that I bring to this study.

Chapter Two provides an overview of the two major acupuncture paradigms and their development in order to show differences in development. This is followed by a review of literature pertaining to the New Zealand physiotherapist practicing Western acupuncture. Issues relating to Western acupuncture and physiotherapy are discussed. The discourses and tensions relating to current acupuncture practice and knowledge in physiotherapy are explicated and will be discussed further in subsequent chapters.

Methodology and method are explained in Chapter Three. The hermeneutic and phenomenological philosophical notions that underpin the study are discussed.
An overview of the study participants' backgrounds is provided and the methods employed in the gathering and analyses of the data are described.
Finally, criteria for establishing the rigour of the study are discussed.

The following two chapters present the findings obtained by interviewing the seven participants. Verbatim excerpts provide the foundation for thematic description and analysis.

Chapter Four – 'A new tool for practice', describes the experience of coming to know Western acupuncture as a new tool. Through contemplation of both gnostic and pathic practice, embodiment of Western acupuncture in practice is demonstrated. Practise with a new tool reveals the possibilities and tensions in everyday practice.

Chapter Five – 'Western acupuncture as a challenge to technical rationality'. This chapter discusses the tool of Western acupuncture and how it presents some very important issues for physiotherapists in relation to our practice, our relationship with the public, our colleagues, our profession and other health professions. The Aristotelian notion of techne and phronesis and Heidegger's description of 'they'

assist in the uncovering of tensions in physiotherapy and Western acupuncture practice.

Chapter Six – This chapter begins with an overall summary of the meaning of Western acupuncture for New Zealand physiotherapists. It discusses the findings in relation to current literature and makes recommendations for practice, education, legislation and further research. It also outlines the strengths and limitations of this project.

Chapter Two: Literature Review

In this chapter I will review the literature pertaining to Western acupuncture and New Zealand physiotherapy. A recent review of research relating to Western acupuncture or any acupuncture from a qualitative perspective, revealed a paucity of literature in these fields. Almost all of the qualitative research in acupuncture treatment relates to client perception of acupuncture, such as produced by Griffiths & Taylor (2005) and Paterson & Britten (2004). Most acupuncture research pertinent to the New Zealand physiotherapist has been undertaken using quantitative methodology.

In this chapter, the background and development of Western acupuncture and traditional Chinese acupuncture will be discussed to establish the philosophies underpinning these paradigms. This will be linked to current physiotherapy practice in New Zealand. Evidence-based practice will also be discussed with particular emphasis on the relevance and clinical usefulness of quantitative and qualitative research of Western acupuncture for New Zealand physiotherapists.

Western Acupuncture

Western acupuncture is a "modern, scientific approach to therapy…which has developed from the introduction and evaluation of traditional Chinese acupuncture in the West" (Filshie & Cummings, 1999, p.31). Western acupuncture dry needle treatment is applied in the belief that acupuncture stimulates the nervous system and acupuncture points are selected for that purpose. This belief is based upon scientific research, which shows that acupuncture needling of humans has a physiological and a psychological impact (Andersson and Lundeberg, 1995; Stener-Victorin et al, 2002). Consequently Western acupuncture treatment is based upon the sciences of anatomy, physiology and pathology and scientific knowledge of pain neurophysiology and acupuncture mechanisms (Bradnam, 2003; Filshie & Cummings, 1999; Stener-Victorin et al, 2002). This provides a rationale based on a Western medical diagnosis to treat physical conditions with Western acupuncture.

History of Acupuncture

Acupuncture is known in Chinese as 'zhenjiu [針灸]', where zhen means needle therapy and jiu relates to moxibustion therapy (Birch & Kaptchuk, 1999; ipedia, 2004). Acupuncture is the practice of inserting very fine needles in particular points of the body to improve health and well-being. It is one component of traditional Chinese medicine. The word 'acupuncture' originated in "late seventeenth century Europe" (Birch & Kaptchuk, 1999, p.12). Nightingale (1994) notes the relative newness of the term 'acupuncture' and suggests that it derives from "the Latin acus (a needle) and punctum, (past participle of the word pungere, meaning to puncture or pierce)" (p.12). However acupuncture, as a practice is not new. The first needles 'bian' were developed during the Stone Age (Beijing et al, 1980). They were made of stone and provided a rudimentary form of acupuncture for healing purposes. Then, through the Iron and Bronze Ages, metal needles were developed. The first medical 'text' written in China describing acupuncture as a central component of traditional Chinese medicine was 'Huangdi-Neijing', which was compiled between 500-300 B.C. (Beijing et al, 1980). It is notable that the Chinese studied anatomy from the outer body. For cultural reasons they did not dissect human bodies in order to study anatomy or the workings of the inner body until the 20th Century (Filshie & Cummings, 1999). As a result the early Chinese descriptions of bodily organs and their functions are very different from current understanding in Western medical science.

Traditional Chinese medicinal texts reveal centuries of analysis involving observation and painstaking classification (Birch and Kaptchuk, 1999). However, Birch and Kaptchuk (1999) consider that the historical texts are not universally clear because of difficulties such as "vagueness of original expression, understanding the terminology of the language from the culture of the time, contradiction between texts and disagreements between texts" (p.12). This has resulted in a wide variety of forms of Chinese acupuncture (Birch and Kaptchuk, 1999).

Acupuncture spread from China to Korea and Japan in the 6th Century (Beijing et al, 1980). It reached Europe in the 1700s from Jesuit missionary contact with the Chinese (Baldry, 2005). However acupuncture did not commend itself to European medical practitioners until the 1800s. A few doctors in Britain practised acupuncture without using Chinese theories, but by inserting needles at the site of

greatest pain (Baldry, 2005). Acupuncture was more generally accepted in Europe, where in 1950 George Soulie′ de Morant was nominated for the Nobel Prize in physiology for his work in acupuncture (Davis, 1973). The Medical Acupuncture Society in Britain was founded in 1959 (Bivins, 2001). However it was not until 1971 that the 'discovery' of acupuncture reached Western public consciousness. A Western pressman was successfully treated with acupuncture during the 1971 Sino-American negotiation in Beijing (Bivins, 2001). Further worldwide publicity followed visits from American and British doctors to witness acupuncture analgesia (Bivins, 2001) and later when President Nixon visited China in 1972 (Baldry, 2005).

Having undertaken many investigations into acupuncture, the World Health Organisation in 1979 proclaimed acupuncture as a clinical practice, which due to the available evidence must be taken seriously as a treatment of significant value (Mole, 1992). This appearance of an integrated traditional medical practice strongly influenced the dissemination and practice of traditional Chinese acupuncture in the West (Birch and Kaptchuk, 1999).

Following the publicising of acupuncture to the Western populace, acupuncture, amongst other Eastern and esoteric therapies such as ayurveda, crystals and iridology captured the attention of the New Age movement (Wikipedia, 2005b). The term 'New Age' describes a form of contemporary Western culture, characterised by alternative and often esoteric interpretation and approaches to Western values based culture (Wikipedia, 2005b). 'Alternative' meant alternative to Western Judeo-Christian culture involving a differing spiritual dimension, such as the integration of mind, body and spirit as the primary ethos (Wikipedia, 2005a). People disenchanted with Western medicine and the materialistic West sought ways in which they could be seen as human beings with freedom of choice, rather than as purposeful machines (Mole, 1992; Wood, 1993). The Chinese philosophy of medicine, where one is an integral part of nature, or even the cosmos, appealed to those people (Mole, 1992). Hence the 're-introduction' of acupuncture to the West was labelled alternative. Not only was it Chinese, esoteric and different from Western medical practices, it was also embraced by Westerners who practised a lifestyle that was alternative from that of their forebears (Bivins, 2001).

Traditional Chinese medicine

Chinese Philosophy is embedded in traditional Chinese medicine. Quah (2003) describes the main pillars "forming the cosmology of traditional Chinese medicine as: yin-yang, the Five Elements, and qi" (p.2002). These 'pillars' comprise the basis of traditional Chinese medicinal diagnosis and treatment. Their theoretical basis is deeply complicated. Simply put, qi is the lifeblood to the traditional Chinese medicinal concept of human health. Qi is believed to be an innate energy that flows through the body in a network of postulated channels called meridians, which are either parallel to or mixed with the circulation of blood (Quah, 2003). Qi is balanced through its yin and yang, a binary opposition of interdependent aspects, akin to hot & cold and black & white (Lewith & Lewith, 1983). Traditional Chinese medical theory holds that acupuncture works by the needles redirecting qi [vital energy] in the body. Pain indicates blockage of the flow of qi and an axiom of the medical literature of traditional Chinese medicine is "no pain, no blockage, no blockage, no pain" (ipedia, 2004). To remedy an accumulation or deficiency of qi, one treats pain or illness through the balancing of the yin [negative aspects] and yang [positive aspects] within the five elements [postulated regulatory body system]. Thus, traditional Chinese medicine is the application of traditionally developed theories to ascertain imbalance within the person. An illness or injury is diagnosed through objective and subjective criteria that are entirely different from those used in Western medicine. Similar tests may be used in both paradigms, such as examining the tongue or feeling a radial artery pulse, but a Western doctor palpates the radial artery pulse entirely differently from a traditional Chinese medicine practitioner who may be feeling for one of the 'six different pulses' of the radial artery at each wrist (Lewith & Lewith, 1983).

Traditional Chinese medicine is based on a variety of modalities. Traditional Chinese medicinal practitioners often combine their acupuncture skills with other treatment modalities such as the prescription of herbs and the use of cupping [creating a partial vacuum on the skin with a cup] and moxibustion [burning small pieces of dried Artemisia vulgaris plant to heat the skin] (Birch & Kaptchuk, 1999; Lewith & Lewith, 1983). Other Eastern practices used in conjunction with acupuncture may include shiatsu [massage], scarification [counterirritation] (Kaptchuk, 2002) and Tui na [Chinese manipulative therapy] (Wikipedia, 2005c).

The influence of politics on traditional Chinese medicine

The use of acupuncture in China declined in the 18th Century. This was possibly because of the use of herbal medicine, possible ineffectiveness of acupuncture itself or the rise of Confucianism (Payne, 1986). The new knowledge of 'Western medicine' probably also played a hand in this, because the Jesuit missionaries and later, the Dutch East Indies Company traders with their accompanying medical officers facilitated the exchange of Eastern and Western medical practices during the 17th century (Ulett, Han & Han, 1998). Interestingly the Imperial Medical College was forbidden to teach acupuncture in 1822 (Payne, 1986). Then in 1911 when the Manchu dynasty fell, a new Republic was created where traditional values, beliefs and 'feudal medicine' were not valued (Mole, 1992). Chinese medicine and remedies were abolished in 1914 (Mole, 1992) and traditional Chinese medicine was outlawed as a medical practice in 1929 by the Nationalist Government (Payne, 1986; Schnorrenberger, 1993). However acupuncture, as a 'simple folk medicine', continued in practice throughout China, because there were too few Western trained doctors to deliver services, especially rurally (Payne, 1986). In 1954 the Communist regime, that had dismissed acupuncture as not being congruent with the 'scientific' principles of Marxism (Mole, 1992), decided that acupuncture was a part of the medical legacy left from the motherland and its practice was incorporated once again into the Chinese health care system (Mole, 1992). The need to provide an inexpensive system of health care for all Chinese people meant that a simplified and systemised way had to be developed, alongside conventional biomedicine (Mole, 1992; Quah, 2003; Wood, 1993). The political climate of the 1950s also meant that the theories of Chinese medicine were adjusted to be more in keeping with the 'spirit of the age'. A demand created by the state was that "traditional Chinese medicine must be fostered as an icon of Chinese culture" (Quah, 2003, p.1998).

Traditional Chinese medicinal theory of yin/yang found theoretical favour in the 1950s because, according to Maoist thinking, it is a rudimentary dialectic, whereas the Five Element theory, with its emphasis on the spirit of each element was disregarded because of its potential to lead those who utilised it to debate idealism and metaphysics (Mole, 1992). The Chinese Governments health policy shifted in the 1990s from traditional Chinese medicine precepts towards Western biomedicine (Quah, 2003). However because of the dual training of many biomedical

practitioners in both paradigms, traditional Chinese medicine continues to be used in conjunction with 'Western' biomedicine for patients. These practitioners believe traditional Chinese medicine to be safe and effective, although they are uncertain about how and why it works (Harmsworth & Lewith, 2001; Quah, 2003).

Traditional Chinese acupuncture

Traditional Chinese acupuncture is the application of 'dry' acupuncture needles in accordance to the individual traditional Chinese medicine diagnosis. The needles are known as 'dry' needles to differentiate from needles used for injection purposes. Often in the treatment of musculo-skeletal conditions, acupuncture points used in traditional Chinese acupuncture treatment will loosely correspond to points selected for Western acupuncture treatment. For example Lewith & Lewith (1983) describe acupuncture points used for the treatment of arthritic shoulder pain using traditional Chinese principles. These points correspond to anatomical locations local to the shoulder joint and surrounding musculature, such as those used by an acupuncturist using Western principles. However other acupuncture points selected by the traditional Chinese medicine practitioner may be very different, such as using point 'Tiaokou [Stomach 38]' in the front of the lower leg, to treat shoulder pain (Lewith & Lewith, 1983). Thus there can be similarities in traditional Chinese acupuncture and Western acupuncture needling, but the means of reaching a diagnosis and determining therapy is radically different in each of the two paradigms.

Research into the system of traditional Chinese acupuncture

There has been much research done to identify the morphological structure and electrical properties of the acupuncture point and acupuncture meridians (Ahn, Wu, Badger, Hammerschlag, & Langevin, 2005; Bossy, 1984; Dung, 1984; Ciszek, Szopinski & Skrzypulec, 1985). Currently an anatomical or neurophysiological entity to explain the property of meridians remains elusive. Becker (1974), as cited by Hopwood (1993), believes that meridians can be shown as electrically distinct and that acupuncture needling triggers neural and neurotransmitter effects by changing the properties of the meridians. It has been proposed that acupuncture

meridians may correspond to connective tissue planes (Ahn et al, 2005). However other trials have demonstrated inconclusive results of electrical connective tissue impedance in the evincing of meridians (Ahn et al, 2005).

Acupuncture points have been thought to contain common properties to indicate they are distinct entities as postulated in traditional Chinese medicinal theory. This has been refuted and it is thought that several anatomical structures might be responsible for acting as effectors at different acupuncture points (Peuckar, 2005; Wood, 1993). Consequently the existence of meridians and acupuncture points as described in traditional Chinese theory have not been conclusively demonstrated. Therefore different understandings of acupuncture structures, theories and science have developed as Western acupuncture has developed from traditional Chinese acupuncture theories (Mole, 1992). This has created tension, because practitioners of different acupuncture paradigms might not understand others' practice, nor believe in it.

Development of Western Acupuncture

The British physician and acupuncturist, Felix Mann first encountered acupuncture in France in the 1950s (Baldry, 2005). Mann considered he was medically 'unorthodox' because he used acupuncture without knowledge of how it worked (Bivins, 2001). Mann (1998) considered that the results traditional Chinese acupuncture achieved were not through the postulated traditional Chinese medicinal methods. His acupuncture teaching from the mid 1970s was based largely upon Western acupuncture principles (Campbell, 1998). Thus a modified version of acupuncture, based on anatomical distribution of acupuncture points, came to be practiced in both the West and China (Payne, 1986).

As alternative medicinal practices gained popularity in the Western world, a variety of research projects including those on acupuncture have been undertaken (National Institute of Health (NIH), 1997). These include laboratory studies and clinical trials in order to gain more understanding of the mechanism of action resultant from acupuncture needling. The scientific world has also made advances in relation to the neurophysiology of pain, which has provided further insight into the possible mechanisms of acupuncture action (Baldry, 2005; Carlsson, 2002; Filshie &

Cummings, 1999). Chinese acupuncture by contrast uses a very different representation of energy balance (NIH, 1997). Many consider the concept of energy flow in meridians implausible, so they consider it essential to have an understanding of the neurophysiology of acupuncture in order to refute the concept of yin, yang, qi and meridian therapy (Stener-Victorin et al, 2002).

The New Zealand Ministry of Health, Ministerial Advisory Committee on Complementary and Alternative Health (MACCAH) has not recognised Western acupuncture as an acupuncture treatment of differing philosophical and theoretical nature from traditional Chinese acupuncture (Ministerial Advisory Committee on Complementary and Alternative Health (MACCAH), 2003). In illustrating the differences between the two paradigms, Campbell (1998) argues that traditional Chinese medicine theory is a representation of a biomedical practice, which does not belong to modern science. Campbell (1998) compares traditional Chinese medicine theory to Ptolemy's theory of the solar system. Ptolemy's theory was accepted as truth in its day, but has now been superseded by Copernicus's theory of the solar system, which is, as we now know it. Campbell (1998) argues that the theory of traditional Chinese medicine in acupuncture is unnecessarily complicated. He also considers it to be static, because any new phenomenon under traditional Chinese medicine "comes back ultimately to yin and yang" (Campbell, 1998, p.153). He implies that traditional Chinese medicine theory is relevant historically and Western acupuncture is the new and 'correct' way of knowing acupuncture theory and practice.

Acupuncture Philosophical Divide: The East/West paradox

There is a deep philosophical divide between Eastern and Western acupuncture philosophies of practice. Observation and the acquisition of empirical clinical experience over time was the method behind development of traditional Chinese acupuncture (Lewith & Lewith, 1983). In a semi-feudal culture traditional Chinese acupuncture progressed relatively unimpeded over the first 2000 years (Beijing et al, 1980), contrasting with Western medical practices, which have often been driven by "social, political and religious influences" (Filshie & Cummings, 1999, p.34-5). Galileo and Descartes are significant contributors to Western thinking and development of the scientific method in the search for truth (Russell, 1961/1996).

Descartes proposed a theory, later named the Cartesian theory, which views mind and matter as two parallel but independent worlds, which can be examined separately from the other (Russell, 1961/1996). Cartesian dualism of mind and matter is based upon Descartes cogito – "I think, therefore I exist, [cogito ergo sum]" (Ehrlich, 1986, p.72). Cartesian thought identifies the body as a machine, without the ability to move itself, driven by causality, akin to the mechanics of a car (Leder, 1984). Whereas the mind was perceived as possessing the thinking self, encompassing the spiritual aspect of being human (Leder, 1984). Thus if the body is considered as a machine, it can then be tested experimentally and subject to physical repair. Each body should be able to act as the other. However Chinese medicine has never differentiated the mind and body as being separate entities (Mole, 1992). Mole (1992) believes that this fundamental difference emphasises the different philosophical, theoretical and practical basis of the two systems. However in the West, the legacy of Descartes continues to dominate medical practice. This contrasts with the Chinese who are not so concerned about issues of knowing and proving, as "contradictions can coexist easily in the Chinese mind, so there is no real conflict between the traditional and more scientific approach to acupuncture and furthermore, they see this combined approach as mutually beneficial" (Lewith & Lewith, 1983, p.138).

Recognition of a number of contradictions leads me to engage with these in this study. The primary tension relates to the practice of Western acupuncture in physiotherapy. Physiotherapy is a scientific Western biomedical practice, whereas acupuncture has its roots in traditional Eastern medical philosophy, which by Western standards is considered alternative, complementary and non-scientific. For some people acupuncture is exotic, while others are sceptical of its effects. Many Western acupuncture practitioners believe Western acupuncture to be 'camouflaged' and misinterpreted as the mechanism of acupuncture is often linked to traditional Chinese medicine (Stener-Victorin et al, 2002). However traditional Chinese medicine, through its recent association with Western medicine, is now partially understood in terms of neurophysiological concepts (Andersson & Lundeberg, 1995; Stener-Victorin et al, 2002)

The 'renewal' of acupuncture in the 'Western world' has created debate and controversy, largely because of a poorly understood theoretical foundation (NIH, 1997). This is exemplified in a rebuttal of a paper published by the National Council against Health Fraud (NCAHF) in 1991. Schnorrenberger (1993) argues the

NCAHF made an erroneous assumption, when in 1991 it stated that acupuncture had not been proven to be effective by modern standards, and so acupuncture was fraudulent. Schnorrenberger suggests conventional Western medicine could be held to the same assumption (Schnorrenberger, 1993). A NIH (1997) consensus statement noted: "The data in support of acupuncture are as strong as those for many accepted Western medical therapies…the incidence of adverse effects is substantially lower than that of many drugs or other accepted medical procedures used for the same condition" (p.7-8). Stener-Victorin et al (2002) concur with the NIH (1997). Furthermore they state that many alternative treatments, such as acupuncture, require further rigorous testing to establish efficacy and that this is also the situation with many conventional medicine procedures. Physiotherapy is also largely based on empirical understandings and many physiotherapeutic procedures lack efficacy proven by definitive research including the randomised controlled trial (Research Committee [Victorian Branch] of the Australian Physiotherapy Association and invited contributors (Research Committee) 1999; Harland, 2003; Stathopoulos & Harrison, 2003).

Clinical decision making in physiotherapy practice

The value of physiotherapy has and continues to be difficult to demonstrate. This is due to the variable nature of practice and the variety of implements or ways of approaching and treating similar conditions (Scrymgeour, 2000). Physiotherapists have tended to base their practice upon three types of evidence: "clinical experience, biological rationale, and the results of explicit tests of the effects of interventions" (Research Committee, 1999, p.167). This is known as the hypothetico-deductive method (Rivett & Higgs, 1995; Edwards et al, 2004). The hypothetico-deductive model's origins were from the empirico-analytical research paradigm (or scientific or positivist paradigm). This paradigm believes that knowledge garnered from truth or reality is measurable, such as through the randomised controlled trial (Edwards et al, 2004). Experimentation and observation are measured to result in a predictable and generalisable outcome. Thus the reasoning of science has created a rational technological process of practicality and utility (Rolfe, 2000).

The hypothetico-deductive/empirico-analytical research paradigm does not acknowledge the everyday 'lived world' of the patient, his or her health problem and

the importance of the clinical practice relationship between patient and therapist (Edwards et al, 2004). Moreover, it must be recognised that most physiotherapy and acupuncture clinical reasoning research has taken place in the laboratory, rather than in practice. Therefore it does not consider the interplay of meaning of practice for the clinician and the patient (Edwards et al, 2004; Verhoef, Casebeer & Hilsden, 2002).

Clinical practice is underpinned by clinical reasoning; without this thinking and reflexive process, clinical decision-making of practice becomes technical practice, based upon recipes for treatment (Edwards et al, 2004; Jones, 1995; Research Committee, 1999). The clinical reasoning process in physiotherapy combines logical and intuitive reasoning. It is an intuitive art combined with practical and clinical science (Bury, 2003; Fritz, 2004; Hack, 2004; Rivett & Higgs, 1995).

Physiotherapy practice, philosophy and evidence based practice

> Science and philosophy have for centuries been sustained by unquestioning faith in perception. Perception opens a window on to things…science has first been merely the sequel or amplification of the process which constitutes perceived things…so the scientific concept is the means of fixing and objectifying phenomena…in thus developing the concept of a thing, scientific knowledge was not aware it was working on a presupposition…the sole conceivable being remained defined by scientific method. The living body, under these circumstances could not escape the determinations which alone made the object into an object and without which it would have no place in the system of experience (Merleau Ponty, 1962/2002, p.62).

As science in medicine developed, science has amplified good aspects of practice, but has also objectified practice and called for it to be based in science rather than experience. Physiotherapy practice was based initially in massage (Nichols & Larmer, 2005; Scrymgeour, 2000). It has evolved into present day practice because

of physiotherapists being open to other treatments complementary to physiotherapy. Early research in physiotherapy was performed in orthopaedic settings and was orientated to the diagnostic process (Edwards et al, 2004). This research was analogous with most historical biomedical research which utilised quantitative methods (Laverty, 2003). Emphasis was placed on the assumption that aspects of the world could show predictability and generalisability and thus, yields universal statements of scientific theory (Munhall, 1989; Laverty, 2003). In the contemporary world of health care, such research is either labelled evidence-based medicine or evidence-based practice.

> Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgement that individual clinicians acquire through clinical experience and clinical practice (Sackett, Rosenberg, Gray, Haynes, Richardson, 1996, p.71).

Evidence-based medicine should be underpinned by understanding the interplay between clinicians and patients, combined with the use of evidential literature (Fritz, 2004). Research methods deriving from quantitative and qualitative paradigms enable fundamentally different aspects of the biomedical sphere to be explored (Carpenter 1997; Fritz, 2004; Verhoef et al, 2002). However, reliance upon evidence-based medicine as the only means of disseminating 'good' research has resulted in a strong allegiance to the "gold standard of randomised controlled trial evidence" to prove the efficacy of interventions (Fritz, 2004, p.332). Some critics such as Miles et al. (1997, 1998, 1999, 2000, & 2001), Charlton (1997) and Tonelli (1998), as cited in Upshur (2002), consider that "evidence-based approaches represent a narrow reductionism that ignores clinical judgement and experience, and that evidence-based approaches foster an inappropriate reliance on epidemiology and statistical methodology, particularly a dogmatic adherence to the randomised controlled trial" (p.113). The complex interplay between evidence and differing

needs of patients and the differing skills of clinicians is not always apparent in the evidence (Fritz, 2004). This means the underlying issue of what clinicians know is neglected by evidence-based research approaches (Tanenbaum, 1993 and Malterud, 1995, as cited in Upshur, 2002).

Sackett et al (1996) suggest that evidence-based medicine should not be restricted to the results from randomised trials and meta-analyses. However the regulators, purchasers and teachers of physiotherapy in New Zealand have prioritised scientific knowledge in the form of evidence-based medicine (ACC, 2003; Lord, 2005; MACCAH, 2003). Groups such as the New Zealand Guidelines Group have produced evidence-based practice guidelines funded by ACC and other health based funding bodies. Thus a dominant discourse of funding care practices, that demonstrate both financial efficiency and treatment efficacy, is beginning to become apparent.

The final result of applying evidence-based medicine through the clinical reasoning process should be the patient/client outcome (Fritz, 2004). The results of randomised controlled trials or systematic inquiry may however not be relevant for all individuals. It is the interpretive paradigm that provides insight into the realities and experiences of the players in the equation (Fritz, 2004; Verhoef et al, 2002). Moreover, the plethora of medically related information available means that some clinicians find it difficult to keep up to date (Jensen, Gwyer, Shepard, Hack, 2000; Rothstein, 2004). There are gaps in physiotherapy literature about best treatments in many biomedical fields (Guccione, 2003). This highlights another contradiction. Without evidence of an effect it is unethical to promise cure and recovery, however, if a method works effectively it would be unethical to not provide that treatment (Stener-Victorin et al, 2002).

Evidence-based medicine and the randomised controlled trial

It has been acknowledged that the randomised controlled trial is a proven and an invaluable tool for the trialling of new drugs (Paterson & Dieppe, 2005). However, the testing of a drug is very different from the testing of complex interpersonal

interventions such as the application of physiotherapy and acupuncture (Paterson & Dieppe, 2005).

The certainty expected in science accepts the validity of that which cannot be doubted. This is a very different notion to what can be understood as the surety realised in life (Gadamer, 1960/2003). Methods such as the randomised controlled trial, systematic review and meta-analyses are constructed knowledge; created for the purpose it is developed to serve (Crotty, 1998). Developing outcome-orientated knowledge, randomised controlled trials are argued to be 'value free'. This 'value free' notion of the randomised controlled trial limits the relationship between the investigator and participant through blinding and elimination of bias. This has been challenged as limiting the 'making of meaning' of different kinds of human experiential knowledge (Laverty, 2003; Polkinghorne, 1983). The 'making of meaning' should encompass meaning of all aspects of a trial, not simply the results. To encompass all aspects of a trial the characteristic elements of a trial cannot be separated from incidental elements, as these incidental elements may be fundamentally connected to the characteristics of human interplay (Paterson & Dieppe, 2005). Incidental effects [non-specific effects] are factors that may affect patient outcomes. These include factors such as the therapeutic relationship, environment, expectations and other effects non-specific to the treatment. Characteristic factors [specific effects] are therapeutic actions, which are theoretically derived. They are considered unique to a specific treatment and "believed to be causally responsible for the outcome, for example, a drug" (Paterson & Dieppe, 2005, p.1202). Therefore some evidence-based medicine advocates admit "evidence is never enough" (Upshur, 2002, p115). Guyatt et al (2000b) are cited in Upshur (2005) as arguing that there are essential dimensions to include and evaluate in a trial, such as a clinician's sensitivity to need, listening skills and openness to the other, and comprehension of the patient's condition relative to their culture, personality and experience. These dimensions of context, preference and values are essential to clinical decision-making, yet are not appropriately considered in the evidence-based medicine process (Upshur, 2002). Consequently, the therapeutic interpersonal relationship could be considered as placebo [incidental factors], but cannot be separated from the treatment (Paterson & Dieppe, 2005). This highlights the problem of the objective, Cartesian scientific paradigm, for to consider the therapeutic relationship as 'placebo' reveals the antithetical value of the human consciousness. Thus in current Western biomedical thinking,

physiotherapy, Western acupuncture, and other biomedical practices aim to be based upon the evidence gained from the randomised controlled trial and meta-analyses information of a practice. This is what constitutes the 'best' evidence-based practice in biomedicine.

The simple notion that all people are different in some way and because of those differences they can react in dissimilar ways to the same treatments appears to be ignored by modern research discourse (Harland, 2003). It removes the essence of being human. It disembodies the person from their world and from science's way of being in the world. Munhall (1989) describes people as individuals having choice and self-determination; these are essential to active being. The practitioner must assess an individual holistically, rather than 'break' them into parts quantitatively, and piece them back together (Munhall, 1989). Interpretative theoretical perspectives offer holistic study of human phenomena (Verhoef et al, 2002). So they differ from objective 'theories of knowledge' where meaning is created independently from consciousness and experience (Crotty, 1998). Interpretative perspectives include hermeneutics and phenomenological research methodologies. These methodologies are oriented to the study of the meaning of everyday human life. It is through openness to further possibility of meaning that human experience and interpretation lead to ongoing understanding. This would enable the accounting for human complexity and contradiction, such as experienced in this study, exploring the meaning of Western acupuncture in New Zealand physiotherapy.

Research into acupuncture

There has been a paucity of published acupuncture research from New Zealand. Bradnam published work relating to Western acupuncture clinical reasoning in 2003 (Bradnam, 2003). Chan, Vujnovich, & Bradnam-Roberts (2004) studied the effect of acupuncture on alpha-motoneuron excitability using the soleus H-reflex. Their findings suggested that acupuncture may have a useful treatment effect in clinical conditions associated with increased alpha-motoneuron excitability. However most of the recent academic literature is limited to postgraduate dissertation studies. This literature is predominantly of systematic review and analysis of available literature such as that of Abbas (2002) & Levien (2002).

Acupuncture has yet to be validated by evidence-based-practice. Hay-Smith and Mercer (2001) state that evidence to the efficacy of acupuncture exists and "to date it does not support the efficacy of acupuncture for musculo-skeletal pain" (p.14). However, the methodological quality of most previous acupuncture studies has been rated poorly by the Western quality-based analysis system (Bradnam & Larmer, 2001; Ernst, 1999; Ezzo et al 2000; Filshie, & Cummings, 1999; Hay-Smith & Mercer (2001); Hodges & Maskill, 2002; MACCAH, 2003; Stener-Victorin et al, 2002).

Acupuncture trials have been limited because of difficulties adhering to the protocols established in evidence-based medicine (Stener-Victorin et al, 2002). The issues of credible placebo, controls and blinding of patient, therapist and assessor are particularly troublesome (Ernst & White, 1999a). This is exemplified by the act of acupuncture. Simulating the manner in which an acupuncture needle enters the person's body, without actually piercing the skin is one problematic aspect (Ernst, 1994; Ryan, 1999; Vincent & Lewith 1995; White, Lewith, Prescott, & Conway, 2004). A credible placebo must mimic the acupuncture needle insertion, yet not enter or heavily pressure the skin, because this could create the acupuncture effect. Placebo needles have been developed which look like acupuncture needles, causing the same tap penetration sensation, so patients cannot differentiate this from real acupuncture treatment (Streitberger and Kleinhenz, 1998). In clinical trials the Streitberger placebo needle has been shown as less effective than 'real' acupuncture (Kleinhenz et al 1999). This 'needle' still relies on acupressure of the skin to elicit acupuncture like effect. The fact that it is held in place by a plastic ring covered in plaster creates further skin sensation, which may also confound the results. It is interesting that recent searches of the literature have not revealed further evaluation or use of the needle developed by Streitberger and Kleinhenz (1998).

Sham needling [the insertion of acupuncture needles into non-acupuncture points] is not inert because central and peripheral nervous system effects such as diffuse noxious inhibitory control [DNIC] are provoked by acupuncture needle insertion (Le Bars, Dickenson, & Besson, 1979). Sham acupuncture needling almost certainly enacts the 'placebo effect' [non-specific treatment effect], because it stimulates the body's endogenous opioids (Filshie & Cummings, 1999; Thomas, 1997). The placing of needles anywhere in the body may create an endorphin response related to the patients' own reaction to receiving treatment, because acupuncture shares

common pathways with the placebo effect (Filshie & Cummings, 1999; Thomas, 1997).

It is suggested that acupuncture is an extremely effective non-pharmacological method to activate placebo effects. This is because psychological factors are able to create the neurophysiological endogenous response, which is the result of acupuncture needling (Stener-Victorin et al, 2002; White, 1999). Furthermore, it is presumed in any acupuncture trial that all of the results are characteristic of the needle effect only; that processes endemic to therapeutic treatment such as of talking, listening, focussed attention and empathy are not of consequence (Filshie and Cummings, 1999; Paterson & Dieppe, 2005). Thus, both the treatment group and all other groups receive the same 'elements' as a part of treatment. These 'elements' should be considered in the estimation of the treatment effect (Paterson & Dieppe, 2005). Therefore within a trial many interventions may occur, but not all intervention results are accounted for, such as the patient's responsiveness to the whole of the therapeutic encounter (Paterson & Dieppe, 2005; Thomas and Lundeberg, 1996).

There are other evidence-based medicine confounders to acupuncture research. Ryan (1999) calls into question interrater reliability, as does Birch (1997), who also discusses issues, such as the huge degree of theoretical disagreement amongst the major acupuncture schools about needle technique, the need to produce a de-qi sensation [acupuncture needling sensation], variation in point selection/location, individualisation of treatment versus standardisation and treatment technique. Ernst (1994) argues against any formulaic approach to traditional acupuncture treatment on the basis that "acupuncture is individualised in at least two dimensions: it accords the initial treatment plan to the uniqueness of each individual and subsequently may change this plan over time according to changes occurring in the individual" (p.94). Ernst's concern is valid for all individualised treatment plans given that physiotherapists often combine acupuncture with other physiotherapy modalities, such as exercise or joint mobilisation in order to enhance the treatment effect (Kerry, Rushton & James, 2003; Scrymgeour, 2000). Furthermore, the multi-factorial nature of many musculoskeletal disorders may have a complex aetiology. For example injury may be longstanding or recent and overlaid with a condition of degenerative nature, such as osteoarthritis or osteoporosis (Hodges & Maskill, 2002). It is argued that through analysis of relevant literature and philosophical critique, an investigation of physiotherapy has shown physiotherapy to be of a

complex nature (Fritz, 2004; Jensen et al, 2000; Kerry et al, 2003; Paterson & Dieppe, 2005). This complexity of multiple aspects of professional practice depicts physiotherapy activities, such as manipulative therapy, to require specialist investigation in order to gather meaningful understandings about the activity of physiotherapy (Kerry et al, 2003).

It is also argued that Western acupuncture research does not tend to inform practice nor improve patient outcomes (British Acupuncture Council, (BAcC), 2002). The BAcC (2002) noted in their research strategy document that most acupuncture trials undertaken in the West have tried to measure the active effect of the needles rather than the non-specific effects of the whole treatment. They have also criticised the rigid trial designs for not taking into account the individual nature of the assessment and provision of acupuncture treatment. The BAcC (2002) believes that the external drive to prove acupuncture does not necessarily improve the understanding and efficacy of acupuncture as a treatment modality for the acupuncturist.

MACCAH (2003) acknowledge the difficulties inherent in applying randomised controlled trials to acupuncture research. They cite the Foundation for Integrated Medicine (1997) who published a table of suggested research methods to investigate key complementary and alternative medicines. Suggested methods included “case-control studies action research and qualitative studies” (MACCAH, 2003, p.34).

Despite the flaws shown to exist when using randomised controlled trials to measure the effectiveness of complementary and interpersonal therapeutic treatments, the randomised controlled trial can still be of significance (Stener-Victorin et al, 2002). For example Stener-Victorin et al (2002) cite published studies, which through randomised controlled trial, support the use of Western acupuncture in assisting women with polycystic ovarian syndrome and anovulation in reproductive medicine. These studies cannot however, address how the meaning is given to the experience of an intervention and so it is argued that qualitative research is more appropriate when seeking understanding of the impact of the context and process of an intervention (Verhoef et al, 2002).

Little is gained from the polarisation of qualitative and quantitatively derived knowledge. The relationship between research and clinical practice needs to be reflexive, for as Crotty (1998) states, scientifically established facts and subjective understandings are both of great importance in our lives, but each constitute a different kind of knowledge. It has been argued that research of complex

interventions, such as acupuncture, may be suited to other research approaches or a mixture of both qualitative and quantitative methods (MACCAH, 2003; Paterson & Dieppe, 2005; Verhoef et al, 2002; Vuckovic, 2002). Thus, effects of treatment both characteristic and incidental can be evaluated and subjected to analysis in an appropriate rigorous format in the ongoing search for knowledge.

Conclusion of Literature review

In the absence of definitive data proving Western acupuncture as a biomedical treatment in New Zealand, the question must be asked: What encourages physiotherapists to study and gain experience using Western acupuncture in practice, which is not proven in Western evidence-based practice research? Furthermore what encourages physiotherapists to continue with that practice, when funding agencies are becoming increasingly reliant on evidential literature to support payment for a practice? Perhaps there are dimensions of practice that Western acupuncture exemplifies that are not evinced through quantitative research. The following chapter describes the hermeneutic approach taken to better understand the meaning of Western acupuncture to physiotherapists currently practising in New Zealand.

Chapter Three: Methodology and Method

This chapter outlines the philosophical notions that inform this study. It then explains how these have influenced the gathering and interpretation of the data to present a thematic analysis of the findings congruent with the philosophies of Gadamer (1960/2003), Heidegger (1927/1962) and van Manen (1997). Hermeneutic and phenomenological methodology was selected because the research question sought to explicate the meaning of Western acupuncture for New Zealand physiotherapists.

Hermeneutic Phenomenology

"Hermeneutics is the theory and practice of interpretation" (van Manen, 1997, p.179). Phenomenology is a descriptive, reflective discipline that endeavours to describe, through conscious acts, how the essential features of the lifeworld are composed and experienced (van Manen, 1997). It focuses on the lived experience of those in the world rather than the conceptual, theoretical or scientific account of it. Thus hermeneutic phenomenological methodology draws out meanings that are in some sense embedded in human actions (van Manen, 1997). The meanings implicit in our actions are a part of our everyday lived experience or 'lifeworld'. Lifeworld refers to the "natural attitude of everyday life which Husserl described as the original, pre-reflective and pre-theoretical attitude" (van Manen, 1997, p.7). The lifeworld includes the phenomena or 'objects and events' that are experienced in the minutiae of our lives. Therefore the lifeworld is 'saturated' with meaning (Rummel, 2004). This meaning includes those which are the taken for granted, or commonsense practices, relationships and language that are part of everyday experiences (Leonard, 1989). In recognising everyday experience, one's 'Dasein' needs to be open to the aspects of the lifeworld "where possibilities arrive and leave" (Diekelmann, 2005, p.14). In German the word Dasein literally means "existence, being here or being there" (Diekelmann, 2005, p.53). The meaning that Heidegger intends of Dasein evokes an interrelatedness of one's being and existing in the 'real' everyday world. Dasein is the nature of one's possibilities of existing, thus being-in-the-world and being with others. However being-in-the-world is not meant as being an object, related and located in respect to other objects. It is meant

as the nature of existing, as being embedded in the presence of the world and so having a unified and referential perception or accommodation to the world. Dasein is the understanding of one's relational being, rather than understanding as a way of knowing (Koch, 1995).

Situating the phenomenon

The phenomenon of practising Western acupuncture, as a New Zealand physiotherapist is the focus of this study. It is the ontological and epistemological relationship between the physiotherapist and his or her Western acupuncture practice that is being explored in the New Zealand context.

In order to describe the essential parts of this phenomenon, an appreciation of the intrinsic nature of 'the whole' of Western acupuncture, within physiotherapy in New Zealand needs to be demonstrated. To comprehend the whole, one must identify and explore the gaps/partial understandings of Western acupuncture as it is experienced in the lifeworld of New Zealand physiotherapists. These gaps assist interpretation of the "common world of understanding" (Gadamer, 1960/2003, p.384), because they provide a greater understanding of the whole. The perpetual motion of coming to new understanding is explained by Gadamer (1960/2003) using the metaphor 'fusion of horizons'. Experiences are understood from the traditional and historical context from which one has evolved. So to understand a situation one must recognise one's place within it. The assumptions or prior understanding brought to that situation represent one's present horizon (Gadamer, 1960/2003). The word 'horizon' denotes the limits of a field of vision provided by one's cultural background. But this is not permanent or static (Polkinghorne, 2004). A horizon, like human life, is constantly in flux. Horizons are continually reshaped by a combining of the past with present and possible future experience. New horizons comprise a fusion of old horizons, recently acquired horizons and those that are coming into knowing (Gadamer, 1960/2003). Thus interpretation and understanding occur through a dynamic fusion of multiple overlapping horizons.

In relation to research, there is a dialectical interaction or fusion between the researcher's pre-understanding, the framework selected for interpretation and the data being collected and analysed (Koch, 1995; Laverty, 2003). Insights revealed from new understanding are unconsciously measured according to what is already

known and what is yet to be known. New interpretation is a result of the contemplation of one's previous historical knowledge and that gained during the research process. In this way the historical context informs the present and the future (Gadamer, 1960/2003).

Much of the practical doing of life is not reflected upon and as a result is not well understood. Focusing on everyday experience brings this experience into thought through language, providing more tangible access to understanding. Writing about 'experience-as-lived' facilitates further thinking enabling deeper comprehension and new possible interpretations (van Manen, 1997).

Self-understanding

Interpretative phenomenological research requires practical wisdom combined with a reflexive interpretation of the meaning of lived experience (van Manen, 1997). "Long before we understand ourselves through the process of self-examination, we understand ourselves in a self-evident way in the family, society, and state in which we live" (Gadamer, 1960/2003, p.276). This understanding of the world allows one to determine what is real. However, the background meaning that determines one's lifeworld and through which one develops a sense of understanding, can never be made completely explicit (Heidegger, 1927/1962). For example, the understandings and decisions of physiotherapists practising Western acupuncture, are often embodied and do not reach consciousness. Yet these are always influenced by what has been learned and previously experienced. Surfacing this historical consciousness helps deepen the understanding of the practice of Western acupuncture by physiotherapists. It also assists the articulation of the practice to others. As a researcher, I seek to illuminate the conscious, unconscious and taken-for-granted meanings that physiotherapists have developed through their experience with this treatment modality.

The texts relating to the phenomenon

Gadamer argued that the work of hermeneutics was to further clarify the conditions under which understanding itself takes place (Laverty, 2003). "Hermeneutics must

start from the position that a person seeking to understand something, has a bond to the subject matter that comes into language through the traditionary text and has, or acquires, a connection with the tradition from which it speaks" (Gadamer, 1960/2003, p.295).

'Texts of life' are passed on through language, orally, in writing and in art form through generations of living. Texts, such as academic literature and textbooks, are sources of learning. Physiotherapy texts influence the individual in his or her shaping of and experiential knowing as a physiotherapist. Further learning continues to mould and inform knowledge, language and practice of physiotherapy. Thus, the language perception and knowledge of a physiotherapist, practising Western acupuncture, develops differently from physiotherapists who do not practice Western acupuncture.

Texts [books, articles, written communication, documented research data and findings] are also a way of disseminating meaning, experience, beliefs and values between people, communities and generations (Crotty, 1998). In this study I must therefore explore the relationship between the 'texts' of acupuncture, physiotherapy, current biomedical discourses and the lifeworld of physiotherapists, both past and present. In chapter two, an outline of many significant texts pertaining to Western acupuncture and physiotherapy practice was provided. There is a paucity of material available from New Zealand; it would appear that there are very few practitioners recording this experiential practice in a local context. Most influential 'texts' have disseminated from other countries and are written by practitioners other than physiotherapists. The participant interview 'texts' are interpreted in the context of aforementioned texts, both literary and practical. The participant interview 'texts' will therefore assist the revelation of accumulated knowledge of Western acupuncture practice (van Manen, 1997).

Each participant's language or text has been created by his or her own experiences of being-in-the-world as a physiotherapist practising Western acupuncture. The texts are both unique and multi-dimensional. Exploring them allows for the surfacing of subtle differences in knowing and understanding that have come about through individual development, interpretation and living/working/being in a world with others.

Humans use words as a basis for texts. van Manen (1997) argues that writing exercises our ability to see more clearly. It "shows that we can now see something and at the same time it shows the limits or boundaries of our sightedness" (van

Manen, 1997, p.130). Once transcribed, the texts as written language reveal opportunities for new and different understanding. Written language as a practical action can therefore make meaning clearer (van Manen, 1997). Knowledge, thought and experience become open, visible and knowable, potentially setting up the future on the basis of what was known in the past. In relation to acupuncture for example, the text of Huangdi-Neijing was written over 2000 years ago. From that text many variations of acupuncture practice, including that of Western acupuncture, have developed.

However understanding can also be limited by language. Any individual's understanding may assume affinity between text and reader, presupposing that people share the same word meanings and interpretation. Traditional Chinese acupuncture and Western acupuncture for example, may appear to be similar in that they appear to achieve the same result. However, the informed practitioner knows that the essential philosophies of traditional Chinese acupuncture and Western acupuncture contrast culturally, scientifically and in terms of diagnosis, practice and treatment. The physiotherapist treating a 'Western diagnosis' using either traditional Chinese acupuncture or Western acupuncture may needle the same acupuncture points and have the same goals for treatment, yet the objectives behind the treatment, such as dispelling wind (traditional Chinese acupuncture) or achieving segmental relief of pain (Western acupuncture) are unspoken and very different. Gadamer (1960/2003) suggests that understanding 'what is there' requires an alertness to the actual reality, not the perceived, or taken-for-granted. Understanding is a self-reflexive process, constructed from one's experiential being and reflecting in the world. Therefore everyday practice develops understanding that becomes embodied. Embodiment is internal; it is unrecognised, unspoken and invisible, yet it is integral to the human experiential process. Drawing on the work of Merleau-Ponty, Munhall (1989) states:

> Embodiment explains that through consciousness one is aware of being-in-the-world and it is through the body that one gains access to this world. One feels, thinks, tastes, touches, hears and is conscious through the opportunities the body offers. It is important to understand that at any point in time and for each individual a particular perspective and/or

> consciousness exists. It is based on the individual's history, knowledge of the world, and perhaps openness to the world (p.24).

Embodiment is expressed in our innate behaviour as instinctive rather than analytical. Openly questioning the practice understandings of Western acupuncture will therefore increase the depth and usefulness of this experiential understanding.

The everyday world of practice

One practices in the 'world' which one inhabits. Leonard (1989) states that understanding 'world' phenomenologically is different from understanding the physical aspect of where one lives. 'World' in a phenomenological sense relates to the culture, traditions, language and relationships that we live in a priori (Heidegger, 1927/1962). One takes-for-granted one's everyday lived experience and it is only when a disruption occurs that real meaning appears in a conscious way.

Heidegger uses the 'to-hand' notion to describe how things matter practically to people. For example, he describes the use of a hammer in order to show how practical and theoretical activity can differ (Rummel, 2004). The notion 'present-to-hand' denotes a theoretical understanding of the use of the tool. In manipulating the tool or object one can discover the purposeful 'being' of the tool (Rummel, 2004). As the purposeful 'being' of the tool becomes understood and more familiar, its use becomes 'ready-to-hand'. This ready-to-hand, practical understanding is an embodied understanding (Heidegger, 1927/1962). 'Unready-to-hand' depicts something 'unhandy', which in its unhandiness "gets in the way" (Heidegger, 1927/1962, p.74). In being unready-to-hand the surrounding world is shown for what it is through what it is not.

To be 'at-hand' shows the worldly character of the tool and its use. It draws attention to the "taken-for-granted, lived experience of our everydayness" (Leonard, 1989, p.45).

The Hermeneutic Circle

The growing and contextual understanding of knowledge and experience in an ongoing cyclical development is metaphorically depicted as the hermeneutic circle (Polkinghorne, 1983; Spence, 2004). This is because "every experience is taken out of the continuity of life and at the same time related to the whole of one's life" (Gadamer, 1960/2003, p.69). As a result, experiences are not processed and discarded, but fused into the previous horizons of one's understanding. The lived experience of our everydayness is a unity of both what is taken-for-granted and new understanding. This new part in one's knowledge fuse with what was known, enhancing the 'whole' of an ever-evolving circle of understanding. Thus, interpretation of experience is an understanding of a part, based upon the understanding of the whole and a subsequent unification of that part within the whole (Gadamer, 1960/2003). Moreover, there is always a potential for coming to new understanding that may in part, or wholly be influenced or understood differently in a new context. In relation to acupuncture, exploration from a Western perspective has provided a possible partial explanation. The discovery of endorphins [endogenous opioid peptides] in the 1970s (Ernst & White, 1999a), enhanced acupuncture's respectability and validity, opening new horizons of understanding and enabling further development of the science and practises underpinning Western acupuncture. The physiotherapist practising Western acupuncture brings understanding of a tool developed from an ancient culture. There is a reflexive relationship between the East and the West and between the whole of the physiotherapy profession and, the physiotherapist as an individual practitioner. Within these dynamic, interrelated and overlapping part-whole relationships, provisional understanding develops and it is through relating each to the other that understanding develops more fully (Spence, 2001). Thus the hermeneutic circle has no starting point and no end. The circle is theoretically infinite because understanding can never be complete, in the sense that there is always a potential for new understanding.

Fusion of horizons

Crotty (1998) describes the notion of fusion of horizons as an integral principle in Gadamer's hermeneutics. The horizon of the present cannot be formed without reference to the horizon of our past being-in-the-world. Because striving for understanding is an ongoing project (Spence, 2004), new interpretation is constantly being assimilated to form new horizons of understanding. This enables a "unity of meaning" (Crotty, 1998, p.102), wherein the interpreter's perspective reflexively engages with another perspective to construct new understanding. Having a horizon potentially means being able to see beyond it. A person, whose horizon is open, knows the relative significance of everything within this horizon. A person's openness to the knowledge formed through tradition, culture and experience can enhance learning opportunities, and the development of new physiotherapy practices, such as in the situation of Western acupuncture. It could be argued, for example, that tension exists within New Zealand physiotherapy in relation to acupuncture because the modality is not well understood, and therefore not valued by the profession as a whole. The paradox is that a person who has a fixed horizon may overvalue what is nearest to him (Gadamer, 1960/2003). Working out the hermeneutical situation of Western acupuncture means acquiring the right horizon of inquiry. As a researcher, this means attending to the questions evoked by the presence of the new modality (Gadamer, 1960/2003).

The aim of this project is to achieve greater understanding of the meaning of Western acupuncture for New Zealand physiotherapists. The hermeneutic notions of fusion of horizons and the hermeneutic circle have facilitated interpretations of the texts relating to the subject. They have assisted understanding of a practice that happens almost unreflectively because, for certain practitioners, it has become so embodied and ready-to-hand. Being open to new understandings will potentially increase depth and breadth of physiotherapy practice.

Method

Ethics Approval

The Auckland University of Technology Ethics Committee (AUTEC) granted ethical approval for this study on October 14th 2003 (Appendix A, p.137).

Ethical considerations

Munhall (1988) as cited in Streubert & Carpenter (1995) argues that qualitative research should be an ethically "moral as well as knowledge generating activity" (p.44). Gaining informed consent from participants is an essential feature of human research. Each of the participants received an information sheet prior to data collection. Questions were answered and participants were clearly advised that they could withdraw from the study at any time prior to data analysis, without being disadvantaged in any way.

Consent forms were signed prior to commencing each interview. Confidentiality and anonymity are additionally important when researching relatively small populations. In this study each of the participants selected a pseudonym for use throughout the transcribing and writing processes. Other identifiers such as names, places of work, reference to colleagues or teachers were deleted and/or disguised during the analysis and presentation of the study findings.

Care has also been taken to provide faithful and authentic description of the participants' experiences. This issue is discussed further on pages 50-51.

The process of recruiting

I initially advertised for participants in the New Zealand Society of Physiotherapists monthly newsletter, but did not receive any replies. I then gave a presentation on the initial planning of my project at a New Zealand acupuncture conference and this prompted several volunteers. A colleague who had taught Western acupuncture at postgraduate level, also offered to email a prepared letter to previous students, and this encouraged others to volunteer.

Upon reflection, I was not surprised that there was no response to initial newsletter advertising. Practice demands, and/or a lack of appreciation for qualitative research may have adversely influenced volunteers. It was notable that those who participated did so because they understood the need to assist the development of research in the profession and, more specifically, in relation to Western acupuncture.

Criteria for participation

Sampling was purposive. According to Streubert & Carpenter (1995) "purposeful sampling" is a method that "selects individuals for study participation based on their particular knowledge of a phenomenon for the purpose of sharing that knowledge" (p.43).

The participants needed to be New Zealand Registered physiotherapists currently practicing Western acupuncture in New Zealand. I wanted participants who had qualified to PAANZ Registration level, or attained a Postgraduate Certificate of Western Acupuncture (AUT) or higher. The participants were required to perceive their practice to be based upon Western acupuncture principles.

Seven volunteers met the criteria for participation and were accepted into the study. Each was provided with an explanation of the interviewing process before times and locations were confirmed for interviewing.

Participants

The physiotherapists who participated in this study had received their specialist education in a variety of ways. Three had qualified through the Western acupuncture course to Postgraduate Certificate of Health Science (Western Acupuncture) level. Three others were qualified at Postgraduate Diploma of Health Science (Western Acupuncture) level. One had studied Western acupuncture as a part of her professional development through her employment, special interests, PAANZ coursework and had attained PAANZ acupuncture Registration. The duration of participants' practice experience using Western acupuncture ranged between two and eleven years.

The participants came from a diverse cultural spectrum including: New Zealand-European, New Zealand-Asian, Asian [Chinese-Asian], and Western European. Participants of Maori or Pasifika origins did not volunteer for this study. This relates similarly to the ethnic representation of Registered physiotherapists currently working in New Zealand (New Zealand Health Information Service (NZHIS), 2004). Only one participant was male, this is characteristic of the predominance of females in the New Zealand physiotherapy workforce. 81.2% of practicing physiotherapists in New Zealand are female (NZHIS, 2004). At the time of interview, three of the participants worked for a District Health Board and four worked in private physiotherapy practices. The participant's age ranges reflected their years of physiotherapy practice since qualification: between two and thirty-eight years**.**

The interview process

The participants were interviewed at a time and location convenient for them. Four interviews took place at the participants' homes and the other three at the participants' workplaces, outside of work hours. The interviews were semi-structured. Open questions allowed the participants to freely describe their experiences, thoughts and practice knowledge. A copy of the questions used to facilitate discussion is available in Appendix E (p.143). I audiotaped the interviews and personally transcribed the data verbatim, supplementing these with handwritten notes. Following completion of the transcribing process, each interview transcript was returned to its owner for comment, verification and the opportunity to add further material. All participants verified their transcripts and some added extra explanatory comments.

There were times during the interview when participants spoke of the influences that developed their understanding of Western acupuncture. While some were congruent with my own experiences I also gained insights I previously had not considered. In this way interaction between the data and myself reveal the fusion that constitutes ongoing interpretive understanding. The reality of the participants' experiences, and the researcher's sensitivity to recreating an authentic interpretation of the phenomenon of interest, through the potential for texts to reveal 'newness', is what this hermeneutic research seeks to achieve (Gadamer, 1960/2003). My

previous understandings were challenged by those of the participants. For example, I had assumed the participants would view Western acupuncture positively, and was surprised when some study participants spoke of their disappointment and frustration with this form of treatment. Enquiring further about these experiences therefore enabled a deeper and more comprehensive understanding of the phenomenon. This will be discussed in Chapter four**.**

Data Analysis

Hermeneutic analysis requires the detailed reading and examination of data or texts (Koch, 1996; Neumann, 1997). The primary data in this study is the stories provided by participating physiotherapists. Other sources include my experiences and the aforementioned research and other texts that contextualised the phenomenon.

Making sense of the data means reflecting on the 'lived experience' described, and the especial significance inherent in that experience (van Manen, 1997). Thus the essence/essential nature of the 'thing' in question is revealed. This allows meaning to be created in terms of emergent themes. These emergent themes are the structures of lived experience that reveal the making of the meaning (van Manen, 1997). Hence themes are created by the researcher from the language of the participants (Carpenter, 1997).

Data analysis in this study began with listening to the participant's verbal descriptions during their interviews. Then, during the process of transcribing the verbal data into written text, significant statements were identified and meanings became increasingly apparent as I became more familiar with each text (Spence, 1999). This familiarity was intensified through 'close' reading and re-examination of the verbatim transcriptions. Ongoing dwelling with the data facilitated the recognition of thematic meanings and essential relationships. This helped to crystallise the essential meaning of the phenomenon. Thus attentiveness to the language of the texts and the interpretation of human meaning enabled exploration towards understanding that had not been previously been seen (Laverty, 2003).

The reading was accompanied by writing. Writing stories to depict the notions described in the transcripts ensures a strong and orientated relation to the research question (van Manen, 1997). Through the process of writing, questioning and re-

writing, central themes were gradually developed. Writing and rewriting in this way allows the dialectics of "re-thinking, re-flecting, re-cognizing" (van Manen, 1997, p.131). It facilitates revelation of the different experiential qualities that may have been experienced in the immense complexity of the lifeworld (van Manen, 1997). Thematic analysis provides a method for sustained reflection in order to unravel hidden meaning and to seek the heart of the matter. Themes also need to relate to the lifeworld as meaning is reflexively taken back through reflection to action and experience. Thus, there is a dynamic interplay between the methodology and data that allows one to become more conscious of or thoughtful to the aspects and nuances of human life which previously were not considered or taken-for-granted (van Manen, 1997). van Manen (1997) describes these situations as being of "the unique" (p.7). 'The unique' exemplifies the notion that individual experiential knowing always holds something ineffable, special and personally exclusive. The 'unique' contrasts with knowledge generalisable to a population, which other research methods seek, rather than that of particular individual awareness. As a result this specialist knowledge of human life continues to be glossed over as the common features of the population are studied. It is through this 'theory of the unique' that deep understanding is created (van Manen, 1997).

These thematic findings were then integrated with relevant literature and hermeneutic philosophical writing. The dialectic between the pre-understandings of the researcher, the information sources, their interpretation, and the methodology of the hermeneutic process assisted a deeper understanding of how the parts of a topic being investigated relate to the whole. Meaning is rarely simple or obvious on the surface. Rigorous meanings are reached only through a detailed reflexive study of the texts, contemplating the many messages and seeking connections among the parts (Neumann, 1997). These meanings are presented as data in discrete chapters, however one must never lose sight of the interrelated and overlapping nature of the whole phenomenon as it is offered thematically.

Trustworthiness and rigour

Trustworthiness and rigour are essential to all credible research. Hermeneutic phenomenology requires an ability to be reflective, insightful and sensitive to language meanings and constantly open to experience.

Ensuring rigour in qualitative research is a much-debated topic. Quantitative research studies require large numbers of random samples to achieve generalisability. Statistical analysis, measures of internal validity, external validity and reliability are used to show 'truth' values, such as applicability and confirmability (Koch & Harrington, 1998). Such criteria are inappropriate when determining the rigour of hermeneutic research. In this study the criteria for deciding rigour are those of credibility, transferability, dependability and confirmability. These are based on the writings of Koch & Harrington (1998) and supported by Koch (1996), Sandelowski (1986), and van Manen (1997).

Credibility

To establish the credibility of interpretive research Koch (1996) suggests that three issues are essential. Two have already been described. They are the philosophical underpinnings of the project and the researcher's role in collecting and analysing the data. The third issue relates to the need to detail the steps taken to ensure the trustworthiness of the study. The following actions were taken in this study to ensure credibility and rigour.

Data was collected at each interview on an audiotape and later transcribed by the researcher. This provided time for listening, writing, re-listening and checking, allowing prolonged engagement with each transcript. The transcripts were then returned to the participants, as described earlier, for checking and verification of the accuracy of the data collected.

Ongoing reading and writing about the data in the context of the research question enabled protracted data analysis. Contextual data provides the ontological basis for the layers of interpretation to be revealed (Koch, 1996). Prolonged engagement with the subject matter increases the probability that credible findings will be produced (Lincoln & Guba, 1985).

For analysis to truthfully and correctly represent the notions contained within the data, the researcher must demonstrate congruence with the original data and also explore the insightful nuances contained within the text (Koch, 1996). I have practice knowledge of the research topic that has developed from my personal and professional experience; therefore I have certain pre-understandings about the subject in hand (Geanellos, 1998). My pre-understandings were explicated in

Chapter One and reflexively contemplated and questioned throughout the study. Care was taken to ensure that I interpreted participants' experiences rather than my own (Sandelowski, 1986). Self-awareness, reflexivity and openness to the topic were assisted through journaling. A reflexive journal was the means by which the rigorous 'too-ing and fro-ing' between questions, data, tentative themes and final analysis was achieved. Keeping a paper and computer audit trail allowed me to clearly document my actions and rationale. Koch & Harrington (1998) believe an "internal or intrinsic logic" will show itself in the final written product if "maintaining an audit trail" throughout the research process has been sustained (p.887). As Koch (1996) explains, the reader should be able to 'audit' the events, influences and actions of the researcher. This audit trail includes items such as original data, interview notes, communications with participants, evidence of reading, initial thoughts, and writing about the phenomenon followed by thematic interpretation and all of the reference material used in the research process.

Transferability

Transferability demonstrates the probability that research findings have meaning to others in similar situations (Streubert & Carpenter, 1995). Assessment of transferability or fittingness rests with the potential user, rather than with the researcher.

Power and validity of the text is actioned through writing that is "oriented, strong, rich and deep" (van Manen, 1997, p.151). This enables others to comprehend and reach deeper understanding of the phenomenon described. It is shown by the phenomenological nod, a nod of acceptance or validation of the interpretation (van Manen, 1997). When study findings are appropriately applied to other situations, the notion of useful transferability is created.

Confirmability

Koch & Harrington (1998) argue that confirmability is achieved through the integration of credibility, transferability and dependability. The rigour of hermeneutic research is dependent upon each of the parts achieving congruence with

a coherent whole. Thoughtful and reflexive planning, explication and articulation of the processes and the findings developed through this study determine the extent of its trustworthiness and validity.

Summary of Chapter Three

Hermeneutic research methodology has been described and justified as an appropriate way of researching the meaning of Western acupuncture for New Zealand physiotherapists.

The methods used to gather and analyse the participants' interview data have been explicated. This has included integration with other relevant texts and the researcher's pre-understandings. Finally an outline evaluation of the basis for the rigour of this project has been provided in order to show its trustworthiness and validity.

The following two chapters will describe and explore the essential meanings of New Zealand physiotherapist's understandings of practising Western acupuncture. These chapters are entitled 'The new tool for practice' and 'Western acupuncture as a challenge to technical rationality'.

Chapter Four: A new tool for practice

In this chapter, part of the meaning of Western acupuncture for New Zealand physiotherapists is presented. Participant data is analysed thematically in relation to the phenomenon. The analysis of Western acupuncture as a physiotherapy tool is underpinned by aspects of hermeneutic philosophy drawn from Gadamer (1960/2003), Heidegger (1927/1962) and van Manen (1997). The notions discussed include the 'readiness-to-hand' of physiotherapy and acupuncture practice, how this enables and limits practice and the different practice understandings that Western acupuncture has brought to the everyday work of physiotherapists who practise this treatment modality.

Numerous tools assist the physiotherapist to achieve treatment objectives, such as the relief of pain or improved range of movement. The use of acupuncture and specifically needles as a physiotherapy tool is a relatively recent phenomenon in New Zealand.

In coming to know a new tool, the horizon of one's situation has to be open to the possibilities of the not yet known. According to Gadamer (1960/2003) interpretation, or coming to know, happens through a fusion of horizons. New understanding is constituted by the fusion of two perspectives, that of the phenomenon (in this case, the tool) and the interpreter (Spence, 1999). Some aspects of knowing are cognitive or gnostic forms of knowing. Gnostic knowing refers to that which is understood theoretically and intellectually (van Manen, 1997). The processes of diagnosis and prognosis are examples of gnostic knowing. They are systematic approaches used by physiotherapists for the benefit of patients. van Manen (1997, 1999) differentiates gnostic from pathic knowing. Pathic or non-cognitive knowing refers to the 'felt' sense of being in the world. It describes the intuitive knowing that is realised as one participates in the "corporeal, relational, enactive and situational" aspects of everyday practice (van Manen, 1997, p.xiv). Physiotherapy practice draws from both pathic and gnostic knowing. Pathic knowing in physiotherapy enhances practice in many facets, notably 'seeing' and knowing without the need to question, and knowing by 'feeling' palpation.

The ‘readiness-to-hand’ of the physiotherapist’s hand

The physiotherapist’s primary tool is the experienced hand. Embodied within this hand, especially its fingertips, is an intuitive body of knowledge that is largely invisible. The ‘readiness-to-hand’ (Heidegger, 1927/1962) of the physiotherapist’s capacity to ‘sense’ and interpret through the hands, is essential to the efficacy of their practice. The notion ready-to-hand implies that the everyday association of doing something can be done; it is the work to be done by the tool at-hand, rather than the tool itself (Heidegger, 1927/1962). Thus the activity of physiotherapy practice “itself uncovers the specific ‘manipulability’ of” the physiotherapist’s hands (Heidegger, 1927/1962, p.98). To objectively assess the hand would not reveal such manipulability. It is only through the use of the object/the hand that it’s own ‘sight’ is revealed as it participates in the things it knows (Heidegger, 1927/1962). In having manipulability, the physiotherapist’s hand shows it’s usability, towards which it is has manipulable qualities. This is the being ready-to-hand nature of the hand (Heidegger, 1927/1962).

Jane recognises that experienced physiotherapists are people with highly tuned hands:

> *I think as physiotherapists we have a feeling intuition. That’s why we are in the field we are in. I think we have our hands on people so much, that we have that part of ourselves more highly tuned than anyone else.*

The hand of the practised physiotherapist has learned much through experience. It has palpated, interpreted and come to understand nuances of perception that are significant in determining the needs of the patient. The physiotherapy hand first begins with knowledge that is gnostic. Through practise this knowledge becomes embodied as pathic knowing. When such understanding is embodied within the hand it can be described as ready-to-hand. The practitioner can draw upon that knowledge intuitively, immediately and without conscious thought.

Acupuncture as a tool

When Helen practises Western acupuncture, fine sterile disposable needles are easily removed from the needle box. Prior to learning acupuncture, the needle box was unready-to-hand. The box and it's packaging were strange and unfamiliar. Helen did not know how to use acupuncture needles. Yet gradually, through practise, the equipment became present-to-hand. The skills were acquired through a process that was planned and deliberate or gnostic in nature. Then with more practise, Helen acquired a pathic ability; an intuitive understanding of acupuncture:

> *It's one of the arrows in your quiver, and you are not restricted to using the same arrow all the time. It's one of many that you can use.*

When she describes the needles as arrows in a quiver one is reminded of the ease with which a marksman draws arrows to his bow. With practise, acupuncture needles have become embodied extensions of Helen's 'physiotherapy' hands. When needed, the needle is innately thought of, reached for and inserted. Firstly in a gnostic sense and then in a pathic sense it becomes 'ready-to-hand', an everyday part of the practice for these physiotherapists. Merran similarly understands this notion. When she was asked how acupuncture had changed her practice she responded:

> *I have another modality at my fingertips.*

The capacity of the hand has been extended. The fingers seem to feel through the needle, inside to living human tissue, in a way previously unknown. The needle creates a new medium for feeling and treating the human body. Jane explains:

> *I can feel the movement and tension in the tissues, and then I feel the acupuncture needle releasing, helping to reduce the muscle spasm. I let my hands guide where the needle is going to go, it's not really a skin feeling, it's deeper than that.*

This statement reveals an aspect of pathic knowing (van Manen, 1999). It demonstrates a kind of confidence; a form of knowing that is gained through

practise, but is not easily recognised. Pathic knowing is “a silent practice that is implicit in my world and in my actions rather than cognitively explicit or accessible to critical reflection” (van Manen, 2005, p.2). It is a form of knowing that is beyond words and is deeply embodied.

Other tools commonly associated with physiotherapy are less embodied in the sense that they are more extraneous to the person. The physiotherapist’s use of equipment such as electrotherapy machines and exercise apparatus also becomes assimilated through practise. These tools can also become ‘ready-to-hand’. But their use does not assist the physiotherapist in furthering his or her understanding of the patient’s condition in a ‘palpable’ sense. These tools are applied ‘to’ the patient, much as a dressing is applied to a wound.

Tools are an everyday part of physiotherapy practice. In this study the participants referred to the Western acupuncture needle as a new and different tool. Catherine states:

> *I think it adds a different tool to the physiotherapy tools I already have.*

Western acupuncture compliments the other tools at the physiotherapist’s disposal. However, there is an essential difference between the acupuncture needle as a tool and other physiotherapy tools. This was drawn to Catherine’s attention when a colleague deliberated about embarking upon further study:

> *Seeing me use acupuncture as a different tool to the other hands on techniques that physiotherapists’ use has helped her choice between musculo-skeletal physiotherapy and Western acupuncture study. She chose acupuncture because it’s so different from the other skills we have. It’s with needles rather than just treating people with your hands.*

Catherine has recognised that the acupuncture needles provide a different form of treatment. Practised hands can manipulate, direct movement, feel tissues and interpret complex meanings (van Manen, 1999). Acupuncture enables a different and deeper treatment relationship between the physiotherapist’s ability to interpret what is required for treatment and to provide and understand that treatment.

Western acupuncture as exploring possibility

The practised physiotherapist interprets the signs and symptoms revealing a person's condition in order to understand the patient's needs. Signs and symptoms show in a variety of visible and invisible ways. The physiotherapist must 'reach' into that invisibility to seek the 'true' nature of the problem. Intuition and experience are important, because similar patients do not necessarily respond in the same way to protocols and guidelines recommended for their condition; it is the response of the patient to the treatment, which directs the subsequent treatments. Western acupuncture seems to provide possibilities that other physiotherapy modalities do not. Ruth comments and provides an example:

> *I've found Western acupuncture very useful as another tool. I work in a practice with about five or six other physiotherapists, so I am getting referrals from them when other things don't work.*
> *One of the first patients I treated with Western acupuncture was referred from another physiotherapy colleague. The patient had a tibial pain problem. Every specialist she had been to said, "we don't know what it is, just get on with it". She couldn't even put walking weight through this foot, as her shin was too sore. I had recently qualified in Western acupuncture and I was 'pretty green behind the ears'. She came for about 6-8* [Western acupuncture] *treatments and she could walk on it, it was fine. I don't know how it worked…the needles seem to fix it.*

The improvements achieved through the use of Western acupuncture can appear miraculous to both the physiotherapist and the patient. Patients appreciate and expect improvement in their condition. Physiotherapists also measure success of acupuncture treatment against their previous experiences treating similar conditions with more conventional physiotherapy.
Heidegger (1927/1962) suggests that we are always on the way to understanding. Whilst being on the way to understanding, a physiotherapist may grasp at the complexity of a patient's problem. Recognising the unknown possibilities of a complex situation challenges their understanding and ability to treat some conditions effectively. This complexity is realised because previous methods of treatments have not always been successful in repairing some of the problems

referred to the physiotherapist. Now, through Western acupuncture, another form of experiencing practice is being developed. Acupuncture is opening up new possibilities for treatment. This provides the physiotherapist with additional hope and potential enlightenment. Jane explains this potential by using the analogy of a lock and key.

> *I explain it with the lock and key philosophy. You put CRC into a lock and CRC allows the movement, but if you don't jiggle with the key then the lock doesn't free up. The CRC won't sit in there it will drain away. I just treat it as a wiggling, putting in the needle, keeping the movement there and then the acupuncture helps to reduce the muscle spasm so the joint doesn't get stuck again. That's how I explain it, and it works for me.*

Jane likens the needle and it's effects to CRC trying to fix a lock. CRC is a mechanical lubricant used to mobilise 'machinery parts'. She speaks of inserting a needle and, in 'jiggling', some relaxation of stiffened body tissue is achieved. Through 'acupuncture lubrication' of the muscle spasm, the stuck joint can be released. The statement also alludes to a deeper meaning. It is as if she has a key that provides access into somewhere previously locked, or denied in terms of access. Acupuncture seems to have unlocked areas, or understanding of the body, previously unknown.

Physiotherapists have traditionally treated the human body from the outside using "natural or non-invasive methods" (Williams, 1986, as cited in Bassett, 1995, p.9). Physiotherapy involves external facilitation of motion, posture, exercise, tissue mobilisation and joint manipulation. The client's skin has acted as a barrier. It has been a platform upon which physiotherapists work, rather than as a medium to penetrate. Physiotherapists feel, rub, press into, stretch and resist through the skin. They also heat up the skin, cool it down, massage it with emulsion and attempt to alter the structures beneath by using electrotherapy machinery such as ultrasonic, diathermy and interferential machines. Acupuncture is different. The acupuncture needle pierces the skin.

Western acupuncture as a new kind of tool

Piercing the body is new for physiotherapists. In this study, each of the study participants believed acupuncture to be invasive because needles are inserted into the body.

Everyone anticipated acupuncture needling with trepidation. Merran stated:

> *I have never liked needles myself. I thought how in the world am I going to study acupuncture when I can't stand needles? I was terribly, terribly nervous and so the first introduction of a needle into skin was rather a tense moment.*

Merran illustrates the personal tensions inherent in learning a new and different practice. Although she is experienced in many physiotherapy treatment practices, acupuncture feels threatening because she dislikes needles. She remembers the anxiety experienced when first breaking through the barrier of the skin. Jeanette recollects similar concerns when learning acupuncture needling in a multi-disciplinary context:

> *All the G.P.'s* [General Practitioners] *were totally keen to stick needles in. They had no hesitation. I don't like blood I don't like deep stuff. I suddenly realised I had to get over the inbuilt hesitation of piercing the skin. However my knowledge of anatomy, surface anatomy and deeper anatomy, was so much superior to the G.P.'s, and I thought well, hang on, it will probably be a lot safer if I did it than those G.P.'s. It was that which helped me lose the fear of sticking needles into people, of going deep. I realised, if you have got the basic knowledge of the anatomy you can do anatomical needling.*

Jeanette draws upon her other physiotherapy learning, such as detailed knowledge of anatomy, to overcome the initial fear of piercing the skin. The act of using a needle to penetrate skin was present-to-hand for Jeanette, a gnostic deliberate action. Being able to picture the structures under the skin seemed to help her believe she could practise more safely than others in the class. Her detailed knowledge of anatomy enabled her acupuncture practice. The musculo-skeletal anatomical structures of the

body had previously been accessible by deep palpation on the skin. Practising acupuncture has changed her professional capabilities. As a physiotherapist, she can now venture into new places in the body. However tensions associated with new and different practice are also exposed. Although piercing the skin seems invasive, physiotherapists have a history of using other invasive techniques such as respiratory suctioning. Upon reflection most of the participants recognised that this was not the first access by physiotherapists to the inside of the living human body. Merran explains:

> *That's* [suctioning] *as much inside the body, you are in their air space.*

And Rob argues:

> *Suctioning is a more internal type of procedure than acupuncture.*

For Merran and Rob, the notion of invasion appears to relate to procedures that are intruding and unpleasant for the patient. They seem to consider suctioning to be a more invasive procedure than acupuncture. Treatment, such as suctioning, involves inserting a tube into a patient's airway. This is not pleasant. However the suction catheter does not penetrate past the protective mucosal/skin layers of the respiratory system. Acupuncture breaks through the skin to blood and other internal tissues. Through the needle entry, tissues and the 'chemical soup' in which they live are altered (Filshie & Cummings, 1999).

A further insight relating to how physiotherapists 'invade' the body was clarified by Merran:

> *You are likely to wonder, what does acupuncture do to somebody because it is invading the body space? But then microwaves are invasive; in fact I would rather have an acupuncture needle than microwave put onto/into me. Now that I think of it, with short-wave diathermy and microwave treatment you are getting into their blood. People, clinicians included, don't automatically think of diathermy treatment effects. As a clinician one should consider this and articulate that information for the patient and yourself.*

Merran has gained new insights about invisible tensions underpinning other forms of physiotherapy treatment. As a physiotherapist she has always known that microwave diathermy has a half-depth penetration into the body of "3 centimetres" (Scott, 1975, p.330) and that short-wave diathermy has the capacity to create "an electric field" that passes through the body (Scott, 1975, p.217). By comparing acupuncture with other contemporary physiotherapy practices she has become aware of the strength and depth of 'invasion' into the body by physiotherapists. The effects of some electrotherapy procedures, although not visibly invasive, are actually much more invasive and less specific in their effects than Western acupuncture. Although Western acupuncture is perceived to be invasive because a needle is inserted into the body, in actuality it is less 'invading' and potentially less damaging than other more familiar and accepted physiotherapy modalities. This insight is even more illuminating when contrasted with the previously accepted notion of physiotherapy practice involving "natural or non-invasive methods" (Williams, 1986 as cited in Bassett, 1995, p.9).

Western acupuncture, as a new tool in the physiotherapist's toolbox, is providing physiotherapists with new understandings of practice as a whole. Rob acknowledged the specific nature of Western acupuncture in enhancing his physiotherapy knowledge:

> *Western acupuncture is very anatomically based. It's very targeting of specific muscle, bone or other anatomical points in the course of the nerve. Western acupuncture helps in my ongoing basic knowledge of nerve and muscle supply.*

Rob has visibly reached new depth not only in terms of knowledge but also his ability to 'plumb' human anatomy. An essential beauty of being able to get at the structures one wants to influence is that the needle can actually go to, or into, the affected part. Ruth has come to understand this notion:

> *Western acupuncture is especially useful as another tool, as patients come to us for repair of tissue injury. When you think about it, I may want to affect a tendon and a needle bends around there quite nicely. This goes right into the tendon, perfect, it's not like you are destroying anything, you*

are getting a specific desired effect. You are going right to the heart of the problem, so to me it's the next step for physiotherapy. All you need is a few needles and some hygiene equipment and you are away. It's not at all like carrying your portable table and a big box of tape around.

The specificity of Western acupuncture creates the ability for more local and specialised physiotherapy treatment than that of many other physiotherapy modalities. Ruth likes the idea of getting to the 'heart of the problem'. Acupuncture seems to provide an accuracy and depth that enables the physiotherapist to directly penetrate the afflicted area.

Furthermore, acupuncture can be a very convenient treatment. Ruth works in a physiotherapy clinic and out on the sports field. Acupuncture can easily be taken to the patient. In the past, physiotherapy tools had tended to be bulky or large and heavy and patients had to come to the physiotherapy clinic. In my practice, I recall an elderly lady who was in pain and immobile to the extent that she was housebound and could only be treated in a sitting position. Giving Western acupuncture treatment over five visits relieved her back pain and re-enabled walking. The woman was exceedingly grateful and I too was very pleased with the outcome. Prior to my practising Western acupuncture I would have had less options available to assist this woman's relief of pain and subsequent improvement in mobility. In this patient's situation Western acupuncture clearly improved her circumstances.

Another positive outcome for the physiotherapist relates to the potential to preserve their hands. Western acupuncture offers hope for the physiotherapists in terms of reducing the tendonitis and degenerative hand joint problems that physiotherapists may develop after many years of using their hands to provide therapy. Jane mentioned:

The thought that it would be nice to stand back and not be getting my thumbs into people all day, every day, my hands are not going to last forever.

Jane realises that her hands are important tools of her trade. She also realises that the work of physiotherapy wears out one's hands. She sees Western acupuncture as a

way of achieving some of the work that hands do, without having to tire the hands. Ruth supports this interpretation:

> *I use acupuncture, instead of frictioning someone regularly during a week. I put some needles in, and they come back a week later, it's* [the injury] *almost better and they* [the patient] *didn't have to suffer the frictions. Western acupuncture takes a lot of the hard work out of being a physiotherapist in some things. It saves your hands, and it makes work so much easier.*

The anecdotal evidence provided by Jane and Ruth is very compelling. It suggests that Western acupuncture is a new and effective tool that has 'extended' the ability of the hand of the physiotherapist to provide deeper, stronger treatment. Through this deeper and stronger treatment, physiotherapists may not need to treat their patients as often, or as regularly. Nor are the patient and the physiotherapist experiencing the pain of providing, or receiving, deep prolonged massage treatment such as frictions. All parties to the treatment experience benefit. Furthermore, should a physiotherapist's hands 'wear out' then his or her career options become very limited. Western acupuncture has been experienced and interpreted as being a very effective reliever of the arduous work involved in physiotherapy treatment for the physiotherapist's hands. This announces to the physiotherapist that one's career choice can be improved upon, still viable and not self-limiting or self-destructive.

The visible, yet invisible nature of Western acupuncture

Western acupuncture has been accepted as a tool by many physiotherapists. This indicates a visible change in the practice of a physiotherapist practising Western acupuncture.

Visibly the tool is experienced as a specific ready-to-hand modality used to provide invisible healing. The notions of visibility and invisibility can be experienced in both a felt and a physical sense. Merran speaks of ways in which treatments are invisible:

> *They* [patients] *never ask how treatments work. They never really ask how acupuncture works. I don't think people really stop to think. I mean when the doctor gives you some pills do you stop to think about what exactly is this pill going to do? You take the pills because the doctor gave you them to produce the effect you want. I don't think people evaluate what they are given. But if you can suggest that a treatment might have this effect, then they might give it a try because of the effect. They usually say they don't like needles, they do not like having things inserted into their body. But if they actually saw and experienced those tiny needles they wouldn't be worried. It's not much more invasive than a scratch or a splinter.*

Merran believes that patients are more comfortable choosing treatments with which they are more familiar. She also infers that patients select treatment options based on trust in the process and the practitioner. This is because the general public does not adequately understand matters that are obvious to health professionals. Pills work invisibly, yet the public easily accepts them. The public cannot see the action of pills or electrical treatment with diathermy. The paradox is that acupuncture treatment is not known publicly as a physiotherapy treatment, thus it is unfamiliar and people are often anxious about the use of needles. Other treatment effects, such as those from medication and electrotherapy are familiar to the public and, as a consequence, are accepted and not contemplated further.

Catherine has noticed that patients usually want to be guided by her expertise:

> *Certain people tell you quite definitely how they would like to be treated, for example they would like to try hands on first, then try needles. But the majority of patients would say, "I don't know, what do you think?" I started giving people some choice, but I think they want to hear from you what you can do for them.*

However, she has been surprised by the responses of some patients following treatment with Western acupuncture. On several occasions she has been asked:

> *"What's on or in the needles?"*

She continues:

> *Some people are surprised to be offered acupuncture, but most people are receptive. They agree to try. Most people say they don't really know what acupuncture is. They have never had it before and they don't know how it works. So you explain how it works, get their consent and needle them. Then at the next treatment they start asking all of these questions about how does it work? I've also been asked whether we put anything at the end of the needle!*

It is as if the patient is so inured into accepting Western medical practices that a new treatment of inserting a slim pin-like needle into a resting body part for 1-30 minutes cannot be believed. When visiting a physiotherapist, a patient assumes he or she will receive a treatment that resonates with their previous understanding of Western biomedical physiotherapy treatment. This type of treatment has been assumed in the context of their life over time and through cultural association. Acupuncture is not commonly linked with contemporary biomedical practice. Jane has experienced this dichotomy:

> *I think every culture has its own intuitive philosophy. I have this* [acupuncture] *spiel that I do which is very Western. If they* [the patient] *are interested I will bring in some of the Eastern philosophy and you can sort of pick the ones that aren't interested, the ones who might think it's a bit quacky.*
>
> *I have noticed that different cultures act differently. I notice that with my Korean patients for example, I'll say to them, "this is what I do for this, it is proven in research that it works for tennis elbow". They give no response whatsoever. They just lie there and just let you do your work; they are in your hands. Whereas a Kiwi* [New Zealander] *will say, "what's that for? Is that going into the muscle? What is that doing?"*

Jane has noticed that people with a background association and knowledge of acupuncture are much more accepting of acupuncture treatment than their New Zealand counterparts. She has discerned that New Zealanders have different expectations of treatment and as a consequence have a different reaction to treatment by Western acupuncture. She has also perceived that some patients think

that the Eastern philosophy of acupuncture is *"a bit quacky"*. Perhaps she is practising something that they cannot believe in or that they believe she is not qualified to do?

This means that use of the tool also creates a need for flexibility. Because patients from different cultural backgrounds come with different expectations, she continually has to adapt to the different challenges that using this new tool presents.

Adapting to the risks of Western acupuncture

All tools have risks associated with their use. Body fluid risk in contemporary physiotherapy practice is relatively low, especially when compared to other health professions where universal precautions are part of everyday practice. Physiotherapists have never had to draw blood or inject their patients. They have never had to consciously work where a high risk of exposure to blood is a regular part of practice. Helen discussed the potentially dangerous aspect of using needles:

> *Working in this* [a hospital] *environment we have so many back up policies and mechanisms that I actually feel quite supported in using needles. I did get a needle prick once, it was good that the whole pathway was there; I knew what to do and how to do it. I could take care of me, instead of having to worry about what do I do?*

Helen has an awareness of the potential danger of a needle stick injury because she has experienced the uncertainty following such an incident. Although she was well supported throughout the process, her awareness of the inherent dangers of acupuncture practice has been reinforced. This has not however, been so, for other participants in the study. Catherine reflected:

> *I think I am almost blasé about acupuncture. My colleague studied Western acupuncture last year. Now before she does acupuncture on anybody, she will ask things like, "when did you last have your meal? Have you had coffee lately?" I don't tend to ask as many questions as she does and fortunately I have never had any problems. I have to say I don't*

> *remember being asked those questions when I went to a Chinese acupuncturist. I don't know, are we being taught to be too careful?*

Catherine's colleague is new to practicing Western acupuncture. The understanding that Catherine brings to her practice is different from that of her less experienced colleague. Over time she has developed a greater confidence and expertise and thus has refined aspects of her practice. This may indicate the ready-to-handedness of her acupuncture practice.

In addition to concerns relating to safety when needling, many of the participants mentioned greater awareness of the adverse effects that any treatment may incur. Rob notes of his acupuncture practice:

> *The odd person gets a bit grumpy because they are a little bit sorer. I have had one person that I have bruised, but she didn't care. I don't think I have had any other adverse reactions. I have had no-one faint on me, no-one throw up on me yet, and I've had no-one go dizzy on me. Pain and bruising, that's about it in adverse effects, however with other physiotherapy treatment the patients wouldn't freak out, that can be a normal side effect.*

Rob is more aware of a difference in what is considered an adverse effect from acupuncture treatment compared to other physiotherapy treatments. There is a tension exposed, that in acupuncture being 'new' and different to biomedical practices in the West, adverse effects are more explicitly identified. Adverse effects such as pain and bruising after contemporary treatment practises are actively prevented and warned against, but if they occur in a mild form they are considered normal, albeit unfortunate, rather than as adverse.

The following excerpt exposes another tension inherent in all treatment practices. Rarely is one specific mode of treatment administered. Modalities such as joint and tissue mobilisation, exercise and advice are provided in combination. Western acupuncture, like electrotherapy or joint mobilisation, is another available modality. Catherine states:

> *I actually don't think it* [Western acupuncture] *is as effective as I originally thought. I think some people get better. It's very rare that I just use*

> *acupuncture as the only treatment, as I often give them exercises as well. So sometimes I wonder how much treatment effect is from acupuncture and how much is from some other form of treatment that I do. If I was treating a shoulder for example, I might put some acupuncture needles in the neck or hands, and I might choose to friction locally, and you just wonder how much effect is because of acupuncture and how much is from the other?*

Jeanette, in coming to comprehend Western acupuncture, has pondered similar issues:

> *I think Western acupuncture is totally in its infancy. It's why as a Western acupuncturist I have to be open otherwise I limit my practice. For example clinically I often get the feeling now that I need something more; I need a bit more knowledge about something.*

Jeanette recognises that Western acupuncture, as a new tool for practice, also has limitations. The full understanding associated with maturity has not yet been accumulated. As a consequence, she recognises that although Western acupuncture is new and emerging, it does not and will never be the answer for every clinical question. One's past experiences do influence current experience, but not in a way that can be evaluated in every moment of practice.

Jeanette feels both concern and openness in relation to Western acupuncture as a tool. The tensions are likely to remain. Practising in the present, she cannot stand back and fully evaluate each situation in the moment of practice; she can only reflect on what has passed. As she practises, new possibilities emerge. Some are noticed and acted upon while others are missed. However, in reflecting on practice, she can come to new understanding. This new understanding fuses with what was previously known. In having more enlightened pre-understanding of a practice one has greater ability to grasp opportunities as they present.

Conclusion of 'a new tool for practice'

In this chapter I have argued that Western acupuncture has meaning as a new tool for New Zealand physiotherapists. It has the potential to strengthen, enhance and

facilitate conventional physiotherapy practices as a complementary tool. Western acupuncture extends the reach of physiotherapist's hands. This new tool seems to be increasing awareness by physiotherapists of their practice as a whole. Their reflective understanding of practice is changing through the use of a new technology and their accumulating practical wisdom. The next chapter will reveal the ways in which physiotherapists are becoming challenged through Western acupuncture practice as it is revealing tensions within the practice of physiotherapy.

Chapter Five: Western acupuncture as a challenge to technical rationality

In the previous chapter I have argued that Western acupuncture is a 'new' and different physiotherapy tool. In this chapter, using the participants' data, I reveal how Western acupuncture has not fully integrated with 'conventional' physiotherapy because of a complex array of tensions. The tool is exposing tensions to which other aspects of physiotherapy are also being subjected; yet other 'tools' have been accepted by and assimilated into practice.

Two philosophical themes have been used to explain the challenges from Western acupuncture in physiotherapy. These are 'they' (Heidegger, 1927/1962) and 'techne and phronesis' (Gadamer, 1960/2003; Polkinghorne, 2004).

'They' describes others as unseen and unknown authorities that in this study, are perceived to be influencing physiotherapy and the development of Western acupuncture practice. Heidegger (1927/1962) proposed that "the others" are the "who" of the public surrounding world (p.126). These 'others' exist "in their inconspicuousness that 'they' exercise a dictatorship which can never be brought home to anyone, so that no one can be made responsible for it" (King, 1964, p.114). As a physiotherapist, I come to be who I am in relation to others, such as colleagues, my profession, other professions and the public. I also conform to the dictates and structures which have been entrenched by 'us' as members of the "impersonal and faceless collectivity" (Collins & Selina, 1999, p.64). Although the ideas of 'they' are attributed to others, over time this discourse becomes one's own and one loses sight of what it is to be thinking for oneself. That is why we do not easily recognise this in ourselves. As a result it is very difficult to identify 'they'. "In this lies its power" (Collins & Selina, 1999, p.65). It is through the 'identification' of the notion of 'they' that one becomes aware of the power that 'they' have over one. In becoming aware of the influence that 'they' exert, one can become more fully aware of one's own being-in-the-world with others.

Techne and phronesis describe the aspects of science and art involved in practice. Polkinghorne (2004) suggests "techne is the application of human intelligence to an area of nature in order to gain some control over it" (p.100). Phronesis is the use of practical reasoning and moral knowledge to gain insight and understanding about

actions as they relate to human beings (Gadamer, 1960/2003; Polkinghorne, 2004). The terms ‘techne’ and ‘phronesis’ facilitate reasoning and knowledge from both the objective scientific world and the subjective human realm. Techne–phronesis recognises the holistic nature of care as relating to the whole of the person. This notion is demonstrated by Mole (1992) who argues that acupuncture is “both a science and an art, the art being dependent upon the sensitivity and intuition of the practitioner” (p.112). To further support this he draws on the words of Albert Schweitzer, the medical missionary and theologian: “It is our duty to remember at all times and anew that medicine is not only a science, but also the art of letting our own individuality interact with the individuality of the patient” (Schweitzer as cited in Mole, 1992, p.113).

In this chapter, the notions of ‘techne and phronesis’ and ‘they’ provide an understanding of the art and the science and the powerful discourses inherent in physiotherapy practice of Western acupuncture. The understanding uncovered from participant data reveals tensions within everyday physiotherapy practices that are usually taken-for-granted. Analysis of the data will explore the importance of science in New Zealand physiotherapy practice. It will also reveal the need for the art of practice in the treatment of human beings by human beings. Tensions emanating from different interpretations and Cartesian influences will be discussed as further meaning regarding Western acupuncture practice as an important part of physiotherapy practice is explored.

Legitimation, technification and time

Physiotherapy began in the United Kingdom as a legitimation of massage (Nicholls & Larmer, 2005). Since then, physiotherapy education has become increasingly embedded in science and biomedical knowledge (Nicholls & Larmer, 2005; Owen-Hutchinson, 1997). A technical worldview infiltrated a culture that was based on touch and massage as the means of facilitating recovery. What was known through the scientific method became reality and was accepted as commonsense (Polkinghorne, 2004). Technification “has taken root in our background understanding of the world and no longer needs to be thought about but serves as a basis for thinking” (Polkinghorne, 2004, p.26). Hence, in physiotherapy, human

activity has been technified in order to produce measurable results and to promote the further technification of human culture (Polkinghorne, 2004). As a consequence, physiotherapy practice evolves as new knowledge and skills are underpinned with scientific evidence. However, not all physiotherapy is or can be contingent upon 'best practice' as derived from randomised controlled trials (Hayden, van Tulder, Malmivaara & Koes, 2005; Kroeling, Gross, Goldsmith & Cervical Overview Group, 2005; Paterson & Dieppe, 2005). Time-honoured practices integrated with physiotherapy continue to be accepted and practiced. Nonetheless tensions exist because the physiotherapist Western acupuncturist believes that the research evidence available about many accepted physiotherapy practices may be less credible than that relating to Western acupuncture. Jeanette states:

> *These gurus taught us, there were these big names to guide you as a student, even though there was very little scientific background to a lot of the stuff that we did. It always really irked me. Now of all the modalities I use, it's* [Western acupuncture] *almost certainly the one that has got the best base in scientific evidence. When I consider my grade 2's and my grade 3's in manual therapy I think it's very empirical as are my other treatment modalities, apart from maybe exercise. I don't know the scientific background of contemporary physiotherapy treatments as well as what I do with acupuncture. However, I think Western acupuncture has one of the best applications to evidence–based practice in physiotherapy. As far as evidence–based practice goes I think acupuncture has got more value, or is more valid than any of the other practices we do.*

Jeanette has a greater understanding of the evidence supporting Western acupuncture than physiotherapists not educated in Western acupuncture. Her statement suggests that 'they' whose understanding differs from her own, think that Western acupuncture lacks proof compared with more established modalities. However modalities such as electrotherapy and manual therapy, are embraced because they are included in the undergraduate curriculum. "Many physiotherapists tend to equate the role of health educator with high status and power" (Owen-Hutchinson, 1997, p.397). Educators dispense knowledge as truth. 'They' emphasise what they value, know well and what they practised. Thus 'they' influence students' knowledge and practice. Many physiotherapy lecturers are unfamiliar with acupuncture; it is only recently that

Western acupuncture began to receive some degree of scientific and educational legitimation. With the ever-changing field of biomedical knowledge, it is hard for lecturers to face that what 'they' learned and practiced may no longer be best practice. Catherine provides another example:

> *I hardly use ultrasound. I don't think acupuncture is any more effective than trigger pointing, its not as good as exercise, but in terms of other electrotherapy modalities I think that acupuncture is better. I'm actually amazed to hear from physiotherapists who qualified long before me, because they did it* [Short-Wave Diathermy and coils] *at Physiotherapy school and yet they have never used it in practice. Then when I was a student we were still learning it at school, so I wonder why? I don't understand it because they were already out of fashion by the time I was a student.*

This evolving technification of disciplinary knowledge exemplifies the hermeneutic nature of understanding. Technical knowledge is tempered by the understanding of practitioners. Their contribution to the hermeneutic circle of practice development is in accepting and rejecting aspects of technification and care to which 'they' are subjected. It is through the ongoing fusion of horizons that practice discards some practices and embraces others. Yet it must be remembered that 'they' continue to dictate horizons to which other 'they' subsume.

Some practices continue because those practices have been shown to work clinically, despite their lack of scientific legitimacy or evidential 'proof'. Therapeutic ultrasound, for example, is accepted as a tool more because it has been used over time rather than on the basis of scientific evidence. Acupuncture is still regarded as alternative in the Western world, despite having been used in China for centuries and being widely written about in the biomedical literature for the past twenty years. Although both modalities remain unproven by the randomised controlled trial, therapeutic ultrasound supersedes acupuncture in physiotherapy education and utilisation, because therapeutic ultrasound has been part of the empirical physiotherapy repertoire since the 1950s. The paradox is that whilst the history and knowledge base of acupuncture far outweighs that of therapeutic ultrasound, therapeutic ultrasound is accepted as a biomedical practice because it was developed in and understood by the Western world.

Acupuncture, scientific technification and 'they'

'They' who have created tensions for the physiotherapist practicing Western acupuncture are those who: legislate health practitioners' practices, pay for health practitioners' work, have treatment from health practitioners, educate health practitioners and are colleagues of health practitioners. 'They' are other physiotherapists or health professionals and 'they' can also be the public.

In the mid 1990's the challenges to New Zealand physiotherapy by 'they' caused physiotherapists to embrace research based evidential truth. As a result physiotherapy research in New Zealand has followed a linear pattern embracing quantitative research. Scientific knowledge permeates the physiotherapists' understanding of their place within the collective realm of practice. Jane states:

> *It* [scientific knowledge] *has to be valued, because that's how we understand things. In our culture we have to see things. We have to know that there is a cell being moved around and shifted. We need proof in our culture. I think we question things.*

The culture of physiotherapy, and indeed biomedicine in the Western world, encourages questioning of a certain type. The ''they' of our profession', such as University educators, the New Zealand Society of Physiotherapy, the New Zealand College of Physiotherapy and The Physiotherapy Board of New Zealand, have directed their members to understand and internalise the 'cultural values' of science and proof as belonging to the profession (Heidegger, 1927/1962; Polkinghorne, 2004).

Helen has searched the Western acupuncture literature to find the most scientifically validated acupuncture papers to support her practice. She has done this primarily to convince the multi-disciplinary team in which she works, that acupuncture practice is based on credible evidence.

> *There is a lot of suspicion amongst the medical profession about acupuncture. There are some doctors who are absolutely dismissive of it and others who are supportive. In order to get them on board it's really important to be able to talk to them in their own language. They are orientated towards the effect of medication. That, I have found, is the way*

in with them. To be able to use that rationale actually connects with them, rather than if you talk about energy and all the other things that we know happen. Using words like homeostasis I find gets it out of the flaky kind of thinking. I know that my acupuncture practice is very much evidence based. I expect the same level of accountability from other people who practise alternative medicines.

Helen recognises the need to be respected by those with whom she works. Shared understanding often benefits both professional relationships and patient welfare. Helen admits that acupuncture can be perceived as 'flaky', meaning "eccentric, crazy, or unreliable" (Websters, 2005). As a consequence, Helen works hard to find evidence that will be acceptable to the medical worldview of 'they'. If acupuncture is to be accepted, it must share common language, objectives and be understood in terms of Western medical science.

Tension between different philosophies of acupuncture

Western acupuncture has also facilitated practice-based practitioner confidence within the professional realm. For example, Helen has gained the acceptance and trust of doctors because Western acupuncture uses the same biomedical 'language'. However, much of the public and some health professionals link Western acupuncture to traditional Chinese theories which they do not understand. Moreover, some members of the public associate Eastern acupuncture practice with the occult rather than with the human world (Fergusson, 1999). Rob distinguishes Western acupuncture from other forms of acupuncture stating:

I have never had negative feedback when someone has mentioned Western acupuncture as if it was an absolute 'whack job'.

Rob uses the term 'whack job' negatively. It implies some members of the public perceive acupuncture as strange, unworthy and possibly fraudulent. Jeanette implies that science should be the basis of acupuncture in physiotherapy. She believes that it is anachronistic to be a 'Western' physiotherapist and to practice Chinese traditional acupuncture:

> *To me a physiotherapist practices Western acupuncture, unless he or she is totally into traditional Chinese medicine and therefore assesses using traditional Chinese medicine principles. I think of traditional Chinese medicine as a cult thing, the pulses and the tongue, and everything else. I don't think* [New Zealand] *physiotherapists should think that they practice Eastern acupuncture because they are Western based physiotherapists first and foremost*.

Jeanette thinks the anatomical and biomechanical aspects of the patients' injuries should always be considered before traditional Chinese medical diagnosis and treatment. For Jeanette, pulse and tongue diagnosis is a 'cult thing'. She cannot accept that a physiotherapist could work within one modality and then switch to another modality from an entirely different paradigm.

Tension has been experienced by all of the physiotherapists participating in this study, because the acupuncture paradigms are not perceived to be congruent with each other. The Western paradigm conforms to the sciences and texts of physiotherapy; the Eastern paradigm does not. The scientific education provided from the first days of physiotherapy training remains embedded within these physiotherapists and thus they appear closed off to different acupuncture 'horizons' that are not congruent with their version of science.

Other physiotherapists have embraced traditional Chinese concepts of acupuncture practice. These physiotherapists have been taught, learned and base much of their acupuncture practice on this paradigm rather than on the neurophysiological model. Catherine remarked:

> *At the moment in New Zealand physiotherapy there is the Chinese acupuncture stream and other practitioners practicing from a Western perspective. Sometimes the question of which philosophy is more legitimate causes friction between the two groups.*

This excerpt identifies the tensions between the two predominant physiotherapy and acupuncture perspectives in New Zealand. The quest for legitimacy becomes important when the different groups within the same health profession are divided because of a possible lack of understanding between themselves. This 'divide'

becomes more fraught when substantial political changes are made to the foundations of physiotherapy and acupuncture because of the ramifications of the HPCAA (2003).

Legitimising Western acupuncture through University study

In New Zealand, Western acupuncture is currently being legitimised through University education. University qualifications are another, very significant, 'they' in the legitimation of any practice. Only one of the participants in this study had not studied Western acupuncture at University. Those who did clearly expressed their preference to complete a postgraduate University course, rather than the PAANZ introductory acupuncture course, which was also available. Rob stated:

> *I wanted to go to a University. PAANZ doesn't have the same level of application because it doesn't have University backing*.

Rob believes that University study provides higher, more comprehensive learning. Jeanette feels similarly about her qualification. A previous short course had not provided the depth of knowledge that she required. Additional acupuncture study has increased her confidence as a physiotherapist and acupuncturist.

> *I say I am a Western trained acupuncturist. I feel very good being able to say I have done the equivalent of a year course at University. Since I've had the qualification I feel a lot, lot happier than when I started out doing acupuncture after a crash course. Probably if I hadn't gone on to the University course I would not be doing it now because I think I would have just been too insecure. Whereas now the background I have got from the study makes me feel very strong. I know all the reading we have done, all the research we've got through. I know what there is out there, so I feel very strong. I feel like I'd defend Western acupuncture in front of anybody*.

The experiences of Jeanette and Rob show the need for strength and confidence in everyday practice. Their physiotherapy-based pre-understandings dictated a requirement to understand acupuncture in a scientific way, justified with a legitimate

qualification. There seems to be a need to prove the legitimacy of one's practice. Cartesian thinking influences this view. If the mind is knowledgeable then it is assumed that the manual practice will be up to date and effective. This assumption is reinforced by a further assumption, that University education provides better knowledge and instruction than other programmes. Universities are held up as the ultimate example of higher standards of learning. 'They' lead us to believe that University qualifications ensure the highest quality physiotherapy practice.

However the graduate physiotherapist practicing Western acupuncture is merely a representation of the learning provided by the University. He or she has been 'professionally socialised' to believe that attaining a University qualification is desirable. French & Neville (1997) suggest: "Professional socialisation can be viewed as a process whereby individuals are shaped to fit the needs of the profession" (p.313). Thus in order to demonstrate the worth of physiotherapy and continuing professional development, physiotherapy professionals are encouraged, by 'they', that University qualifications are required to meet the health needs of New Zealand citizens. The New Zealand health care service is modelled on that of the United Kingdom (Nicholls and Larmer, 2005). The ideologies of both governments are clear. "Health is a purchasable commodity" (Owen-Hutchinson, 1997, p.405). 'They' who direct the marketplace want 'professional practitioners' to provide high quality, effective treatment, with less emphasis on the associated model of 'care and caring', which is perceived as difficult to measure and more expensive to administer (Owen-Hutchinson, 1997). Owen-Hutchinson (1997) also suggests that this dominating discourse fosters the 'medicalisation of health' and preserves the hegemony of the 'medical expert'. As a result, University education in Western acupuncture has professionalised the physiotherapist-Western acupuncturist. 'They' have socialised the physiotherapist practicing Western acupuncture to conform to the discourses 'they' have promulgated.

Furthermore, a University qualification in acupuncture is an important 'they' in persuading the patient to accept the physiotherapist's provision of acupuncture treatment. The patient is likely to be more compliant and accepting of Western acupuncture treatment because they have faith in the qualifications associated with legitimised knowledge (Calman, 1997).

Broadening one's understanding of practice through study

Physiotherapy practice is underpinned by what one knows. Ongoing study extends those horizons of practice. However study, for a physiotherapist, usually means the acquisition of further practical skill rather than analytical thinking regarding the implications of skill delivery (Stathopoulos & Harrison, 2003). Every participant in this study acknowledged the intellectual stimulation gained through the study of Western acupuncture. Most mentioned that they were challenged to think from perspectives other than those previously associated with physiotherapy. Rob stated:

> *I like the fact that I am getting challenged all the time, that I have to sit down and really think about what I am doing. I think it has changed me in that I am not so trusting about everything that I do, see, read and hear. It taught me to always be questioning. When someone comes out from the undergraduate system they are used to being told this is the way it is, whereas when you get to postgraduate it's not.*

Rob credits his Western acupuncture study with having made him more aware of the different possibilities of the realities he experiences everyday at work. In being open to new horizons of thinking, his ability to reason has developed to a new level of maturity. He believes his capacity to question and use different perspectives of thought has been enhanced through advanced learning. Jeanette also realises that the learning associated with Western acupuncture has broadened her practice. She had previously maintained an unquestioningly positivist acceptance of the dominant scientific discourse embedded in and underpinning physiotherapy.

> *The actual acupuncture probably hasn't changed me so much, what changed me was the philosophy paper. That's been my biggest mental challenge, because I have always been so scientific. It pulled the carpet from underneath my feet; it got me to question a whole lot of things. Western acupuncture has changed me, but not necessarily because of Western acupuncture. A few things seemed to come together and I became very, very sceptical, a lot more sceptical of the scientific approach. I hadn't really appreciated how totally ingrained my thinking was in the Cartesian dualism of practice. To me this was 'the truth', but now I have*

> *more of an understanding of 'truth'. Science was like a natural law to me. To pinpoint the experience of actually recognising how deeply ingrained this Cartesian dualism was in me was unsettling. Even though I had always thought I was quite open minded and that I always thought about the whole person, I realised that I was separating the problem from the person. Suddenly I recognised that physiotherapists, by definition are part of that split, the mind/body split, the Cartesian dualism and really I don't want to be part of that split any more*.

Jeanette's orientation to practice has been significantly challenged by recent experiences. The philosophy paper, together with her study in acupuncture, has exposed the Cartesian duality of physiotherapy practice. For Jeanette, this is a 'watershed' experience. She now understands that science contributes, but that it is not the 'only way' to establish truth. Jeanette has become aware of a 'split', by which she means treating the patient as a machine rather than a whole person. She now knows that people and circumstances rarely mirror the textbook examples.

> The mirror throws back an image and not a copy: what is in the mirror is the image of what is represented and is inseparable from it's presence…the intention is the original unity and non-differentiation of picture and what is represented. It is the image of what is represented – it is "its" image and not that of the mirror, that is seen in the mirror (Gadamer, 1960/2003, p.139).

Gadamer's notion of an image being reflected in a mirror describes the reflected 'image' to be as unified to the original identity as possible. However, to copy a practice is merely to imitate or recreate something that has already happened. The scientific application, of a practice by humans, is altered in its reproduction. It is the art associated with the reproduction of the practice that enables the accomplishment of that practice. Jeanette realises that interpreting human practices cannot be automatically reproduced. What is needed in a situation is the moral humanistic concern of practical wisdom. Eliminating humanness from clinical reasoning in physiotherapy produces "less effective choices, not more effective ones"

(Polkinghorne, 2004, p.107). The learning gained through different forms of study enables Jeanette to re-evaluate and broaden her understanding of physiotherapy practice. As well as broadening her professional view, the fundamental tenets upon which her practice is based have been challenged (French, 1997).

Western acupuncture as an art and a science

For Helen, Western acupuncture has meaning deriving from anatomy and neurophysiology. Science provides a foundation for legitimised knowledge from which the understanding and the art of her practice builds. Paradoxically, Helen notes that some forms of acupuncture, particularly those deriving from Chinese theories, are not based in 'Western' science, yet she has experienced their benefit.

> *My understanding of Western acupuncture is focused around approaching it from an anatomical perspective and an understanding of the affect of acupuncture in terms of its effect on neurotransmitters, rather than the traditional Chinese medicine culture of energy and moving energy, focusing on qi. My experience of the training is that it was a mixture of the Western acupuncture and traditional Chinese medicine. I think that the understanding of Western acupuncture I could identify with a lot more easily. Going to a Thomas Lundeberg workshop consolidated that considerably. It really rooted me in Western acupuncture because of the way he described the neurochemistry and the neurophysiology. I mean it was so fantastic and it was so rooted in research. It made me say: "Yes, this is absolutely fact and I can identify with this as a physiotherapist". It's not to say that I don't draw on some of the understandings of traditional Chinese medicine. Recently I went to a shiatsu weekend course and the energy theory there was demonstrated vividly. It was a real eye opener. So I am very, very open to explaining what I do as regards acupuncture, with my clients. I find it quite useful to be able to straddle both acupuncture paradigms. The thing about Western acupuncture is that it is taking the Chinese philosophy and explaining it a different way. But I have difficulty seeing the connection between shiatsu and how it could be explained using the Western rationale of cold science. I have actually been thinking about*

> *that quite a lot, because my personal experience of that weekend was quite dramatic. I had an iliotibial band* [specific muscle/tendon] *problem that I have had for years and after that weekend it went. I was absolutely blown away and I was trying to think what was it that made the difference. It has made me think about the words that we use. We talk about being vitalised and energised. We have got 'lots of energy' and we 'lack in energy'. There is this whole idea of energy flow. I have this ongoing debate with myself on how much of energy flow is about neurotransmitters, like serotonin and dopamine. When I look at the effects of exercise and so on, I think that this has to be about energy. We use these words everyday and I don't think we can say we are either one thing or another. I think we have to be able to take into account both. But in my practice I am often thinking, just what is happening here? To me this is where I don't think we can separate the Western from the traditional Chinese medicine, because we need to be able to interpret things in lots of different ways to get the keys for finding the answers to what we are doing. This is what I find so exciting about working in this way, to me there is always a question and an answer, but somewhere it just has to be ferreted out*.

Helen is comfortable basing her practice in science. She remembers a Western acupuncture workshop as being *"fantastic…rooted in research…this is absolutely fact and I can identify with this as a physiotherapist"*. Yet she has also experienced physical benefit from traditional Chinese medicine based practices, such as traditional Chinese acupuncture and shiatsu. In hindsight she states *"I have difficulty seeing the connection between shiatsu and how it could be explained using the Western rationale of cold science."* However, she decides that she cannot interpret the energy theories of shiatsu as belonging to "*cold science*". Helen believes Western acupuncture to be a way of beginning to explain traditional Chinese acupuncture using science. She considers that all forms of acupuncture change energy, whether that is by neurochemical transmitters or by qi. However she does not think that energy is adequately explained by science. For example, science does not explain energy in terms of how 'energised' a person feels. She recognises that there is a phronetic aspect to human energy. What she values therefore, is understanding both forms of acupuncture and being able to choose that which best meets her patient's requirements.

> *I can choose. I have knowledge. I can make my treatment choices as best befit the need of my clients. This is my ultimate knowing through the choices I have.*

Helen believes her acupuncture practice to have benefited from understanding from both acupuncture paradigms, despite them having very different theoretical bases. The two paradigms of acupuncture assist Helen to balance knowing and doing to *"best befit the needs of her clients"*. Heidegger (1927/1962) suggests that being concerned or absorbed in balancing knowing and doing is a basic element of one's intentional being-in-the-world:

> Heidegger seeks to get at the unsolved problem of knowing and doing, or of theory and practice in human subjectivity, by attempting to understand both (not just doing and practice, but rather knowing and theory as well) fundamentally as kinds, or modes of 'concern, ' which he sets forth as the fundamental characteristic of human 'Dasein' (Prauss, 1999, p.1).

Heidegger (1927/1962) believes that the 'doing' of a practice is essentially more important in one's understanding, than the theory of that practice. In the 'doing' of an activity one comes to personally know the activity in all of its different aspects. For Helen, 'to personally know' is to understand the balance of her practical knowledge and experiential wisdom. This is where the art and science of practice knowledge and skill are balanced with experience and moral consciousness. Reflection on experience has enabled a fusion of new understandings and meanings in Helen's consciousness. Her receptivity to the difference new meaning has brought to her practice helps her see possibilities for further understanding, because to understand is to know that understanding is never complete (Gadamer, 1976).

Western acupuncture as practice-based evidence

With experience, evaluating and understanding practice becomes both a conscious and unconscious embodied skill. Merran evaluates the measurable outcomes

achieved with her patients and also bases her judgements about the effectiveness of treatment choices on experiential knowledge:

> *That's evidence and it's personal evidence-based practice. If I have seen a certain type of situation before and a previous treatment worked with a person who was similar, then I would follow my instincts from the previous effective treatment experience. For example with headaches and migraines, I have found that Western acupuncture works nicely with migraine. I have had much better results in treating headaches and migraines with acupuncture than with my manipulative therapy skills. I think my physiotherapy practice is much improved because of my experience* [25 years]. *Because of my experience I am more able to know what works for different people. I can now assess situations differently. I can look at a person and situation much more holistically, coming to a more productive outcome more quickly. This is because of my experience, rather than what is written down in clinically based evidence. You want to see the doing and the knowing. That's evidence; therefore the proof is in the pudding.*

Merran believes that the *"proof is in the pudding"*. She uses technical reasoning balanced with practical wisdom gained from past experience. She values her capacity for reflective practice-based judgement because it improves her ability to reason comprehensively in clinical situations. She is working in a human context of practice which, despite scientific effort, can never create techniques that are truly predictable (Polkinghorne, 2004). Merran's 'pudding' metaphor is akin to the Gadamerian metaphor of the fusion of horizons (Gadamer, 1960/2003). Each time Merran treats her patients with acupuncture she is in effect 'cooking another pudding'. The proof of the pudding is the fusing of the present experience with others previously encountered. Thus a new dimension of understanding fuses with a past horizon. It is through continued reflection on previous practice understandings, that knowledge is extended and deepened. One is then able to understand both that practice can be based on evidence and that evidence can be based on practice.

Exposing tensions in the scientific measurement of practice

Merran believes that randomised controlled trials create a particular style of practice:

> *But the thing about research and what they are trying to do with this evidence-based medicine is to make us all work to a certain prescription. However everybody and everything out there is so completely different in their presentation. No one headache is the same, no knee pain is the same and there are so many other different factors which impact on a situation. Individuals can be terribly upset, or very nervous about their injury, or even having treatment. All kinds of individual factors affect how a person may react to a treatment.*

She argues that because people are different they can and do react differently to the same treatment. Treatments based on scientific evidence can become too prescriptive. This contrasts with the non-automated, personalised, individualised assessment and treatment that each of her patients currently receives. She, like Jeanette, knows that a person is a whole entity comprising many facets. Jeanette states:

> *At the moment we are looking for physical kinds of things in research. I think it uses the mind and body split in that the West always tries to explain everything on a physical bodily level. The actual act of acupuncture, sticking the needle in, is a very physical one, but the reactions to it might not all be able to be explained physically, because not everybody responds similarly. If twenty similar people are research participants it will not ensure that the same Western acupuncture treatment will give the same response, because they are different individuals. How does one quantify a person who responds differently from another to the same treatment? Other things, such as clinical experience need to be considered. I think that in the West we tend to try and do research in simplified versions that don't always give the answers that we need.*

Problems with Cartesian dualism are increasingly being recognised as contributing to the tensions between physiotherapy as practiced and the dominant evidence-based discourse. Western acupuncture seems to enable the balancing of the individual patient's nervous system as well as providing healing effects to the injured part. In observing the patients' responses to the acupuncture treatment provided, the physiotherapist recognises that their experiential knowledge is not congruent with that of the evidence-based discourse. Western acupuncture has facilitated a practice-based confidence that allows the physiotherapist to question 'they' who challenge their practice. To stay at the cutting edge of science and practice, one's knowledge must be informed by science, but this is only a part of the whole of any practice involving the human realm. Rob understands this notion:

> *I gain my knowledge through my experiences, with the things that I do to keep myself at the knife-edge.*

Ultimately it is experiential practice that enables understanding of the whole of practice.

Western acupuncture as expanding physiotherapy practice

Rob has successfully integrated Western acupuncture into his practice. In doing so, acupuncture has changed the criteria by which he evaluates physiotherapy practice. His ability to practice Western acupuncture, or any other treatment tool, is dependent on the knowledge embedded within him. It is embedded in the way he has interpreted and understood it. Gadamer (1960/2003) describes one's interpretation of anything, as looking at a picture and trying to capture its essence. Interpreters cannot discern another's viewpoint for themselves, because the interpreter already has a unique platform from which his or her view is projected. Each physiotherapist shares common understandings, but even within commonalities of knowledge there are different interpretations. The individual variation of understanding of the limitations and variable successes is evident with each different physiotherapist's practice of Western acupuncture. Rob states:

There are some conditions, which clinically respond better to Western acupuncture. One is extensor tendonopathy; it seems to respond quite well in most cases, whereas conversely for an Achilles tendonopathy it doesn't respond so well.

Whereas Merran remarks:

I have found it has worked really well with chronic Achilles tendonitis. I feel like I now have something that I can use to help in that condition. Interestingly enough, my brother and I both had very tight calf muscles with lots of Achilles stiffness and when acupuncture was done it made a difference to the stiffness.

The differences in outcome have lead to the formation of different theories of causation. It is through the repeating of the nature of an experience that one comes to know or possess knowledge of that experience. Although Merran and Rob have experiences with different outcomes, they have each discovered different ways of treating problems successfully with acupuncture. Similar diagnoses do not necessarily mean that treatment of similar conditions will be equally successful. Physiotherapists cannot predict exact individual outcomes to treatment, only an educated estimation of outcome based on previous experiential knowledge.
Jeanette has been practicing Western acupuncture for more than twice as long as Merran and Rob. She estimates that 80% of her clients are offered Western acupuncture:

The benefits to me are huge. I offer Western acupuncture to probably three-quarters of the people at least, 80% maybe, are offered. I'm using it as an adjunct to my other physiotherapy techniques. Western acupuncture has opened up a whole new range of possibilities I can offer patients, people that in the past, I probably was a bit stuck with. I knew their injuries were very irritable, or things didn't really move the way I would have liked them to. Now I have something else, which is effective to offer my patients.

Western acupuncture has become essential to Jeanette's practice as a physiotherapist. Success using this modality has brought a sense of hope and

satisfaction to her practice. Western acupuncture has expanded her skill repertoire and enabled her to combine new practise skills for the benefit of her patients. Thus acupuncture, a different practice, is used to achieve the common physiotherapy purpose of improving patient outcomes. Helen similarly believes her practice has been broadened and expanded through the use of acupuncture:

> *I think acupuncture has made me less dogmatic, more open to exploring new ideas and not just about health. I'm generally a lot more open to exploring different ideas and concepts and I think less rigid in my approach to life. I work with a lot of people who are depressed or anxious. If that mood status can be changed by medication then why can't you change it with acupuncture, exercise, massage, the kind of things you use to treat their conditions. To me it's just fascinating and it has changed the way I think professionally as well as personally.*

Western acupuncture has opened and expanded Helen's interpersonal and professional horizons. She is exploring different ways of improving the health of her patients. Gadamer states that the horizons of someone who is open to possibility are potentially infinite. These new horizons opening up physiotherapy and Western acupuncture practice can challenge the boundaries of a physiotherapist's ability to practice. The participants in this study are demonstrating enhanced skill delivery and greater awareness of the different reasoning skills required for effective clinical decision making and clinical interaction. These skills are described to be commensurate with those of an expert physiotherapist (Jensen et al, 2000; Stathopoulos & Harrison, 2003).

The participants demonstrate ability to effectively deal with the complex situations the workplace presents. They also demonstrate the use of knowledge and ethical wisdom employed in order to keep the physiotherapists' practice of acupuncture safe. Physiotherapists may be tempted to experiment with acupuncture treatment outside of their scope of practice. Hence Catherine warns against this predisposition:

> *I think physiotherapists have to be really aware that they are physiotherapists first and foremost. We can't really jump out from our knowledge base and treat other areas. It is so easy to think that you can treat a sinus problem or gynaecological problems and skin conditions and*

> *sometimes it is quite hard to draw the line. Where do you stop? I think we need to be aware of this because, as physiotherapists, our skills and scope of practice are in the movement and the physical function of people.*

Catherine's awareness of boundaries in Western acupuncture practice derives from a positivist understanding of practice. The physiotherapist practicing Western acupuncture is a part of a biomedical system. Part of practice wisdom is knowing when to treat a patient's condition and when to refer the patient to another practitioner. Rob supports Catherine's cautiousness:

> *The physiotherapy profession as a whole needs to know its boundaries. I think as physiotherapists, we should master a particular area of knowledge, not be a jack-of-all-trades. Some physiotherapists try to do everything, but I consider they don't have a great depth of knowledge in anything. I am quite happy to send people to traditional Chinese Medical practitioners if that is what they want. My knowledge is what I know and what I am comfortable reasoning with. I don't feel comfortable reasoning with meridians because I don't know enough about them. I think I am much safer as a practitioner because I won't experiment outside of recognised boundaries of practice.*

Safe practice is a very important aspect of professional responsibility. People and their afflicted body parts must not be experimented with beyond the capabilities of the practitioner. Rob's statement highlights the tensions between the generic practitioner who is qualified to treat a wide variety of conditions and the specialist who has deeper understanding in a more specific area. The critical 'art' of science is to understand the depths and limits of one's understanding. In order to cultivate a deep fund of knowledge one needs to "develop a real art of understanding instead of an aggregate of observations" (Schleiermacher, 1976, as cited by Gadamer, 1960/2003, p.185). Deep understanding comes about through reflection on past practice, experience, knowledge and misunderstanding, rather than automatically understanding each situation. To understand automatically means that one does not necessarily understand the full implications of a practice. We treat according to what we see, hear, feel (physically and emotionally) and think we know. We do not always recognise that we do not always know all, or know 'correctly'. We must

always be open to reflect critically on past experience in order to understand and develop our practice within appropriate limits.

Catherine and Rob know the conditions they are able to professionally treat with Western acupuncture. They are aware of the potential limitations of their practice and, as such, practice acupuncture within the scope of their physiotherapy.

Understanding Eastern acupuncture as an art

The participants in this study believe that traditional Chinese acupuncture is more of an art than a science. They believe that practicing traditional Chinese acupuncture is outside their scope of practice as a physiotherapist. Ruth studied Western acupuncture because:

> *I think Western acupuncture is much more applicable to physiotherapy* [than traditional Chinese acupuncture]*, it integrates physiotherapy and acupuncture in a scientific approach. I didn't feel I had to bury myself up to my ears in it; I didn't want to be confused. After a week of traditional Chinese acupuncture study I couldn't understand it, it was a totally different way of thinking from what I was used to. I don't know how it works.*

Ruth perceives Western acupuncture to fit more easily with the scientific Western biomedical genre. This does not imply that one acupuncture paradigm is better than another. Ruth remembers finding traditional Chinese acupuncture confusing and thinking that in order to learn to apply traditional Chinese acupuncture to her clinical practice as a physiotherapist she would have to *"bury herself up to her ears in it"*. To bury oneself up to one's ears suggests an almost total immersion that would require considerable time and effort. Rob shares the tensions experienced by Ruth.

> *I was exposed to a little bit of traditional Chinese medicine, and it just blew by my eyes. I didn't understand it whatsoever. I just couldn't grasp what was going on there. It is almost as if you have to rethink all that you have known in the past in terms of any holistic medical model, leave it at the door, have your mind blank and then start again. That's probably what you have to do. I would have trouble doing it.*

Rob cannot begin to interpret traditional Chinese acupuncture. He cannot start again with his mind blank and closed to what he has previously known and valued, particularly when the new knowledge is in opposition to what was known before (Gadamer, 1976). This is because interpretation is reliant on previous understanding. One's understanding cannot be removed from one's knowledge in order to make way for new understanding (Heidegger, 1927/1962).

Rob is foremost a physiotherapist. Western acupuncture conforms to and develops from his existing understandings as a physiotherapist. Western acupuncture opens up new avenues of knowledge that are congruent with what is already known. It opens new possibilities for treatment and future development. Rob's background knowledge of science and evidence-based practice has created the conditions for his understanding. This limits his ability to interpret new, foreign, different horizons of understanding. Thus Rob is unable to fuse traditional Chinese acupuncture into his practice. Scientifically based acupuncture is more congruent with the life-world of Rob and Ruth than the traditional acupuncture theories of the Chinese. Merran exemplifies these notions. Although she has studied both Western acupuncture in New Zealand and traditional Chinese acupuncture in China, she thinks from a Western perspective.

> *When I think about acupuncture and why I am doing it, I think from a Western point of view. I am thinking about the nervous system, sclerotomes, dermatomes, myotomes, etc. I use that background and knowledge to get the outcome I want from the acupuncture. Eastern acupuncture is looking at it from a more 'flowery talk'. It is different. They are looking at the yin and the yang, and other reasons.*

'Flowery talk' is not part of western biomedical practice and 'yin and yang' do not feature in evidence-based practice. In describing Eastern acupuncture as flowery talk, Merran suggests that Eastern acupuncture may only be partially akin to the acupuncture that she understands. She understands the action of acupuncture as inherent within the nervous system of the body. Jeanette shares this view:

> *Western acupuncture is probably everything that is not Eastern, traditional Chinese acupuncture. I think anything that is more anatomical, where you*

> *are not really looking at channels, just anatomical needling, or dry needling, that's Western. Even if I use a TMM* [tendo-muscular meridian] *approach, or zone approach, I still think I am working in a Western manner, because I explain it with Western rationale. I don't believe in the meridians.*

Jeanette does not believe in the traditional Chinese meridian theory that claims that the balance of qi is the lynchpin of human well being. To many Eastern acupuncture practitioners such beliefs are heretical; acupuncture without the traditional Chinese acupuncture theories cannot be acupuncture. Mole (1997) supports this argument: "Any person who professes to practice acupuncture without having studied Chinese medical theory, and who maintains that it can be used as an adjunct to Western medicine, has failed to grasp its essence" (p.4). However Jeanette is clear that she understands all acupuncture as having an anatomical and neurophysiological foundation. For her, the essence of acupuncture is not rooted in ancient Chinese energy theory. It has new possibilities congruent with her other biomedical knowledge. It is an explanation of acupuncture that is tangible rather than esoteric. Jeanette recognises that the Western acupuncture explanations cannot explain all Eastern acupuncture practices and theories. However, she is not bound to employing the technical rational model of using scientifically validated statements to make practice decisions (Polkinghorne, 2004).

> *I am Western in my thinking, however I acknowledge that Western acupuncture is in it's infancy and we can't explain a lot of things. But that doesn't mean I disregard, or discard what happens, or what has been shown to work in the past empirically. I think the main core of traditional Chinese acupuncture and Western acupuncture in the future will be similar and explainable with more Western rationale as is already starting now. I think as we start to understand more neurophysiology, the more we will realise how little we really know.*

Interpreting Western acupuncture from a scientific perspective exposes the tensions inherent in the traditional Chinese explanations of acupuncture. Although she does not believe in meridians, Jeanette is very open to using what she has experienced as effective from traditional Chinese acupuncture principles. Thus she is open to the

possibilities of new understandings. Jeanette anticipates that both paradigms will become better understood when the art and the science of acupuncture become more closely aligned.

Balancing art and science in Western acupuncture practice

The activities experienced during an individual's everyday life constitute the meaningful life-world existence for that person. van Manen (1997) states that people or beings have consciousness and within that consciousness they act purposefully in their lives for themselves and for others.

Helen has practised physiotherapy for many years, however she believed that her practice lacked efficacy prior to her acupuncture training. Furthermore, new standards encompassing accountability and evidence-based practice were developed. 'They' had not provided Helen with a wide enough range of skills to effectively practise her physiotherapy speciality within these standards.

> *I was always extremely frustrated before doing acupuncture training. I was and continue to work with people with chronic pain. Much of the time before acupuncture I felt absolutely helpless. Professionally I was stuck and I didn't know if I could continue in the work environment of the mid-90s knowing that the age of accountability and evidence base was coming. I knew that my physiotherapy practice just didn't stack up. Acupuncture learning changed everything. I was so energised, I felt that a dam had broken and the learning was exciting. It was exciting, challenging and I felt that professionally I was a lot more competent. I was safer, and I really had something to offer people. Whereas before I had felt I was just going through the motions and trying to bluff my way through. That's being very honest.*

Helen had lost her sense of professional worth, usefulness and effectiveness. She was worried about her future in a profession to which she had devoted many years. Her moral consciousness was troubling her. Practices were changing both at her work and in the wider profession. She had to find a way to improve and revitalise her physiotherapy practice. For Helen, studying acupuncture was a turning point. It was

as if *"a dam had broken, I was so energised…the learning was exciting"*. It has enabled progress from a situation of frustration and helplessness to one of great satisfaction in her work. Accountability through evidence-based practice had caused Helen to consider her previous practice efficacy to be insufficient. Acupuncture revitalised her ability to practice physiotherapy. The possibility that acupuncture provided in Helen's practice developed her ability to provide what she construed as effective evidence-based practice. Experiential reasoning, rather than recipes and prescriptions, now guides her practice. Experiential reasoning is based on one's experiences in practice; it is the pathic awareness that a practitioner unconsciously draws from at practice, regarding the patient and their injury. It involves a holistic approach engaging a long-term plan to effectively treat the patient's overall condition relative to physiotherapy. No longer was she dependent on technical rationalism, focusing on the injured part. The scientised culture with its dependence on the "diagnostic attitude of medical science" (van Manen, 1998, p.16) no longer regulates her physiotherapy practice. Practicing Western acupuncture has enabled the participants in this study to understand that although science is important in their practice, it is not the sole basis of their practice. Helen states:

> *It* [acupuncture] *has made me more aware of balance in life. We talk about the O2/CO2 balance and the levels being out of balance. In teaching breathing retraining we are balancing out those different gases in the bloodstream. People had experienced symptoms because their neurotransmitters were out of balance. Acupuncture is very powerful in helping redress balance. Physiotherapists have so much to offer, and I think that my understanding of both Western and traditional Chinese Medicine acupuncture informs other areas of physiotherapy, so I can use them more effectively.*

Phronetic deliberation informs practical choices by "combining and co-ordinating diverse elements to reach a conclusion" (Polkinghorne, 2004, p.116). Through trying different approaches using intelligent enquiry and phronetic deliberation a source of knowledge is created enabling more 'balanced' and able practitioners (Polkinghorne, 2004).

Practicing Western acupuncture has assisted the realisation that phronetic reasoning combines with science and technology to achieve successful outcomes for the

therapist and the person for whom they care. Thus Western acupuncture is stimulating debate within physiotherapy. The art of holistic practice in science is beginning to be recognised. However, 'they' hold technical rational thinking to be more legitimate than human situated judgement (Polkinghorne, 2004). Western acupuncture is the technification of traditional Chinese acupuncture. In effect, science has tried to translate the Chinese art of acupuncture to a scientific practice. This does not mean that the physiotherapist using Western acupuncture practices as a technical rationalist. The physiotherapist is pressured to conform to technical rational reasoning in order to claim that their practice is effective and cost-efficient (Polkinghorne, 2004). Because of the challenges that Western acupuncture poses to the physiotherapist practicing Western acupuncture, attention has been drawn to the art of practice, thus increasing the visibility of experiential reasoning in practice.

In summary

'They' have espoused technical rationality as the best way to repair human physical problems. However the use of techne/scientific reasoning as the basis of decision-making does not always value skills such as commonsense, practical reasoning and moral knowledge. Cautioning against an over-reliance on technical rationality, Polkinghorne (2004) argues that human practice should depend on a full range of human knowing. His use of the Aristotelian notion of phronesis encompasses thinking that integrates intellect with feeling, moral values and acknowledgement of variation and conflict. This notion of human practice as being a part of a relationship between individuals contrasts with the collective notion of 'they' as groups, managed as a unified whole. 'They' organise and control the practice of physiotherapy, because 'they' manage biomedical practice in the human realm (Polkinghorne, 2004). 'They' have affected Western acupuncture practice by physiotherapists in New Zealand. 'They' have legitimised and moulded acupuncture practice, to be more congruent with physiotherapy in the Western world. Yet for many Western acupuncture remains unacceptable because 'they' have evaluated it according to the standards of evidence-based practice and do not believe it measures up.

We attribute 'they' to others, yet there are parts of 'they' in us all. In existing, one conforms to the dominating discourses of 'they'. Thus 'they' have limited the practice of Western acupuncture in physiotherapy and yet 'they' have enabled it.

Paradoxically ‘they’ co-exist. It is through exploring the meaning of the practice through language that these insights can be gained. Reflection on practice facilitates recognition of these paradoxes. In seeing the contradictions one understands that Western acupuncture is an important tool for physiotherapy practice. Nevertheless, it is one of many important tools because physiotherapy practice comprises more than acupuncture. In the following chapter these findings will be discussed in conjunction with other research findings and recommendations will be made regarding education, practice, further research and legislation.

Chapter Six: Discussion and recommendations

This thesis presents a synthesis of meanings gained, through research using an interpretative methodology, from New Zealand physiotherapists practicing Western acupuncture. A background to Western acupuncture and physiotherapy practice in New Zealand has been provided. The procedures used to collect and analyse the data have been explicated and a thematic description of the findings has been presented. In this chapter the implications of these findings are discussed in relation to the literature and recommendations are made for practice and further research.

Exploring the lived experience of Western acupuncture from the perspective of physiotherapists has revealed a myriad of meanings inherent in the use of this new and different physiotherapy tool. I had anticipated that the participants in this study would describe their Western acupuncture practice positively. However, I did not foresee the uncovering of tensions within physiotherapy deriving from the differences that this new tool presents. This study demonstrates that understanding and effectively using a new tool opens the physiotherapist to possibilities other than the acquisition of practical skill. In keeping the 'lid of the toolbox' open, further exploration and understanding about the value and the limitations of Western acupuncture potentially offers new and different possibilities for the practice of physiotherapy as a whole.

The meaning of Western acupuncture challenges New Zealand physiotherapists

Physiotherapy, as a profession, has evolved from a technically oriented basis in massage to the more evidence-based treatment rationales now utilised in practice. Acupuncture was introduced in New Zealand before scientific research became predominant. Thus the early physiotherapists practicing acupuncture, unconstrained by a lack of scientific evidential literature, were able to explore new and unknown practices. As acupuncture practice demonstrated clinical efficacy, it became more established in physiotherapy practice. Yet one could ask whether physiotherapists have had sufficient opportunity to investigate the use of acupuncture because of the more recent emphasis on evidence-based practice. Paradoxically science opens some practice horizons and limits other practice developments. This is a valuable

insight because science has been revealed to be deeply embedded in the participants' understanding of both physiotherapy and Western acupuncture. As a foundation for new learning, science has facilitated the study and use of this new tool, expanding physiotherapist's experiential knowledge and practice. Experiential learning from a pre-existing skill base facilitates the "artistry of advanced practice" (Fulbrook, 2004, p256). This notion is supported by Stathopoulos & Harrison (2003) who argue that it is not experience that develops expertise, but the meaningful interpretation of experience which is developed through rigorous postgraduate study. Thus, Western acupuncture, as a postgraduate field of study, has facilitated development of expertise in clinical development and reasoning skills as well as the further development of clinical practice skills.

The development of professional reasoning skills has also uncovered tensions in physiotherapy that previously have been alluded to but not exposed for detailed discussion and analysis. Many of the tensions in physiotherapy are absorbed in the continuation of accepted practices that may or may not be validated as evidence-based practice. The use of electrotherapy machines to provide treatment is one such example. Other tensions include the power of the randomised controlled trial to demonstrate best evidence of a practice when, in fact, the randomised controlled trial does not always support interventions that the physiotherapist and the patient perceive to be beneficial.

The fact that Western acupuncture is not accepted as clinically 'legitimate' in physiotherapy can be challenged through reflection and rigorous critique of Western acupuncture and physiotherapy practice.

Recommendations

The need for more wide -ranging research

Scientific endeavour and technical accomplishment have attempted to understand, predict and control nature and the human realm. In strictly and 'scientifically' controlling the outcome of scientific research, people as humans are objectified. Little attention is paid to the manner in which individuals are different and unique. Scientific research has become the foundation stone of evidence-based practice and experiential knowledge is receiving less recognition.

Exploring the practice of Western acupuncture has provided insight into the limitations of evidence-based practice as it is currently interpreted. It has also facilitated the understanding of the bridging of practice between empirical clinical skills and more scientifically orientated evidence-based clinical practice. Paradoxically, whilst there is a strong scientific basis to Western acupuncture, the practice has not been accepted within the evidence-based paradigm because most acupuncture trials cannot show evidential significance through the randomised controlled trial. My findings concur with Stener-Victorin et al (2002), who state that the lack of a significant outcome from a randomised controlled trial does not mean that a treatment modality is ineffective. Scientific legitimacy does not equate to clinical legitimacy. The findings of this study are also supported by those of Paterson & Dieppe (2005), who argue that acupuncture and physiotherapy are complex practices that are not always suited to evaluation by the randomised controlled trial. The evaluation of drugs for example, unlike physiotherapy and acupuncture, does not need to account for a complex interplay between evidential reasoning, the skills of clinicians, the differing needs of patients and the interaction of people's perceptions, feelings and emotions. In both physiotherapy and acupuncture, reassessment of the patient's condition and alteration of treatment depending on the outcome of that particular assessment, requires the integration of knowledge from several paradigms. The same 'whole' treatment encounter is not provided in the situation of a research trial of medication. Characteristic effects are therapeutic actions or strategies which are believed to be responsible for the outcome of a specific treatment (Paterson & Dieppe, 2005). However Paterson & Dieppe note, "a factor that is characteristic within one therapeutic system may be incidental to another"(p. 1202). Furthermore, incidental affects such as empathy and focussed attention continue in the face-to-face treatment process, whether that is sham, placebo or active treatment (Paterson & Dieppe, 2005). Thus evaluation of complex interventions, such as physiotherapy and acupuncture by the randomised controlled trial is confounded by effects which are incidental to the treatment provided. Yet they are a necessary element in the provision of that treatment (Paterson & Dieppe, 2005). Physiotherapists educated with knowledge predominantly from the positivistic paradigm are encouraged to value and use the outcomes of traditional scientific research in their everyday practice, even though the randomised controlled trial may generate false negative results (Paterson & Dieppe, 2005). Thus the 'value free' notion of the randomised controlled trial is

challenged because the making of meaning from different forms of knowledge is limited (Laverty, 2003). Randomised controlled trials provide statistical information about practice efficacy. They do not necessarily assist in the gathering and understanding of meaning for practice decision-making, practice delivery or reflection on practice. Exploring the meaning of Western acupuncture has exposed these tensions. The findings of this study have revealed that practice enhances awareness, knowledge and practice effectiveness.

It is paradoxical that the meaning of an intervention is integral to clinical reasoning, yet not essential for evidence-based practice. Fulbrook (2004) argues that there is more to practice than traditional forms of inquiry provide. Physiotherapists need to embrace wider scopes of research and understanding in order to develop the complex nature of practice with which they are faced.

The findings of this study also support the recommendations by Bovey et al, (2002), that acupuncturists need to engage in further rigorous research from different research paradigms. This will further develop practice knowledge, personal and professional standards, better meet the needs of patients and develop an ongoing agenda for acupuncture research that best meets the needs of one's profession. Research activity must be encouraged to develop the skill base and professional knowledge in relation to understanding practice from the perspectives of physiotherapy acupuncture educators, providers, purchasers and consumers. Although funding for research is limited, it is essential that further research into the use and effectiveness of Western acupuncture in New Zealand by physiotherapists continues.

Recommendations for Research

- Quantitative surveys are required to collect information about treatment frequency and perceived effectiveness of acupuncture throughout New Zealand, both by practitioners and clients/consumers.

- Critique of the 'gold standard' in research – the randomised controlled trial needs to be undertaken.

- A range of research methods, including those from the qualitative paradigm should be used, in isolation, or in combination with the randomised controlled trial to bring deeper meaning of the inherent and characteristic elements of any trial. The primary aim of interpretative research is to reveal meaning while critical research aims to bring about change (Taylor, 1998). Some examples are:

    - A grounded theory approach could use a comparative method of analysis to explore the perceptions of physiotherapists practicing acupuncture from traditional Chinese and Western perspectives.

    - Research could be undertaken from a postmodern perspective to explore the dominating discourses within acupuncture practice among physiotherapists.

    - Inquiry informed by critical social theory could be used to question the power-knowledge relationship in physiotherapy-acupuncture education and how that relationship is evident in physiotherapy-acupuncture practice.

    - Critical social theory could be used to investigate the criteria for research publication to illuminate any dominant publication bias or discourse.

    - Further phenomenological research could explore patients experiences of Western acupuncture as a part of their physiotherapy treatment in New Zealand.

- Those publishing physiotherapy research in New Zealand need to encourage new fields of thinking and research.

  Much research presently directly relates to science and skill based practice. Greater emphasis could be placed on issues confronting the profession such as education, standards, legislation, public safety, and clinical and professional decision-making. These issues are not only related to skill delivery but also to the people involved in that delivery and the development of the profession as a whole with other healthcare professions.

Challenges to education

Acupuncture is one of the few modalities used by a physiotherapist that is not part of the core curricula for the undergraduate physiotherapy student. Members of PAANZ, physiotherapists with an interest in acupuncture, have developed and until recently provided the majority of New Zealand physiotherapy acupuncture education. PAANZ still provides post-basic acupuncture courses for physiotherapists. Thus, over the past twenty years acupuncture education for physiotherapists in New Zealand has developed in an ad-hoc manner, in comparison with other more formalised physiotherapy education programmes overseen by representatives of the Ministry of Education. This contributes to the fact that acupuncture remains on the 'fringes' of contemporary physiotherapy education. All modalities or practices regularly used by physiotherapists need to have some undergraduate exposure to facilitate practice acceptance and development. However, detailed articulation of that specialist knowledge is probably best provided at postgraduate levels.

The development of University level acupuncture qualifications in physiotherapy has ensured that certain standards are attained. However there are differences in the nature and content of the two predominant New Zealand University acupuncture programmes for physiotherapists. The Western acupuncture course, developed by AUT is more orientated to Western than traditional Chinese acupuncture education. The Otago course, developed by PAANZ in conjunction with Otago University has aimed to bring the PAANZ introductory acupuncture course to University standards. This course seeks to balance both acupuncture paradigms, so it is more oriented to the traditional Chinese philosophy than the Auckland course. Consequently tension exists between physiotherapists educated from the different acupuncture courses because each holds different philosophical understandings. This is particularly evident when physiotherapists discuss the reasoning underpinning their acupuncture treatment because some graduates of the Western acupuncture course do not believe in traditional Chinese meridian theory. This contrasts with other physiotherapy acupuncturist's understandings because they may believe in and utilise traditional Chinese theoretical philosophies.

Another tension relates to the fact that earlier PAANZ graduates do not have an 'institutional qualification'. Many consider their practice to be as rigorous, efficacious and safe as that acquired through University. Does a University qualification guarantee safety and efficacy of acupuncture practice in physiotherapy? However, with the advent of registration under the HPCAA (2003), some practitioners are concerned that their qualifications will not be sufficient to continue acupuncture practice. These issues create professional tensions that have the potential to become dysfunctional. In a small country like New Zealand it is important for professions to be a strong united voice. Moreover, the willingness to debate issues is essential for the benefit of all physiotherapists and the public.

Physiotherapists educated in Western acupuncture believe the neurophysiological scientific principles underpinning the action of acupuncture explain enough of the interaction between the acupuncture needle and the human nervous system to comprehensively link it with physiotherapy treatment of human function problems. They consider the evidence-base behind Western acupuncture to be as rigorous as the evidence for other physiotherapy skills, such as manual therapies. However, because of further education, many have become more conscious of the contrast between the literature supporting Western acupuncture and the lack of supportive literature for some other contemporary physiotherapy practices, such as electrotherapy.

Further tensions exist for the physiotherapists educated in Western acupuncture because their knowledge of its scientific underpinning contrasts with other people's understandings of Western acupuncture. Those not educated in Western acupuncture do not necessarily understand what constitutes the difference between Western acupuncture and traditional Chinese acupuncture. As a result, Western acupuncture is perceived to be alternative medicine. An example of literature that acknowledges, but does not distinguish between different acupuncture paradigms, is the results from the review by Hodges & Maskill (2002) who provided a systematic review of acupuncture treatment for accident-related musculo-skeletal disorders. This was commissioned by ACC. Thus major purchasers of physiotherapy provision in New Zealand are informed by literature that evaluates Western acupuncture as analogous to traditional Chinese acupuncture. Many New Zealand physiotherapists, biomedical professionals and healthcare purchasers are therefore unaware of the differences between these paradigms.

Recommendations for Education

- Western acupuncture should be introduced to New Zealand physiotherapy students at undergraduate level.

- More comprehensive specialist Western acupuncture education should continue to be provided at postgraduate physiotherapy level.

- Ongoing exploration of the overlap between the different acupuncture paradigms is required. This needs to be combined with relevant new scientific, evidential and research information.

- All physiotherapists need to develop skills to appraise literature in order to more fully benefit from participation in ongoing education.

- Under and postgraduate physiotherapy education programmes should include and draw from both qualitative and quantitative literature.

Challenges to physiotherapy practice

Physiotherapy has been demonstrated to be a healthcare practice with roots embedded in science. This scientific basis has revealed a tension wherein other physiotherapists, professionals and the public presume that Western acupuncture practice is not based in science. This tension is exacerbated through education and the physiotherapy literature. Increasingly physiotherapists are becoming aware of the inconsistencies between the scientific base justifying Western acupuncture and other accepted physiotherapy practices such as the use of electrotherapy equipment.

In Chapter One I wondered whether Western acupuncture could become 'the ultrasound of the future'. In the 1980's ultrasound was a tool used in the daily practice of many physiotherapists. The fact that participants in this study prefer using Western acupuncture rather than electrotherapy modalities, such as ultrasound, demonstrates a major shift in everyday practise. In comparing electrotherapy modalities with Western acupuncture, physiotherapists exemplify the

changing ‘face’ of physiotherapy, both in the selection of practice modalities and their willingness to challenge evidence-based practice.

Ongoing education and reflection should facilitate openness to practice understanding, thus enhancing the capacity for clinical reasoning. However the science-based, prejudicial nature of some physiotherapists has revealed a difficulty in embracing other, less scientific, forms of acupuncture such as Western acupuncture’s precursor, traditional Chinese medicine. All participants considered science in Western acupuncture to be more useful to their practice than traditional Chinese acupuncture theories.

Western acupuncture has enhanced treatment outcomes in many situations. When it does not succeed questions arise as to whether or not traditional Chinese acupuncture treatment may have enabled treatment success. Bradnam (2003) argues that by using the Layering method of Western acupuncture treatment, different neural pathways can be evoked. Thus ongoing educational support is required to develop practitioner skill bases and practice confidence in the progressing of neurophysiological principles underpinning practice.

Specificity of treatment is important. Western acupuncture is largely used for the relief of pain and facilitation of soft tissue healing. Western acupuncture practice is justified using neurophysiological clinical reasoning, such as the Layering method (Bradnam, 2003). Traditional Chinese acupuncture involves assessment and practice that may include the treatment of conditions outside of a physiotherapist’s scope of practice. Thus there are challenges for the physiotherapist practicing acupuncture to understand the specificity and range of their patients’ needs, and to refer the patient to other providers when the patient’s requirements are beyond those that can be provided within the scope of physiotherapy practice.

Physiotherapists practicing Western acupuncture are extending existing horizons of interpretation and practice. In so doing they are becoming aware of the traditional tendency to disassociate patients’ bodies from their minds. As they strive to practice more holistically the patient, rather than the body part, becomes the focus of attention, communication and treatment. Through Western acupuncture these physiotherapists are realising that without co-operation and understanding between

the clinician and patient even the most skilled therapist has difficulty in gaining efficacious outcomes. This finding is supported by Hale (2001) who argues that people's attitudes are more limiting and disempowering than the environment when participating in healthcare practice.

Recommendations for Practice

- Physiotherapy modalities need to be constantly re-evaluated for their relevance to current and future practice needs.

- Ongoing development of clinical reasoning in practice, such as using the principles of the Layering method, is required to further develop practitioner skill bases and practice confidence.

- The physiotherapy profession needs to reflect upon the notions of holistic care and technical rationalism in practice.

Challenges for the physiotherapy profession

Throughout this study the tension of ongoing legitimacy of Western acupuncture practice within physiotherapy has been apparent. However, in dwelling with the data and deepening my understandings of Western acupuncture I now wonder about the criteria for legitimating physiotherapy practice. I understand that professionalisation of practice is a dominant legitimating process. This enables many practices to continue and develop, but it may also constrain the development of practice as a whole.

The ramifications of the HPCAA (2003) have raised questions about the legitimacy of acupuncture in physiotherapy. This tension has been increased over the recent decade because of the need for evidence-based practice and both fiscal and treatment accountability. This has challenged the practice of physiotherapy because it cannot easily be simplified into prescription-based treatment.

There are two very important facets to practice: safety and effectiveness. Practitioner qualifications, or the legitimising of practice, do not guarantee these. A qualified practitioner can be ineffective and potentially unsafe. The challenge for physiotherapists, the profession of physiotherapy and the public is to facilitate ongoing situational action, reaction and reflection on action to maximise the safety and effectiveness of Western acupuncture practice.

Recommendations relating to Legislation

- A forum to explore the pros and cons of acupuncture practice as an advanced scope of physiotherapy practice would facilitate the determining of satisfactory standards of competence, training, practice and ongoing education for physiotherapists practicing Western and other forms of acupuncture as a part of their physiotherapy practice.

  The Physiotherapy Board of New Zealand, in conjunction with key stakeholders such as PAANZ, the New Zealand Society of Physiotherapy, the New Zealand College of Physiotherapy, the University postgraduate education providers and the public should be represented at such a forum. This could promote discussion and establish common understandings between all parties for the benefit of physiotherapy outcomes.

  If acupuncture is not endorsed as an advanced scope of practice, I suggest that The Physiotherapy Board of New Zealand should consider the endorsement of the Postgraduate Certificate in acupuncture as the baseline qualification for acupuncture practice within physiotherapy. However, provision would need to be made for practitioners with relevant, non-University acupuncture qualifications that pre-date any new directive and for physiotherapists who have received their acupuncture training overseas.

Limitations of this study

Although interviewing seven physiotherapists experienced in Western acupuncture provided a wealth of information for analysis it cannot be assumed that the

experiential meanings presented in this thesis are the same for all physiotherapists practicing Western acupuncture in New Zealand.

Physiotherapists who practice ‘acupuncture’ but do not perceive themselves to be Western acupuncturists, may notice some congruity and/or difference of themes relating acupuncture and physiotherapy. This study is limited in that the Western acupuncture perspective, as earlier defined, is the only perspective explored through participant data. As such there is a need to evaluate the perspectives of acupuncture from physiotherapy practitioners using different paradigms.

The majority of participants had gained their Western acupuncture education through Western acupuncture University training. Only one participant had not attained her Western acupuncture education through University study. Thus, if more participants had achieved their Western acupuncture knowledge through different coursework options, differing perceptions of the meaning of Western acupuncture practice in physiotherapy may have emerged.

Maori and Pasifika physiotherapists practicing Western acupuncture were not included in this study because none of the volunteers came from these cultural backgrounds. Although people from these cultures are not strongly represented in the New Zealand physiotherapy profession, there may be a future requirement for research to more fully represent differing cultural perspectives of New Zealand physiotherapists practicing acupuncture.

In Conclusion

The purpose of this study was to more fully understand the meaning and usefulness of Western acupuncture in physiotherapy practice from the practitioners’ perspective. The findings provide insight in two important ways. The first is the articulation of experiential knowledge, ‘the meaning’ of Western acupuncture for practicing physiotherapists. The second is the revelation of Western acupuncture as a catalyst for surfacing tensions within physiotherapy. A new and different tool has exposed differences in understanding between practitioners, practitioners and the public, and practitioners and the physiotherapy profession.

Western acupuncture exemplifies the potential for physiotherapists to develop increasing flexibility and acquire skills that will meet the challenges posed by health care changes as well as those which patients present. The boundaries of physiotherapy practice are widening in ways not previously conceptualised.

Education, registration, regulation and practice are important aspects of ongoing professional development because each contributes to safe and effective practice. Yet there are no absolute guarantees of quality in practice. Thus the challenge is to maintain ongoing dialogue, debating and refining the checks and balances inherent in responsible practice. The exposure of tensions stimulates discussion. It assists in opening multiple points of view. However, understanding is never complete (Gadamer, 1976). It is essential that the physiotherapist practicing Western acupuncture and profession as a whole recognises this fact. Both must continually seek further understanding in the ongoing striving to improve the practice of physiotherapy. The 'tensions in the toolbox' provided by Western acupuncture offer challenges to the physiotherapist, the physiotherapy profession and the public.

In the words of Wedlick [a medical practitioner presenting a lecture on medical electricity to physiotherapists]:

> Your profession is an interesting one; it will be as interesting as you yourselves make it. We either go on learning or we slip back, we can never stand still (Wedlick, 1955, p.157).

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Appendix A: Ethics approval

MEMORANDUM

Student Services Group – Academic Services

To: Deb Spence
From: **Madeline Banda**
Date: 14 October 2003
Subject: 03/135 Exploring the meaning of Western Acupuncture for New Zealand physiotherapists

Dear Deb

Thank you for providing amendment to your application for ethics approval as requested by AUTEC.

Your application was approved for a period of two years until 14/10/05.

You are required to submit the following to AUTEC:

- A brief annual progress report indicating compliance with the ethical approval given.
- A brief statement on the status of the project at the end of the period of approval or on completion of the project, whichever comes sooner.
- A request for renewal of approval if the project has not been completed by the end of the period of approval.

Please note that the Committee grants ethical approval only. If management approval from an institution/organisation is required, it is your responsibility to obtain this.

The Committee wishes you well with your research.

Please include the application number and study title in all correspondence and telephone queries.

Yours sincerely

Madeline Banda
Executive Secretary
AUTEC
Cc: Susan Kohut

From the desk of ...
Madeline Banda
Academic Services
Student Services Group

Private Bag 92006, Auckland 1020
New Zealand
E-mail: madeline.banda@aut.ac.nz

Tel: 64 9 917 9999
ext 8044
Fax: 64 9 917 9812

Appendix B: Advertisement

Ethics application: 03/135
Subject: Exploring the meaning of Western Acupuncture for New Zealand Physiotherapists.

Physiotherapist Acupuncturists

Your help is requested with the study:

Exploring the Meaning of Western Acupuncture for New Zealand Physiotherapists

A Master of Health student needs to interview Physiotherapists who are practitioners of Western Acupuncture in Auckland.

To participate you need to be a New Zealand Registered Physiotherapist, either PAANZ Registered, or have achieved the P.G. Certificate in Western Acupuncture (AUT).

You would be interviewed about your perceptions and use of Western Acupuncture in practice.

If you are interested please contact:

Susan Kohut
P.O. Box 89-056, Torbay
Email: kohut@xtra.co.nz
Tel: (09) 475 5055, or 021 255 5653

Appendix C: Participant Information Sheet

Date Information Sheet Produced: 1.8.03

Project Title: Exploring the meaning of Western acupuncture for New Zealand physiotherapists.

Invitation

You are invited to participate in an interview with the principal researcher in order that she may gain an understanding of your perceptions of western acupuncture as a treatment modality.
Participation in this study is voluntary.
Your consent to this study can only be made after you have read and understood the information sheet.
Any discussion, which may take place between receiving information and consenting to the participation in the study, will take place over the telephone, or email.

What is the purpose of the study?

This study is being undertaken as the research project to fulfil the criteria for completing Master of Health studies in Western Acupuncture (WA).
I propose to explore what WA means to physiotherapists in the context of their practice.
I wish to research the meaning of WA to New Zealand physiotherapists. I am interested in what is motivating New Zealand physiotherapists to study and to utilise this new treatment modality.

How are people selected to be part of the study?

7-10 physiotherapists will be selected on a first come, first served basis to be interviewed as a part of this study.

What happens in the study?

Each participant is recruited, interviewed (it is anticipated the interview may take 1-2 hours), the interview is audiotaped, and later transcribed by the researcher. The transcript is then sent to the participant, who has the opportunity to verify that the transcript is correct. Participants will be able to add or delete material from their interview transcription, prior to the analysis phase, should they wish to do so.

What are the discomforts and risks?

The possibility of discomfort or risk is minimal. The participant is not under any form of duress to disclose any information, nor is the exploration of sensitive personal feelings intended.

Ethical risks could involve the participant revealing information, which betrays privacy of another individual, such as client, colleague or teacher. This information will be used in the data gathering and transcription process, but as previously mentioned all identifiers will be altered to preserve anonymity.

There is some risk that recalling a situation, which resulted in less than ideal outcomes to a client; this may be a source of discomfort for the participant. Should this happen referral for counselling at AUT can be advised. If a breach of PAANZ Guidelines (1999), or ethical physiotherapy standards (Physiotherapy Act, 1949) is the reason for discomfort, then recommendation to contact the New Zealand Physiotherapy Board will be advised.

How will these discomforts and risks be alleviated?

In this study the probability and magnitude of risk of harm or injury are negligible.
Participants will be fully informed of expectations and processes relating to this study.
The participant may stop the interview, or withdraw from the study at any time prior to data analysis.

What are the benefits?

The benefits include a personal experience of research participation, an opportunity for the participant to discuss and reflect on the meaning that western acupuncture has brought to their practice, and a personal contribution to the expansion of this discipline's knowledge base.

What compensation is available for injury or negligence?

The probability of occurrence of injury and magnitude of risk of harm or injury, whether that be physical, psychological, emotional or economic is minimal.

How will my privacy be protected?

All participants will have their anonymity protected. Real names, or settings of descriptions and stories will be altered to ensure this.

How do I join the study?

If you wish to formally join the study, you will need to contact me. You will then need to sign a consent form, which has been verified through the AUT Ethics Committee, prior to being interviewed.

What are the costs of participating in the project? (Including time)

I do not envisage your having any monetary costs involved with your participation in this research.
Time taken to participate will be 1-2 hours for the interview process.

Opportunity to consider invitation

I would appreciate your responding to this information sheet, and informing me of your intention to participate/not participate in this study within the next two weeks of you receiving the information sheet.

Opportunity to receive feedback on results of research

Should the participant wish to receive further information on the outcome of this study, the thesis will be lodged at the AUT (Akoranga) Library, and articles relating to this thesis may be published through the PAANZ newsletter, or the New Zealand Journal of Physiotherapy.

Participant Concerns

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, madeline.banda@aut.ac.nz , 917 9999 ext 8044.

Researcher Contact Details: Susan Kohut, kohut@xtra.co.nz,
(09) 475 5055, or 021 255 5653

Project Supervisor Contact Details: Dr D. Spence, dspence@aut.ac.nz,
(09) 917 9999, ext 7844
Mr P. Larmer, plarmer@aut.ac.nz,
(09) 917 9999, ext 7322

Approved by the Auckland University of Technology Ethics Committee on 14.10.2003
AUTEC Reference number 03/135

Appendix D: Consent to Participation in Research

This form is to be completed in conjunction with, and after reference to, the AUTEC Guidelines (Revised January 2003).

Title of Project: Exploring the meaning of Western acupuncture for New Zealand physiotherapists.

Project Supervisor: **Dr D. Spence & Mr P. Larmer.**

Researcher: **Susan Kohut**

- I have read and understood the information provided about this research project (Information Sheet dated 1.8.03.)
- I have had an opportunity to ask questions and to have them answered.
- I understand that the interview will be audiotaped and transcribed.
- I understand that I may withdraw myself or any information that I have provided for this project at any time prior to data analysis, without being disadvantaged in any way.
- If I withdraw, I understand that all relevant tapes and transcripts, or parts thereof, will be destroyed.
- I agree to take part in this research.
- I wish to receive a copy of the report from the research.

Participant signature: .....……..

Participant name: ……

Participant Contact Details (if appropriate):

……

……

……

Date:

Approved by the Auckland University of Technology Ethics Committee on 14.10.03
AUTEC Reference number 03/135

Note: The Participant should retain a copy of this form.

Appendix E: Interview Questions

Susan Kohut: Proposal for AUT Ethics

'Exploring the meaning of Western acupuncture for New Zealand physiotherapists'

Questions likely to be asked at the Interview

- What is it like to be a physiotherapist practicing Western acupuncture?
- What interested you in acupuncture?
- How did you decide to study Western acupuncture instead of traditional Chinese acupuncture?
- To what extent has Western acupuncture become a useful treatment modality in your practice?
- Can you recall a story that shows the benefits or otherwise of Western acupuncture?
- How does Western acupuncture complement other treatment modalities?
- Evidence based medicine is a very important issue. How does Western acupuncture meet the requirements of evidence-based medicine?
- Where do you see Western acupuncture going in the future?

N.B. The interview is an exploration of the meanings interpreted by physiotherapists being interviewed, thus they will be encouraged to discuss, and reflect on the reasons for the choices they have made. Personal anecdotes may tell me about successful treatments, unusual responses to treatment, client comments etc.

Susan Kohut 25.7.03