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Move hands like clouds

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Abstract

This thesis describes the processes and outcomes of my Master of Design Project, ***Move hands like clouds***. It explores the connections between social sustainability, design, somaesthetics and Taoist Tai Chi. The designed outcome, a film, expresses the inclusive design of Taoist Tai Chi, its group activity within a community and its priority of focus on the internal origins and stance of its practice. It uses LED light drawings to trace the movements of multiple practitioners. It is an experience design response to the belief that we experience the world and our place in it through an integrated mind, body and spirit – all the senses – the rational and the intuitive. This stance is shared by the philosophies that underpin social sustainability, somaesthetics, Taoist Tai Chi, and design for sustainability. Mindful attitudes and behaviours with a focus on the wellbeing of the individual and the community is integral to these disciplines and to my film.

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The title of this research project – Move hands like clouds – is the name of a set of movements in Taoist Tai Chi. It is a gentle command, instruction or suggestion to take action, to make a movement. Clouds are soft and shifting, constantly in a motion of ebb and flow as they race across the sky, and float and linger and mingle through each other. They are an integral feature of our natural world. To move hands like clouds, is to move with an attitude of naturalness – softly, flowing, merging and joining with others, gently but with intention. These are the attitudes of thinking and doing, reflected in the spirit of this project.

There are many styles of Tai Chi taught by many different organisations. For the sake of brevity, for the purposes of this document, I will use the term Tai Chi when I refer to The International Taoist Tai Chi Society.

Introduction

This project draws together design practice, social sustainability and somaesthetics, a philosophy that integrates mind, body and spirit, to visualise the practice of Tai Chi. The designed outcome of this research engages the senses of sight, sound and smell in a holistic communication, an experience, that expresses Tai Chi movement through time-based media – a film, supported by a banner and a card.

The philosophy of social sustainability creates and maintains quality of life that ensures the mental, physical and emotional wellbeing of all people. It encourages communities that treat everyone equally and fairly. Designers have long engaged in debate about the importance of social sustainability and inclusivity in design practice and the positive contribution designers can make to society. A design response to Tai Chi that seeks to be socially sustainable should, therefore embrace the principles of inclusive design. This means design that accommodates a wide range of individual abilities and preferences, is simple and intuitive to use, and with a tolerance for error and low physical effort. Inclusion supports the kind of wellbeing that is promoted by the practice of Tai Chi.

The practices and structure of the International Taoist Tai Chi Society encompass many of the aims of social sustainability and inclusive design. The movements allow anyone to perform them, and adapt to a wide range of abilities. Its practice provides benefits to health and these begin at whatever level of participation the individual is capable. It integrates the mind, body and spirit, and in doing so, Tai Chi is a somaesthetic practice.

Somaesthetics (Shusterman, 1999, p. 299) is a branch of aesthetics, which seeks to place the body, mind and spirit together within an ontological philosophy of being. It validates the experience of the body as the location of sensory appreciation and creative self-fashioning. Academic and pragmatist philosopher Richard Shusterman coined this term for the use of physical exercise as a route to greater consciousness of the self and the way one interacts with the world (p. 302). He argues that the heightened awareness of the body and mind acting together allows for a deeper awareness of the spirit, of emotions and of things ethical (p. 303). Somaesthetics values doing, that is, physical practice.

To gather the threads of design practice, social sustainability, somaesthetics and Tai Chi into a seamless whole, I used creative practice to make a film that expresses the feeling and atmosphere of Tai Chi practice. Right action or mindfulness is core to this design response to Tai Chi and somaesthetics. Mindfulness requires conscious care for oneself and the community, and is, in turn, integral to the social sustainability remit of my design. Design communicates through all our senses – sight, sound, smell, taste, touch. The body and mind are one and work to collect, process and respond to information. The rational and the intuitive together allow us to weigh the data we receive and detect nuance and atmosphere and to decipher complex and subtle meanings. The bodily manifestation of this research project embraces an experiential, multi layered design response to the practice of Tai Chi.

The movements of Tai Chi and the benefits to health that they provide and the relationships with other people fostered by performing it as a group are the essence of its social sustainability. Mysterious, joyful, relaxed, and hypnotic, the film is designed to intrigue and to delight. It seeks to pique interest and encourage participation in Tai Chi practice.

1 Background to the project

At the beginning of my engagement with this master's project I thought of the pleasure of graphic design, the enjoyment in the thinking and planning and making of design, and of the aesthetically pleasing visual palettes available for exploration. This very quickly turned to what would be a more meaningful, deeper undertaking, a concern with design's ability to make things better and to be helpful. This did not mean I wanted to exclude or devalue pleasure and beauty. Function and beauty are interdependent. The rational and the intuitive both have value and meaning in design practice. Choosing subject matter that is useful and beautiful to people brought my attention to Tai Chi, a movement practice of the body, mind and spirit.

I have been a practitioner of Tai Chi for nine years and much of my knowing about Tai Chi comes from this. I have found its relaxing, gentle practice is always refreshing and enjoyable. It is a calm oasis when work or life pressures are overwhelming. I like to think of it as 'Tai Chi health insurance'. It is a way of being in the world, a way of keeping my body and mind well, of keeping my spirits up, something that I can continue practicing and evolving into my old age. I wanted to let other people know about it, so they could enjoy its benefits too.

The movements of Taoist Tai Chi allow anyone to participate. This was vividly shown by the wide range of ages and abilities, of the people in the classes I attended. The design of Tai Chi practice uses inclusive design in the movements and in the non-competitive and supportive way the classes are conducted. Inclusive design aims to create design that does not exclude anyone. Academic, journalist and inclusive/universal design specialist Oliver Herwig explains that it is an approach to design that seeks to make products, services, interfaces, and communications that work for people of diverse ages and abilities. It operates with the older or disabled user at the centre of design thinking and understands that if these people are accommodated then everyone is. The goal of inclusive design is quality of life for everyone (Herwig, 2008, pp. 16-18).

In my past design practice as a graphic designer I have utilised inclusive design. Designing the graphics for the children's Discovery Centres and Story Place at Te Papa Tongarewa, The National Museum of New Zealand Fig. 1, 2 & 3, I worked together with 3D designers, to realise the communication intent of museum curators. Inclusive design was employed to make design that was informative, legible, attractive, entertaining and culturally sensitive to engage children and their caregivers in a broad range of educational and cultural information. My design outcomes had to take into account details which effect inclusion such as type face, size of text, quality, appropriateness and placement of image and colour, to enhance legibility, information flow and understanding. The design needed to have qualities that would 'not date', as the exhibitions were permanent ones, completed in 1998 and still in use today. Through my intimate knowledge of both Tai Chi and graphic design I saw opportunities to continue this approach and to make important connections of the inclusive design between the two.

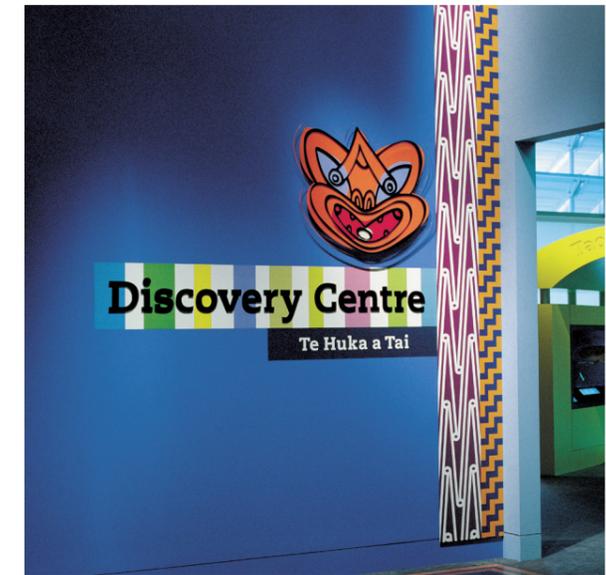


Fig. 1



Fig. 2



Fig. 3

Figs. 1, 2, and 3
Discovery centre
and Story Place entrance
graphics and artifact
box in use at Te Papa
Tongarewa,
The National Museum of
New Zealand.
Lee Whiterod,
Eyework Design

1.1 Taoist Tai Chi

Tai Chi is a series of 108 precise movements, called 'the set'. It has its origins in 10th century China and the teachings are deeply rooted in ancient traditions of Taoism, Buddhism and Confucianism. It was brought to the West when Master Moy Lin-shin founded The International Taoist Tai Chi Society in Canada in 1970. His teachings combine the training he received from respected teachers in China and Hong Kong in the Taoist classics of Tai Chi Chuan, Lok Hup Ba Fa, and Taoist meditation. Master Moy has developed a unique form of Tai Chi adapted to produce maximum health benefits for the mind, body and spirit – the whole person.

The International Taoist Tai Chi Society has a set of aims and objectives that underpin all its activities, including the practice of the Tai Chi movements. The first is to make Tai Chi available to anyone who wishes to become involved. The gentle inclusive movements and the discrete approach to its teaching encourages participation by anyone who wishes to become involved. The second is to promote the health improving qualities of Tai Chi in order to improve the physical, mental and spiritual wellbeing in the community. With this in mind members hold regular public Tai Chi demonstrations in order to encourage participation in Tai Chi. The third is to make the richness of Chinese culture more accessible and thereby promote greater understanding and respect among people. The movements and their names as well the drinking of green tea all reflect the ancient Chinese Taoist practices that are embedded in Tai Chi. And the fourth is to help others, the foundations of Tai Chi are compassion and the values of selflessness and service to others. The voluntary nature of the instructors and the respectful non-competitive teaching practices reflect this (Society, 2002).

Tai Chi is more than a set of movements, it is a way of thinking and being, a philosophy of living, with 'harmony as the goal' (Society, 2002). By doing Tai Chi the health of the body, mind and spirit of the practitioner is gently changed for the better.

Tai Chi includes anyone

True to the society's aim to include all people, each individual performs the movements in the way that their body allows. Tai Chi can be learned as a seated set if standing is not possible. Tai Chi has minute and precise physical stances, timings, intentions and ways of using the body that the practitioner constantly aims for, but no one within the group is singled out as having good or bad 'form,' the word used to describe the stance of the practitioner's body in the movements. A supportive and non-competitive approach pervades the society. The quiet and restful atmosphere in the classes and the movements of Tai Chi practice gently emphasises its health benefit and its inclusion of, and adaptability to, a wide range of people's needs and abilities Fig. 4.

Internal focus for wellbeing

The minute shifts and tweaks of the body, are reflected outwardly, in the appearance of the movement, but originate in the internal intention of the stance. It is about being aware of all the parts of our body, about feeling well and being in our bodies in the world. It is not about the beauty of the flesh. Mirrors are utilised to help the practitioner literally see what the body is doing, as you may only think you have, for example, your feet shoulder width apart or your arms at waist height. Each individual will perform the set with a unique and evolving 'form', based on their own body and their own skill and knowledge level (Society, 2007). The health benefits of Tai Chi begin with participation and grow as knowledge and control of the movements grow.



Fig. 4

Beginner's classes teach the 108 moves of Tai Chi in what is called a stick figure set, over a period of about 6 months. Once the beginner's class has completed the practitioner can progress to continuing classes, where foundation exercises are introduced. 'Your' Tai Chi is always evolving. Tai Chi does not try to rush, as the nuance of the 108 moves is so great that attempting to place a timeframe on the learning will only lead to frustration. Tai Chi seeks to put the practitioner 'in the moment', and to be fully aware of every part of the experience, every part of the body moving in a complex continuous motion. As the practitioner gains more experience the body and mind work together to remember the sequence of the set. Phases of one's relationship with Tai Chi are always developing and shifting, as new knowledge constantly surfaces. Concentration levels may move from session to session, from a light barely focused one to a deeply intent one concentrating carefully on a particular detail. There is always something to work on within 'your' Tai Chi. Individuals are encouraged to practice whenever they can, ideally on a daily basis. Tai Chi can be practiced in a group or alone in whatever setting and clothing is convenient. Concentration and memory are exercised in order to perform the 108 moves of the set and the complexity of the movements are such that the mind can take a rest from the many anxieties of life. This creates a tranquil, moving meditation (Society, 2007).

Visualisation connects mind and body, the internal and external

As they lead the class, instructors communicate the intricacies of the exercises using demonstrations and descriptions to help everyone see and feel the correct internal intention. The mind must guide the precise movement of the body. Practitioners are instructed to put their mind into the leading edge of the movement, the part of the body from which the movement originates: think of only moving this and let the rest follow.

Going through the set, we let our hands fall like blossoms, or move our hands down like stroking a cat, we turn the hand and let the turn run along the arm like a twisting cloth. We aim to 'open the 3 gates' of the spine. In the move 'carry tiger to mountain' we imagine the size and weight of a heavy tiger in our arms as we rise up, lift and turn to face 'the mountain'. In 'move hands like clouds' the motion of arms and hands is flowing, continuous and looping as we step across the room.

Descriptions and the movement names coupled with demonstration by the instructor, gives the practitioner a much more vivid and precise understanding of the intention of the stance. The use of this visualisation demonstrates the mind and body functioning as one. The aim of the society to promote greater understanding and respect among people through cultural exchange is in part realised through the names of the moves and descriptions. They reflect Tai Chi's Chinese Taoist and martial arts origins and greatly add to its pleasure and richness.

The instructors show incredible dedication and warmth – they are there every week, on a completely voluntary basis. All practitioners are drawn into the voluntary nature of Tai Chi by occasional activities such as cleaning the clubrooms, which takes only 5 minutes, and by joining in fund raising. These things are in themselves voluntary, approached with a light touch, and add to the enjoyable community atmosphere of Tai Chi. This selflessness is one of the aims of Taoism that is integrated into the practice of Tai Chi.

The health benefits of the Tai Chi community

The calm and quiet enjoyment of being in a group focused on the same set of movements is an important aspect of Tai Chi's health function. It is like a dance we are all at different stages of knowing and the shared performance of our bodies as we move and interact 'creates meaning and purpose' (Thackara, 2005, p. 109). It creates feelings of affinity and unity, satisfaction, achievement and pleasure.

An integral part of every Tai Chi class is sitting together to drink green tea, which greatly contributes to the relaxed friendly community atmosphere. John Thackara, influential sustainable design facilitator and writer suggests the mental wellbeing of people is enhanced by a sense of belonging and community, and that social contact with others is a powerful tool for health. 'Recent studies have shown that psychosocial factors, such as lack of social support and depression, are important predictors of morbidity and mortality' (Thackara, 2005, pp. 34, 114).

The health benefits of Tai Chi movement practice

Western medicine has taken an interest in the practice of Tai Chi. To scientifically assess its effectiveness, The British Journal of Sports Medicine, conducted a review of over 30 controlled experimental studies and clinical trials, originally published in English and Chinese Journals, (J X Li and Y Hong and K M Chan, 2001, pp. 148-156) The review set out to assess the affects of Tai Chi exercise on metabolism, heart function, mental control, the immune system and balance control. A range of original study types were employed including longitudinal, cross sectional, intervention and clinical trials. The review concluded that Tai Chi is beneficial to cardiovascular function, immune capacity, mental control, flexibility, balance, and fall prevention in the elderly; it improves muscle strength and is a moderate intensity exercise.

The benefit to the health of mind, body and spirit that Tai Chi provides through its stretching, twisting, turning and balancing movements and through its supportive community gives people an opportunity to take responsibility for their own health. Thackara argues this is a strongly socially sustainable approach (Thackara, 2005, p. 119).

The mind, body and spirit philosophy

When we take up Tai Chi we may or may not be looking for a spiritual dimension in our lives. Some people see it as a purely pragmatic exercise regime for alleviating a particular health issue. Others may choose to embrace it on a very spiritual level. Everyone will have a personal idea of what spirit means to them. Instructors will occasionally relate aspects of Taoist philosophy during a class, and members are free to seek out a deeper engagement with these. The important thing is the allowance for participation of the sort that the individual chooses, at any particular time. It is 'your' Tai Chi. Individuals are free to borrow books from a small library in the clubrooms and of course have conversations, if they wish to go further into its philosophy. This is done in a casual and relaxed manner, as Tai Chi seeks to share its health benefits with everyone and does not wish to exclude those people who want to engage with Tai Chi on a purely exercise oriented basis. This discrete approach in itself reflects the quiet tolerance and inclusion of Taoism on which the Tai Chi society is founded.

2 Theories, methods and practice

2.1 Somaesthetics

Richard Shusterman's 1999 'Disciplinary proposal for Somaesthetics' set out a body-centered philosophical and aesthetic discipline which recognised the body and the senses as the vehicles through which we experience the world. Somaesthetics embraces the art of living and the experience of the senses, which had been previously discounted by much aesthetic and philosophical tradition. It is concerned with the awareness of our bodies, minds and spirits, our emotions, our attitudes, our wellbeing.

Shusterman advocates the practice of exercises where this bodily awareness becomes the 'medium for creative self-fashioning' (Shusterman, 1999, p. 301). This is based on a belief that by careful, intelligent and diligent practice of somatic exercise, actual doing as opposed to theory, one can hone and perfect the senses and perceptions, and 'remake the body and society' (p. 305). He is a practitioner of the modern psychosomatic therapy Feldenkrais Method. He believes if we can be more conscious of our bodily actions and emotions we will be more able to control our actions and behaviours, and therefore our will for what he calls 'right action' (p. 303).

Tai Chi is an experiential and performative somaesthetic practice. Both Tai Chi and these branches of somaesthetics have an internal focus for health and enhanced wellbeing (p. 305). Shusterman argues that Eastern philosophies and practices such as Tai Chi have long understood that true knowledge cannot be gained by theory alone but comes through practice. He believes that by careful and diligent practice of nuanced and precise exercises we can break down habitual physical and mental states, allowing new behaviours to emerge (p. 302). Much of this is also embedded in the philosophy of social sustainability.

2.2 Social sustainability

Social sustainability is just one of the three pillars of sustainability: environmental, social and economic. They are overlapping and mutually dependant: 'to live in a way that is environmentally viable over the long term; to live in a way that is economically sustainable, maintaining living standards over the long term; and to live in a way that is socially sustainable, now and in the future' (Dillard, Dujon and King, 2009, p. 2).

The aims of social sustainability as outlined by sustainable design specialists espdesign are: 'To create and maintain quality of life for all people, to protect the mental well being of all people, to protect the physical health of all people, to encourage community, to treat all people fairly, and to provide all people with essential services' (Greenwood, cited 2010, espdesign.org/sustainability).

A number of important aims of The International Taoist Tai Chi Society closely mirror those of social sustainability. Both aim to promote the health of mind, body and spirit of all people, in the community and through community, using inclusive and fair, non-competitive practices. Both Tai Chi and social sustainability practices are nuanced, multi-faceted philosophical stances, affecting the outlook and lives of the individual and the community.

Social wellbeing

Social sustainability aims to provide social wellbeing to all people. Robert Prescott-Allen, a consultant to the United Nations commission on Sustainable Development, describes social wellbeing as 'the fulfilment of basic needs and the exercise of political, economic and social freedoms' (Dillard, Dujon and King, 2009, p. 16). These freedoms and rights encompass: community diversity, equitable access to healthcare, housing, education, employment and open and democratic government structures (Shinn and Magis, 2009, p. 21-22). Social sustainability embodies the idea that future generations have the same access to resources as the current one, and that there should be equal access to resources within the current generation. Communities must be involved to effect change in behaviours that affect environment or social issues, so social sustainability can be thought of as the foundation of environmental sustainability (Dillard, Dujon and King, 2009, p. 1).

Oneness with nature

'We are not apart from the natural world. We do not have dominion over it. We are subject to its laws and processes as are all the animals on earth of which we indeed are related'
David Attenborough from Charles Darwin and the Tree of Life (Mirzoeff, Sacha, 2009, BBC).

David Attenborough's words express a rational basis for sustainability – the finite nature of the earth, and our own organic bodies as part of nature. It expresses the naturalness of our existence. An attitude of control over nature is shifting to a more open and inclusive one, which embraces diversity of people, cultures, ways of seeing and interacting in the world. The reality of the interconnectedness of all things is the basis for a sustainable way of thinking about our place in the world (Chapman and Gant, 2007, p. 3; Micklethwaite and Chick, 2011, p. 78-79).

Personal wellbeing

Thackara sees a shift to a more natural and humane way of being in the world as vital to a more satisfying and achievable sustainable future. We experience our lives through our whole body, mind and spirit, and all our senses and emotions play their part in our understanding, our perception and interaction with our environments. Influential phenomenological philosopher Maurice Merleau-Ponty believes 'perception is a process in which, the active body enters into a 'communion' with its surroundings' (cited in Thackara, 2005, pp. 62, 171). Behaving sustainably will not work in the long term if it is too difficult or feels like it involves too much sacrifice. It needs to take into account our human nature and be pleasurable to integrate into our lives, remembering beauty, attraction and meaning have a function (Chapman, 2007, pp. 6-7; Herwig, 2008, p. 18).

Stuart Walker Professor of Environmental Design at the University of Calgary believes if sustainability practice is to develop and be effectively integrated into our lives, it needs to nurture the inner person, our creative, emotional and spiritual sides (Walker, 2006, pp. 26-27). He argues that the emergence of sustainability awareness is perhaps a modern secular society longing for moral guidance, 'our own myth' emerging from a culture of science, technology and reason. Embracing sustainability is a way of creating values and meaning in our lives, a point Thackara also makes (Walker, 2006, pp. 16-17). Walker believes that only by attempting to make meaningful design through the integration of inspirational and spiritual qualities can we hope for a sustainable future (Walker, 2006, pp. 47-51). By having a personal philosophy to live by we can begin to be in the world with a sense of purpose, 'we can imagine an alternative sustainable world that can shape expectations and drive transformational change' (Thackara, 2005, p. 27; Shusterman, 1999, p. 302). Tai Chi and somaesthetics philosophies align with these ideas – the transforming of ourselves and our world flowing between each other. They see an opportunity to shift from a control over nature to one of awareness of ourselves and our behaviours within nature and working with this to create change.

The thinking and actions that must be made to effect positive change of any sort has been called design thinking. Our world is full of inequity and injustices and to single handedly find solutions to these is certainly not the remit of this project. I seek to investigate and express the social sustainability of Tai Chi practice. Social sustainability explores how shifts in attitude might be accomplished through education, community and design thinking. Small shifts in attitude by groups of individuals can build to make larger changes in society (Micklethwaite and Chick, 2011, pp. 130-131, 146-147).

Researchers, writers and academics on design for sustainability Anne Chick and Paul Micklethwaite have produced a comprehensive guide to roles of design in the issues of sustainability in their book *Design for Sustainable Change*. Design can be involved in the experimentation of discovering new ways of being, thinking and doing that are socially sustainable. I have focused my interest on how communication design might embrace social sustainability. Small steps can make for change and designers should endeavour to make an effort to integrate sustainable practices and attitudes into our lives and every design brief we undertake (Berman, 2009, p. 131).

2.3 Design and social sustainability

A desire to make positive contribution

Societal problems are not a 21st century phenomenon, and neither is the design and arts community's desire to make positive steps to effect change. Charles Dickens' fictional portrayal of the living and working conditions of England's urban poor in the mid 19th century and Gustave Dore's drawings of the squalid London of the 1870's made this 'great slice of human misery credible' (Clark, 1969, p. 223). Design in the 21st century is equally capable of communicating ideas to an audience and raising awareness of issues of sustainability to help facilitate change (McKoy, 2003, p. 2; Walker, 2006, p. 36).

In 1964 when British graphic designer Ken Garland's *First Things First* manifesto was published, designers were disillusioned with the shallowness of their practice and the consumerism it serviced. Garland called for a reawakening of egalitarian motives for design and urged a return to more satisfying and worthwhile uses of design skill, more lasting, meaningful and helpful employment of design – in areas of education and culture; book, exhibition and film design, information and street signage. He did not want to take the fun out of life, or suggest the abolition of advertising, but advocated a reversal of priorities and he asserted that our society 'will tire of gimmick merchants.'

In *First Things First Revisited*, published in 1999 graphic designer, commentator and academic, Rick Poynor renewed Garland's call for designers to find new ways to operate. Many designers had started to feel they had some opportunity and responsibility to control their processes, production methods and communication tools for the good of society.

Industrial designer and sustainability pioneer, Victor Papanek's *Design for the Real World*, first published in 1971, and reflecting its increasing relevance, updated in 1984, called for the designer to 'be conscious of his social and moral responsibility.' For Papanek, design was too preoccupied with frivolous surfaces and neglected the more genuine needs of people. Functionality and user experience, should, he felt, be of paramount importance (Papanek, 1984, p. 15). It is perhaps hard to see how this surface oriented culture will ever change, but interest in, and consciousness of, our actions as designers and people, has been gaining momentum over the last fifty years. The scope of sustainability research is constantly evolving and exploring what designs role and influence can be (Walker, 2006, p. 26).

Socially sustainable design practices

Community

Just being part of a community and enjoying its social contact and support is a tool for better health of the individual. Current thinking suggests designers interested in creating work that addresses issues of social sustainability should act in a local, small scale and co-operative way, within communities, respecting that all people can have ideas and share in design thinking (Chick and Micklethwaite, 2011, p. 24-25, 144-145). The call to 'think global act local' is based on the need for local knowledge and clear ideas about what you want to achieve. When designers are part of a community they are better able to understand its needs and issues. These local initiatives can flow on and be part of a building momentum for change (pp. 24-25, 144-145). Designers are able to take a more sensitive approach, of facilitation, working with, rather than for people (Thackara, 2005, p. 7). To have interests and knowledge outside design is an important aspect of being a more rounded designer, one who is able to work with communities and 'find new ways to collaborate' (Thackara, 2005, p. 8).

Collaboration across disciplines

Sustainable design solutions and design solutions to issues of sustainability require an open mind, exploration, and trial and error. What constitutes a sustainable solution is still being explored and there are no definitive answers or rules (Chick and Micklethwaite, 2011, pp. 130-131). We must allow ourselves free reign, to explore without inhibitions, to generate ideas that go into unfamiliar territory. We need the collaboration of people outside our specific design disciplines who have the skills to realise our design solutions. These 'collaborative networks' facilitate people getting together to develop and organise projects, finding different ways of thinking and doing (Manzini, 2007, p. 80; Thackara, 2005, p. 8; Walker, 2006, p. 12).

This project set out to explore, by the choosing of Tai Chi subject matter, an engagement with communities and an open and collaborative approach. Being part of the Tai Chi community and its immersion in the processes of this design research gives me knowledge not freely available to non-members. I have explored into areas outside my usual design discipline and collaborated with technical experts in order to bring the design to fruition. The focus on doing in Tai Chi and somaesthetics is transferable to design's thinking and planning process which culminates in the actions of doing and making.

Diverse approaches are emerging within design, offering ways of operating sustainably, to address issues of wellbeing for communities and individuals: open source design, user centred design, experience design, universal / inclusive design, co-design. These are complex and focus on different sets of practices which cross-over and influence each other (Fuad-Luke, 2007, pp. 28-36). This project explores some of them.

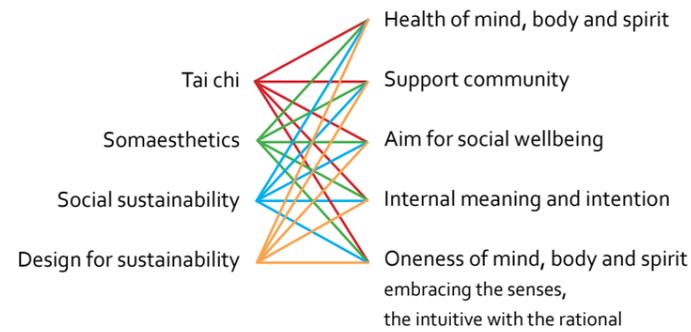
The value and enjoyment of experiences and doing suggests it may be useful to think about designing experiences rather than things. These can be an engaging, memorable and pleasant way of communicating. Experience design innovators B. Joseph Pine II and James H. Gilmore have many useful insights for the designer wanting to create affective and effective experiences. They believe people do not want things, they want experiences and that the best way to make them more experiential is by engaging all the senses for a more immersive feeling (Pine & Gilmore, 2011, pp. 25, 88-90, 241). They recommend filling an experience with meaning (p. 178) and creating clear and consistent themes throughout it. Every encounter and aspect of the experience design should reinforce its central theme (p. 79). Getting people to linger and spend time and to interact with other people is valuable to the effectiveness and pleasure of the experience (p. 63). Offering multiple ways and different points for encounter and interaction and offering pieces of memorabilia to enjoy later are all useful tools for the experience designer (pp. 77, 86). My iterative process led to an experience based design outcome.

Earlier I outlined how Tai Chi is an inclusive practice. There are some interesting nuances that effect inclusive design's implementation. Allowing for inclusion should not be coupled with an impression of being specifically designed for any particular group as this can create unwelcome stigma, and limit its uptake (Herwig, 2008, pp. 16, 18; Gassmann and Reepmeyer, 2008, p. 127). The images we make can have either a negative or a positive impact. Respectful and non-exploitative design does not create false needs or use inappropriate depictions of the flesh. It is important for us as designers to be aware of the semiotic signals we send – what we imply (Berman, 2009, p. 71-92).

The intention of a design is an important part of its value and its sustainability. Making design that informs and enchants, and that addresses a need, is sustainable design. It can become beautiful through the internal factors of its good intentions, the functionality and the meaning it contains, by 'what it represents, not simply by its appearance' (Walker, 2006, p. 59). If people feel a piece of design has lasting beauty and meaning, that they can treasure, over the long term, there is not such a desire to discard it for a newer version, they can keep enjoying the design again and again (Walker, 2006, pp. 40-51; Berman, 2009, p. 106).

Whole person – analytical and rational together

People perceive, learn and understand in diverse ways – there are many 'intelligences – social, physical and emotional' and to take this into account when making design is a more natural and reality based approach which helps create social sustainability. Head of the School of Design at Manchester Metropolitan University, David Crow has discussed the emergence of images over words as the dominant communication tool in a post-modernist world. This represents a shift to a way of thinking that puts intuitive experience alongside the analytical, and leads to understanding with more immediacy. It takes the whole range of perception styles into account and is therefore more holistic, inclusive and democratic (Crow, 2006, pp. 17, 183, 185; Thackara, 2005, pp. 62, 136).



Connections

The philosophies of social sustainability, design for social sustainability, Tai Chi and somaesthetics are connected and overlapping in a number of ways – they work towards the health of the whole person and understand the body, mind and spirit are one, where the intuitive and the rational share equal value and include the senses and emotion. They emphasise the importance of community and aim for the creation of social wellbeing through their practices. They share an internal focus on meaning and intention, which is evident in the external form, be it the practices and body stance of somaesthetics and Tai Chi or the details of function, appearance and experience of design that are beneficial. They agree intentions, meaning and consciousness should guide our behaviours and that these can have an impact on our own wellbeing and that of society. They emphasise respectful, caring and mindful attitudes and behaviours.

Shifting to a more natural, satisfying, balanced whole person way of thinking; being conscious to the processes and outcomes of design and an awareness of design practice as part of the wider community; collaboration and employing inclusive, non-exploitative practices and the design of experiences are all design behaviours that are socially sustainable. Design can be a practice that takes in ethical concerns for the benefit of all people.

The senses and our natural embodied lives, community and conscious action became strong rallying points for my design thinking. A hands-on participation and first hand knowledge of Tai Chi is a vital aspect of the project as a somaesthetic enquiry. I am DOING the design and DOING the practice of Tai Chi in the film. I am designing an experience.

Research question

How can sustainable design practice communicate the inclusive, community and internal nature of the movement practice of Taoist Tai Chi?

3 Integrating these principles in my design practice

Design is at the place where art and science meet, and brings our whole person – body, mind and spirit, the emotions, the rational and the intuitive into play. The wider senses and experiences are essential to this design project through a number of pathways that link and mesh with each other. The threads are pulled together by our very bodily existence as part of the natural world. My design thinking started with wanting to be helpful, and sustainable and this meant making design that allows all people to use it. Choosing Tai Chi as subject matter reflects its modelling of social sustainability and inclusiveness, its health benefits to the whole person.

Design grows from research

My own experiences, thoughts and reflections were expanded and shaped by the research activities of reading, diary keeping, and design practice. In this way, socially sustainable design practices, Tai Chi and somaesthetics pervaded my thinking and making. I wanted to be open to letting the research process guide and shape what the design outcome might be, avoiding preconceptions, and letting the reality of the issues and context guide the process. The final designed outcome grew through an iterative process.

Tai Chi diary as a way of understanding Tai Chi

As part of my research methodology I kept a Tai Chi diary, recording the practice and teaching at classes. The diary recorded the experience of Tai Chi; the way the movements were communicated; the descriptions and visualisations used to guide the practitioner; the way the instructor and participants interacted; how all people were included at their own comfort level; how the sessions made me feel; and how the body, mind and spirit were connected by the deeply complex movement practice. The descriptions and knowledge of Tai Chi that I have brought to this project have been enabled by the act of recording and reflecting on them. I had to pay close attention if I expected to remember the details of the classes to include in my diary when I got home.

A deepening understanding of the strands of my topic led to my seeing how all of Tai Chi contributed to its health benefits and its modelling of social sustainability; the movements and their inclusiveness, embracing the whole person, the community interaction, the gentle respectful teaching practices, the internal origins of the movements, the variety of relationships with Tai Chi that are possible. It is an holistic experience. Tai Chi provides a way of being in the world, an outlook or philosophy and once the class is over you continue to move and think in Tai Chi. Based on this, I developed a set of elements that could form a design vocabulary of sustainable Tai Chi.

Utilising local knowledge

It was very important to me to work in a way that was sympathetic and respectful to the aims of the International Tai Chi Society and social sustainability. I did not want to offend or behave in a way that would conflict with the spirit of Tai Chi. It would not be appropriate to design something that took on the role of teaching Tai Chi, as this would contradict one of the fundamental factors that contributes to its health benefits, learning in a group, in a community, with an experienced instructor. I wanted to design something that would express the tolerance for difference and embracing of diversity that is at the heart of Tai Chi. These ideas were coupled with a growing awareness of the things people have in common, our bodies and our needs for health and community and this led to designing something that expressed how we are 'the same only different'. It was important to create design which would give a fresh perspective, not repeating the familiar realistic and usually static photographic depictions of Tai Chi. A diverse group of people moving together in a shared activity that is tolerant of varied abilities is the core of the sustainability of the practice.

The movements embody Tai Chi's social sustainability. They are intricate, flowing and continuous and very pleasing to watch. The 108 moves have a hypnotic quality when watched for the full 20 minutes of the set, the steady pace is constantly enlivened by new types of movement such as the bend in 'push needle to sea bottom' and kicks of 'separate foot to left and turn and kick' and the dramatic lunges of 'creep low like a snake' or backward sweeping motions of 'go back to ward off monkey.' Finding a way to depict them in new fresh directions formed the basis of my design brief.

Utilising sustainable design practices

Inclusive design includes anyone by not proclaiming its use for particular groups and respectful design does not exploit the flesh. Tai Chi does not focus on the flesh – the form originates and flows from the internal intentions and actions of the movements. To reflect this I wanted to create work that somehow depicted bodily things without showing them explicitly. How could I depict Tai Chi movements without exploiting any individuals and at the same time show the tolerance for difference and the community, practicing with others that are so important to Tai Chi and to socially sustainable design practice?

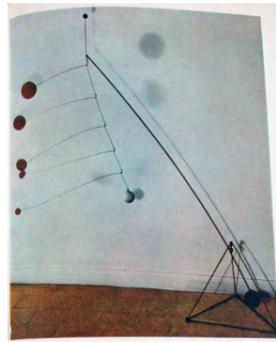


Fig. 5
Alexander Calder
Calderberry Bush
1932

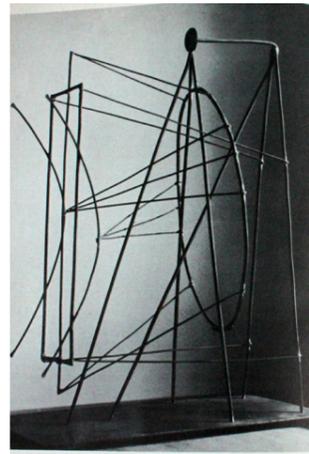


Fig. 6
Pablo Picasso
Construction
1930



Fig. 7
Alexander Calder
Stable (Le Petit Nez)
1959



Fig. 8
Mary Callery
A
1960

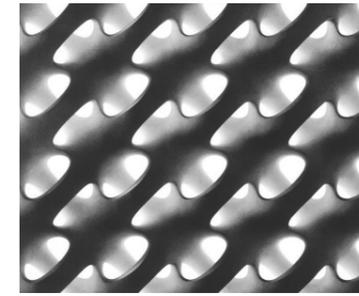


Fig. 9
Erwin Hauer
1950

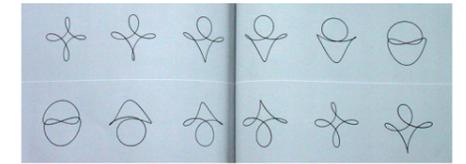


Fig. 10
Erwin Hauer
1951

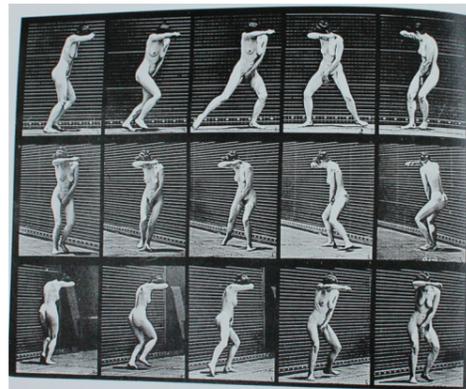


Fig. 11
Eadweard Muybridge
Turning around in surprise
and running away
1887

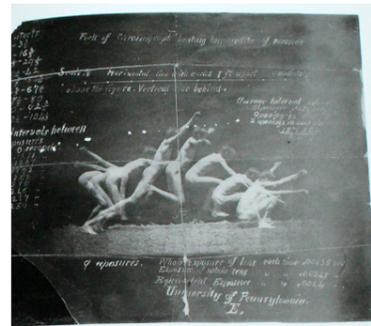


Fig. 12
Thomas Eakins
Man jumping with
photographer's notations
1884-85

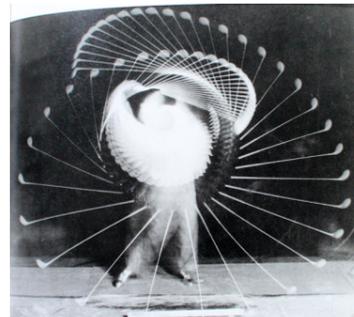


Fig. 13
Harold Edgerton
Multiple-flash photo of
Bobby Jones
1935

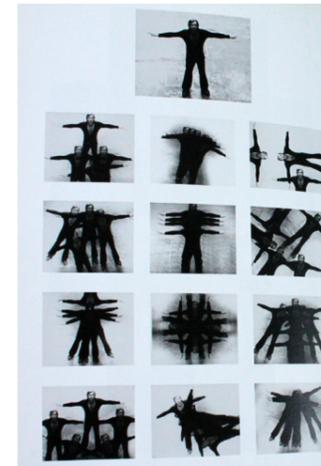


Fig. 14
Andrej Rosycki
Icarus - A Photographic
Project of Picture
Enlivening
1974

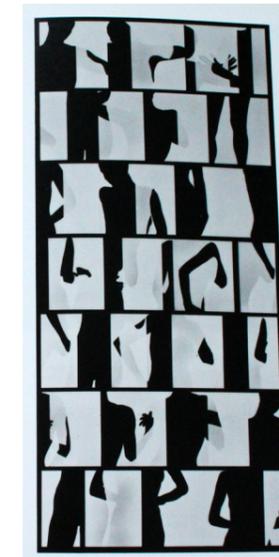


Fig. 15
Ray K. Metzker
Nude Composite
1966-90

Developing a design vocabulary

Imagery that referred to or implied the body and movement would fit this brief well. I collected examples of this type; blurred images, shadows of bodies, abstract representations of movement and people. Within this collection were light drawings – these have been used as art works and as tools in ergonomics to track time and motion. I found images that expressed difference and similarity.

The abstract sculptural work of artists like Alexander Calder Fig. 5 & 7, Pablo Picasso Fig. 6 and Mary Callery Fig. 8 used organic shape and line which give exuberant feelings of liveliness, freedom and movement. The work of sculptor Erwin Hauer is based on the arcs of body movement and he uses these to create repeating patterns for architectural screens and walls Fig. 9 & 10. The use of repeating pattern fits very seamlessly with Tai Chi practice, as we stand in multiple rows to perform the set. If looked at from above the set would produce many repeating patterns as we all made the same moves together. The material Hauer uses to produce his work has a pleasing bodily bonelike quality. The works by Andrej Rosycki Fig. 14 and Ray K. Metzker Fig. 15 displayed a playful and fresh use of pattern that gave me new ways to think of the body and light. Early experimental photographers Eadweard Muybridge Fig. 11 and Thomas Eakins Fig. 12 trace and track the movements of wide ranging activities of people and animals, as does the work of photographer Harold Edgerton Fig. 13. This work is instructive for thinking how I might capture Tai Chi using multiple images and time-lapse photography. However these images often possess a stark and clinical investigative tone, which is not so sympathetic to my subject matter.

Influential Bauhaus artist and thinker Laszlo Moholy-Nagy's beautiful images using light Fig. 16 & 17 are full of movement and are inspirational for their feeling of optimism and vigor. They track the movements of cars and give a sense of the excitement and energy that can accompany this. I felt capturing movement with light in this way had to be one of the methods I explored to depict the movements of Tai Chi.



Fig. 16
Laszlo Moholy-Nagy
Untitled (Auto headlights
white, orange and red,
traffic squiggles)
1939-46



Fig. 17
Laszlo Moholy-Nagy
Untitled (3 shots of
traffic lights)
1939-46

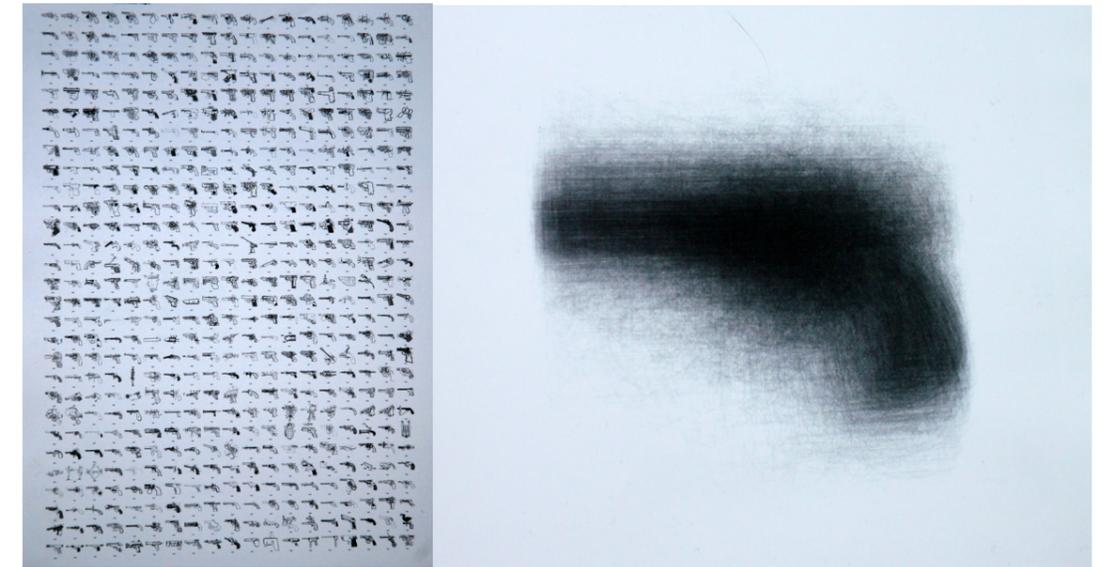


Fig. 18
Christopher Baker
American Toys
Published in Data Flow
2006

American Toys, Christopher Baker. Fig. 18
Guns are the subject matter in this piece and they are used to comment on a social issue. The guns are all 500 of the drawings submitted to the United States Patent Office since the 1800's in 'the toy gun' section. The fact that they are not just guns but toy guns poses questions for the viewer on the acceptance of guns and violence as being suitable as toys. What happens when we keep layering more guns on top of each other? Seeing them collected and spread out this way draws attention to the great numbers produced. Overlaying them forms a black, blurred shape, a fog that is beautiful in a menacing and mysterious way. I interpret the work as a reference to the arms race. It is like a lurking spectre in the lives of adults and children. Attraction and danger are both implied by this image. It is fascinating and emotionally engaging.

I was inspired by this work's ability to make me think about its deeper meaning. I was drawn to the way it used over-laid images to communicate. Repeating the gun over and over delivered the social message. Over laying and repeating the image of people performing Tai Chi movement could be a successful way of expressing the things people have in common and the tolerance for difference embedded in Tai Chi.



Fig. 18
 Stacy Greene
 Lipstick: Lisa, Ellen, Gwen,
 Victoria, Beth, Lisa,
 Simona, Roberta, Wendy,
 Jerelyn
 1991

Lipstick, Stacy Greene Fig. 19
 This artwork depicts how different people use lipsticks in their own individual and personal ways. It shows clearly the 'same only different' that I am seeking to express and captures evidence of movement, an index with humour and intrigue. What the work also contains, are everyday, small, hidden and insignificant objects that are easily overlooked. Taking time to look closer at all the things that make up our lives even the most insignificant, with an intuitive outlook, valuing the in-between and quiet natural processes, is part of the Tai Chi philosophy, and the mindful and democratic approach of social sustainability (Thackara, 2005 p. 32).

The use of abstraction and repetition, of light and shadow, of graphic devices that imply or appear to track movement sometimes can also convey meaning and emotion. These stylistic approaches and their potential for communicating meaning were examples that helped shape the progression of my understanding and development of a visual vocabulary.



Fig. 20



Fig. 21

Beginning to visualise Tai Chi

As a starting point and basis for exploration I needed images of Tai Chi to work from and refer to. I took photographs of the set performed by my Tai Chi class in the clubrooms at the Home of Compassion in Island Bay Fig. 20. I needed their help and 'let them in on' my project. These people are my Tai Chi community, and as the years go by and people come and go from class to class we slowly get to know each other. I asked permission to photograph them and everyone was more than happy to help me. I explained that I would not be using the actual photographs themselves as part of a finished design but would be using them as reference material for drawing and design. These photographs were taken in available light in an evening Tai Chi class and I worked as the set unfolded. These photographs show the diversity of ages, body shapes and clothing that are representative of a Tai Chi class. Here are the staggered lines we stand in to do the set and similar but slightly 'out of sync' positions of everyone within the moves. Here too is the community support as we help each other through the complicated set. The images are greatly enhanced by the hand held camera wobble of a longer exposure, and the dynamic atmosphere of movement this creates.

Drawing and tracing over them lifts out the patterns and repeating shapes of so many performers working together. The drawings clearly show the different body types and the slightly different time we are all keeping, everyone is in a minutely varied position and place in the move Fig. 21. These simple drawing are effective for depicting the concept of 'same only different.' They have an analogue, lightly made, loose, fresh, relaxed tone implying freedom of movement and these connotations are semiotically aligned with my bodily, human, hands-on, caring, intuitive subject matter (Crow, 2003, p.57). These little drawings have detail without in any way identifying a recognizable person, there is no exploitation and anyone could imagine themselves in the practice.

I made very loose gesture drawings of individuals in Tai Chi practice Fig. 22. These convey the intention of the stance, the distribution of weight and the swing and sweep of the motion, a pace of careful deliberation or freedom and openness, they suggest lingering or dwelling on a detail or the repetition of focused and repeated attention and action. They are able to supply information regarding the spirit of the move and the internal origins of the stance of Tai Chi by their abstract nature. The eye is not distracted by unimportant details of clothing or body parts. The drawings relate a feeling.

These drawings were a good start. I wished to explore drawing the pure movements of Tai Chi – if I could isolate the movements themselves and separate them from the performer, this would be a way of capturing the action that provides the health benefits of Tai Chi.

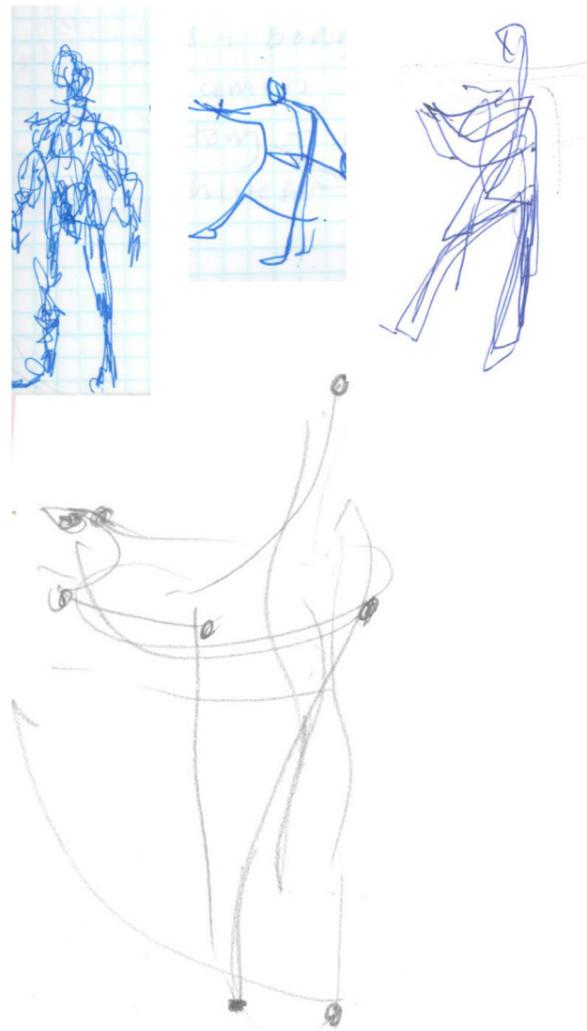


Fig. 22

The drawings with light that Moholy Nagy had made were some of the most exciting and potentially interesting and relevant directions for exploration. I found more examples of this kind of light drawing, these showed the lights actually moving. A work by Charlie McCarthy, Flight Patterns Fig. 23 is a film of the wriggling and swirling trails of insects as they flew in the light of a street lamp. It revelled in nature and the irresistible attraction of light. The light revealed a random, frenzied and yet organic quality to the insects motion as the fine lines intertwined and rushed through the air. The light traces were made using stop-motion animation, by capturing 156 still images and running them together to make a film. The frenzied quality is partly derived perhaps from the not quite accurate timing of the stills running together. The idea of using light to track motion was gaining momentum for me.

Lichtfaktor a collection of young multimedia artists explores new territories for expression using drawn light, creating images that activate environments Fig. 25. PIPSlab are a group of artists and designers that also use photography to record movement through the use of light Fig. 26. These artists are making exciting and 3dimensional drawings in space.

Baaastuds, a Sony advertisement used LED lights attached to sheep to track them and make drawings Fig. 24. The sheep running across hills, separating and gathering created jokes and drew unexpected pictures with light. Whether this tracking and drawing with light was real or not, I was inspired to try using LED light to accurately record how we moved as we performed Tai Chi, and I was very interested to see just what the shapes and patterns of the actual movements looked like. Employing an approximation of the Baaastuds technique to Tai Chi movements was the next stage of my exploration.



Fig. 23



Fig. 24



Fig. 25

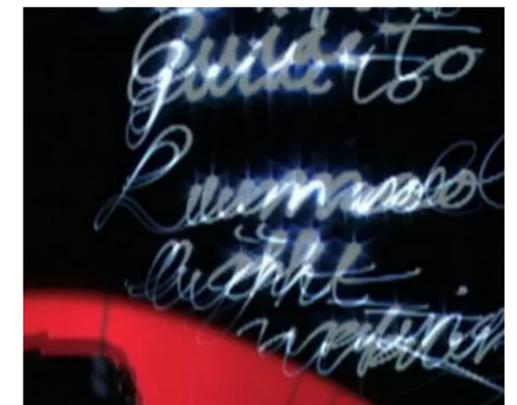
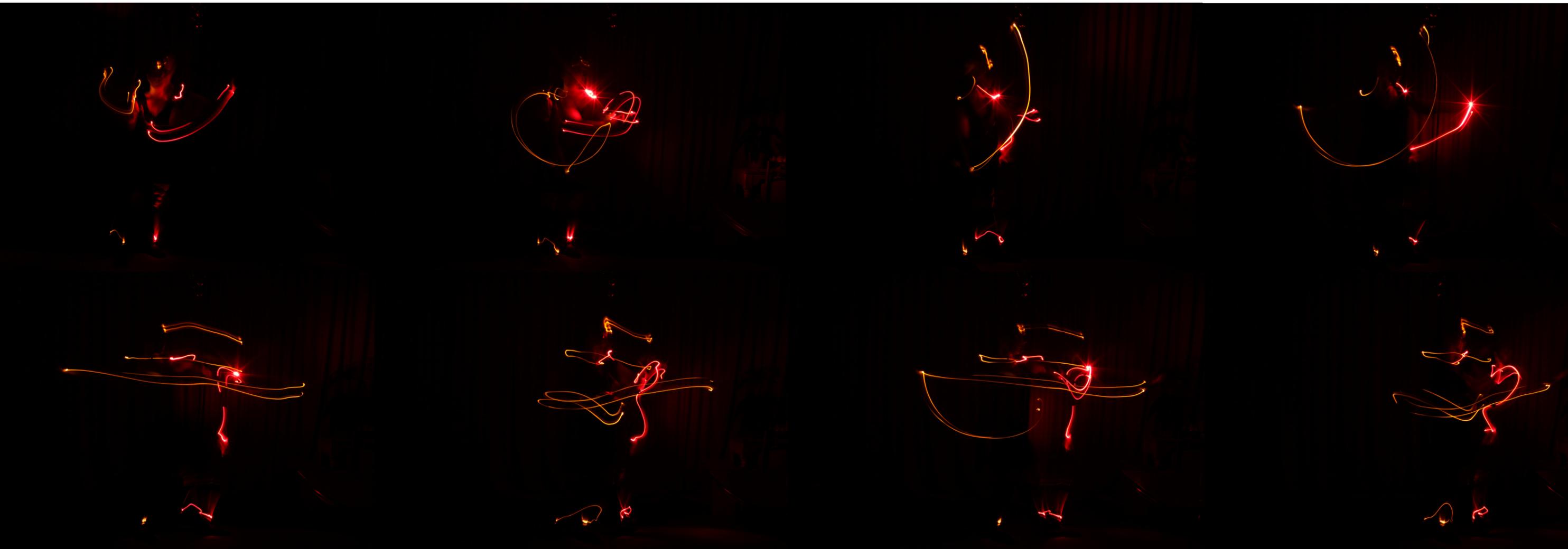


Fig. 26

To set up the recording of Tai Chi with light I taped individual LED light buds and batteries to strategic spots on my body – above the eyes, on the shoulders, the wrists, and feet. I performed part of the Tai Chi set in sections. Using a tripod and single reflex-lens-camera, open shutter photographs of part of the Tai Chi set were made Fig 27. As I did Tai Chi the open shutter photographs captured the arcs and sweeps of the movements. The images are flowing, rounded, undulating, and vibrantly electric, but have an analogue quality as they are literally made by the body moving. These images were very exciting as they captured the usually invisible arcs of the actual movements. They made the invisible visible. They are reminiscent of Chinese calligraphy, a unique signature of my Tai Chi. The practitioner is almost entirely removed. Here I found the implication of an internal focus rather than a surface or appearance based one. The practitioner, me, fades in and out of the images, in ghostly, soft, blurred, barely visible wisps. By recording my own practice performative somaesthetics, actual doing, becomes part of this project.



Fig. 27





I felt these images were very successful but I wanted to keep exploring other avenues. These photographs became the imagery, which I built on and explored, together with other ways of thinking about the representation of Tai Chi movements. What other aspects of Tai Chi connected to social sustainability?

Exploring widely and going on detours

A period of thumbnail conceptualising based on all the visual elements I had so far generated followed. I explored widely and made many tangents that were sidetracks and dead-ends. One of these held the germ of the concept, which led to the design outcome of this research – the film. The moving light drawings of Baaastuds and Flight Patterns had led to producing the open-shutter LED photographs. These now formed part of a developing cluster of themed encounters, which was based on getting people to perform Tai Chi movement. The sensory and the participatory had started to enter the project more as my research uncovered experience design and somaesthetics and these aligned with the body, mind and spirit of Tai Chi. I imagined a series of interactive elements the participant could engage with within a tactile environment. By running them together, the LED photographs could be animated, if rather crudely. The central piece was a spherical animation flipbook to hold, with other elements complimenting it; a curtain visualising 'hands falling like blossoms' to brush aside; a drawer to push open to see the animals from the 108 moves. The holding, brushing and pushing actions could mimic the movements of Tai Chi. I constructed a mock-up flipbook in the shape of a ball Fig. 28. 'Hold the ball' is an oft-repeated phrase for a particular way of holding ones arms in the set. The flipbook-ball had a lot going on – spherical, layered paper construction, with a red woven binding, scented pages to engage the senses more fully, the LED photographs with a Chinese calligraphic quality, coloured pages with images of the animals from the Tai Chi set, all activated by the user to create the animation.



Fig. 28

I opened this concept up to colleagues for critique and feedback, a vital part of my iterative process. Some feedback on this concept was positive, but others pulled no punches and I came to see that there were far too many ideas and elements within this concept. It was unwise to assume people would use the objects as I imagined they would and expecting users to engage in this participation was not realistic (Herwig, 2008, p. 32). My idea of a suite of participatory objects unravelled.

I realised I had become side-tracked by the sensory and participatory aspects of experience design and somaesthetics. My attention had been diverted from the essentials – people performing an activity together and the tolerance of the movements for different abilities. I was very happy to leave these concepts and move on with fragments of the work that held more potential for expressing the essence of Tai Chi movement.



Fig. 29
LED light trace
photographs
as animation

Remembering tolerance and diversity

As part of the presentation to colleagues the LED light trace photographs were run together as animation Fig. 29, and projected on a large screen. This received very positive comment. Moving images viewed in a darkened room are immersive and compelling (Pine and Gilmore, 2011, p. 46).

What these images didn't contain was multiple practitioners working together. If I could make photographs of several different practitioners using this technique, I could then arrange and overlay them to show their similarity and their subtle differences. Accuracy was vital if I was to communicate the tolerance of 'same only different' in Tai Chi practice. Too much variation through inaccurate recording would severely dilute or even entirely confuse the images, and render them pretty but meaningless. To do this would mean capturing each practitioner's movement in precisely the same section of the set. This would require beginning and ending each open shutter photograph at exactly the same moment in the movement for each person. I did not have to think very far or attempt to actually do this to realize the impracticality, impossibility in fact, of such an undertaking.

I needed to solve the problem of capturing the movements accurately across several different people. Filming the movements as continuous, eliminating the need to use open shutter photographs, presented itself as a possible solution. If I could have continuous footage I could see where the movement began and ended for each separate practitioner, right there on the screen and cut each section at the same point. They would really be moving too – eliminating the earlier halting, crude animation of the still images. I wanted moving light drawings.

I had worked my way through a process and been very open to ideas from many angles. To take what I knew well, design and Tai Chi, into an area I knew little about, moving images, I needed the technical help of a collaborator. I discussed my intentions, what I wanted to communicate with animator Paul Densem. Densem helped make the drawings move, in a flowing continuous way, he became the project technician. I found that crossing disciplinary boundaries encouraged innovation and it soon became an essential aspect of my process (Walker, 2006, p. 35-37).

'Drawing' light on a screen was a complex operation. The twenty-five frames per second nature of video meant that filming a moving light would not show lines and arcs but merely moving dots. A video post program was required which allowed me to keep each frame on screen as each successive frame was added, so a continuous series of dots of light could eventually form traces or gestures of the multiple movements. This filming and post effect technique would have to be tested.

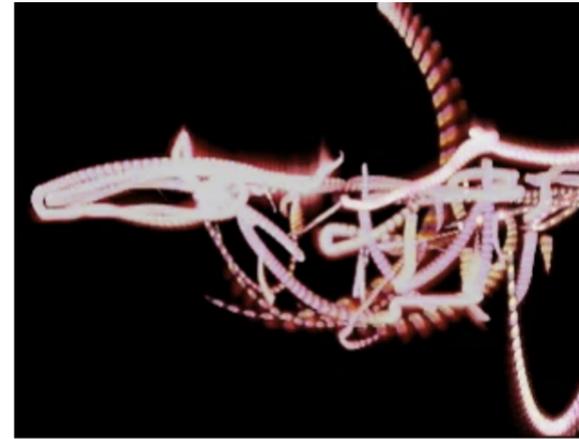


Fig. 30
Technique test

Visualising Tai Chi on film

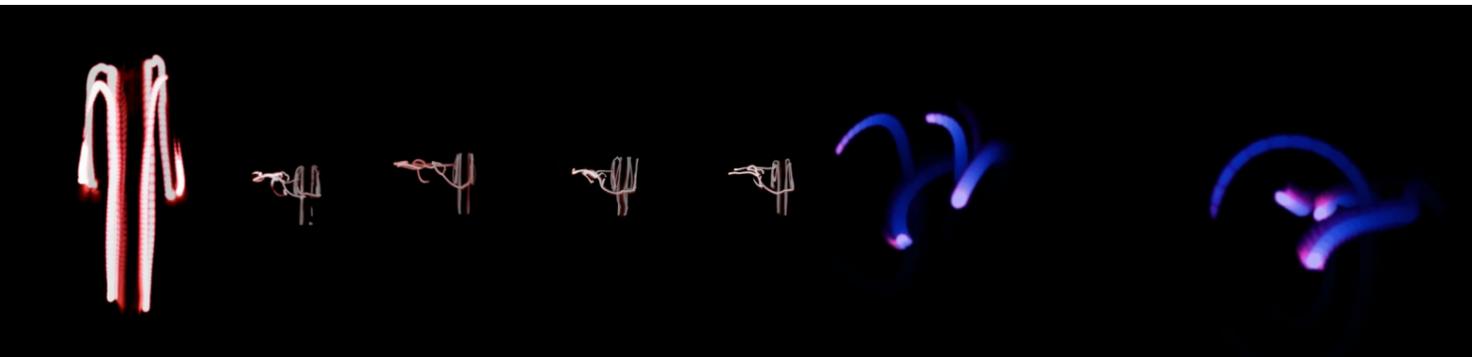
I performed a tiny section of the Tai Chi set and video recorded the movements to test if this technique was workable. LED lights were attached to my body, this time on my wrists only to simplify the drawings. The raw footage shows a set of moving dots that travel around the screen. Even at this stage they had a mysterious organic quality, suggesting playful fireflies or sprites. To reveal the trace lines of the movement the raw footage was manipulated using the application After-effects and plug-in Sapphire. Each frame was left on screen as each successive one was added, until an unfolding, overlapping and looping drawing was formed Fig. 30. The result was expressive and intriguing, flowing and sweeping to and fro across the screen, capturing the hypnotic pace and rhythm of the set. This was the turning point of the project – here was the technique I could use to make the tolerance and diversity of multiple practitioners movements visible. The next step was to multiply the practitioner.

Nine years ago I started attending Tai Chi with three close friends, traveling to and from the sessions with them. I asked them if they could help me realise my design. They were pleased to be involved and their enthusiasm was strengthened by the anonymity required by my concept. The four of us are the participants in my film. Dinner and an evening of Tai Chi was arranged. We practiced the set together, getting our timing close and accurate so when we were filmed separately we would be working roughly at the same pace. Experimenting and improvising, LED lights were used again this time inside ping-pong balls which I found created a more diffuse light (Walker, 2006, p.34-37). Batteries were connected and held together with gaffer tape and cloths pegs to attach to each person's wrists Fig. 31.

The first 14 moves of the set was filmed one person at a time. It was difficult to capture more than one person's movements in frame, as the video was fixed on a tripod, and the movements took us right across the room. I wanted to be able to layer up, manipulate and experiment with the raw footage and separate recordings of each person was more controllable. I led the set out of frame each time, to keep the pace close across each person. We worked in a darkened room, to capture the light, and this was quite a new and disorienting experience.



Fig. 31



After-effects was used again to draw the raw dot footage out into lines and arcs. A range of different trail types and colour was applied, and some sections inverted to introduce a light bright background. Assigning a transparent and bright colour to each drawing created multiple sets of movement drawings that run and chase, duplicate and overlay each other. The raw footage itself had a mysterious, magical, fairy-light, firefly quality that was entirely appropriate for a subject that embraces nature, emotion and spirit. The intricate and visually dense movements of each of us were placed side by side as a direct and clear comparison of four different bodies moving together. I could now, too, finally overlay the individual sets of drawings and dots onto each other. *Different* timings and details varied, but clearly the *same* movements were being performed. The graphic elements were saying all the things I needed them to.

Tai Chi is a very quiet practice, with just the sounds of brushing clothing, moving bodies and footfall heard during a set. These ambient sounds would be a restful and realistic score for my film. I made a recording of the set at a Tai Chi class as a test soundtrack. The sequences were joined together as one continuous film but transition devices were not employed as yet.

I showed the film to a range of people and this brought out some very useful feedback. My design academic community's response was very positive, the images intrigued and delighted, but they felt there were some repetitive elements. The sound track was not entirely successful, perhaps sounding more like people moving furniture, rather than gentle sounds I had imagined. I needed to revisit the sound and to go back to film more, manipulate more, and begin to craft the transitions between the sections of movement.

Another Tai Chi filming session with the four participants was held. The camera placement was adjusted to allow as much movement in frame as possible. We filmed the first thirty five or so moves, more than on the previous occasion. The individuals were filmed separately as before, but also all four of us actually moving together. This was an excellent addition. The integration of this into the film gave another version of the movements, depicting more diversity. We were closer together, staggered two to the front, two behind.

I arranged for photographs using the open shutter technique to be taken while we were being filmed. I wanted to see what patterns our group movements made. We performed the set a third time, this time outdoors with photographs being taken from above. This shows a new type of pattern, separate dashes and swirls across the page. These sets of still photographs are a valuable addition to the 'same only different' family of images Fig. 33.



Fig. 32

In After-effects the order and the duration of each section was adjusted, new footage introduced, colour applied, length of trails varied and multiplied, editing and sequencing done. The colour was partly derived from the reddish pink of the LED lights, and other colour sections grew out of what worked well with this, what provided diverse atmospheres and created a lively building sense of joy. The clear, clean colours of green, blue, yellow and pink sometimes cross over each other as they dance across the page, overlaying to create new, more muted colours. The background of each section, either black or white was a strong visual element and this drove how to create the transitions between each section. A simple fade between was the most unobtrusive and successful option. Initially, intercutting and arranging them alternating from dark to light, and back again was tried but this was jarring and set up a cluttered harshness that was entirely inappropriate. A softer more seamless, natural effect was needed.

Another edit of the film was made, collecting all the dark backgrounds together to flow into all the collected white ones creating a much calmer atmosphere. The dark to light shift is a natural and pleasing reference to the cyclic naturalness of night and day and the Yin and Yang of Tai Chi. A new sequence of movements, which have been tracked and rendered with vector images further extends the diversity concept of the film. It reflects the range of relationships people are able to have with 'their Tai Chi.' Each person has a personal and evolving relationship with it going through many phases of feelings and understandings and ways of performing. A range of movements, atmospheres, timings, colours, arcs and dots, slower and faster, overlaid and side-by-side, individual and group movement now populate the film Fig. 32. These changes in pace and flavour can hold our attention and make the film more memorable (Pine and Gilmore, 2011, p. xxii). Sound too, aids pace and provides atmosphere (Thackara, 2005, p. 174).

I decided exploring what effect music might have on the images was worth trialling. I looked for a quiet, rhythmic, ambiguous quality. 'Where the rabbit sleeps,' by Sensorama, is instrumental, and perhaps could be described as joyful melancholy. It builds and shifts beautifully with the images, greatly enhancing the transitions and shifts. I played the new version of the film to people for feedback. The response was very favourable. The visuals were working. I asked for feedback on the music, explaining that it was not entirely a good fit for the quiet practice of Tai Chi, that ideally, I intended to use the sounds of Tai Chi practice to construct the soundtrack and my colleagues agreed this would give greater context for the film as an expression of bodily practice.

To capture the ambient sound of Tai Chi required a specialist sound engineer as the recording I had made lacked subtlety. Sound engineer Bernard Blackburn, agreed re-record and craft the soundtrack. I briefed him on my intentions, playing him the film using my original recording of Tai Chi sounds, and the Sensorama track. I directed the sounds of Tai Chi, building them into a soundscape that subtly shifts, builds and moves much in the way music does aiming for a gentle organic bodily reference point for people.

The sounds of the movements with other natural sounds of a Tai Chi class, breathing, heartbeats, birds singing, and water pouring have been layered. A first draft was adjusted and refined to soften its heavy base and some elements that gave an eerie, sinister quality. It needed a lighter more uplifting touch to subtly support the visuals. The introduction of more bird song and sounds of water created the lighter uplifting tone the film needed.

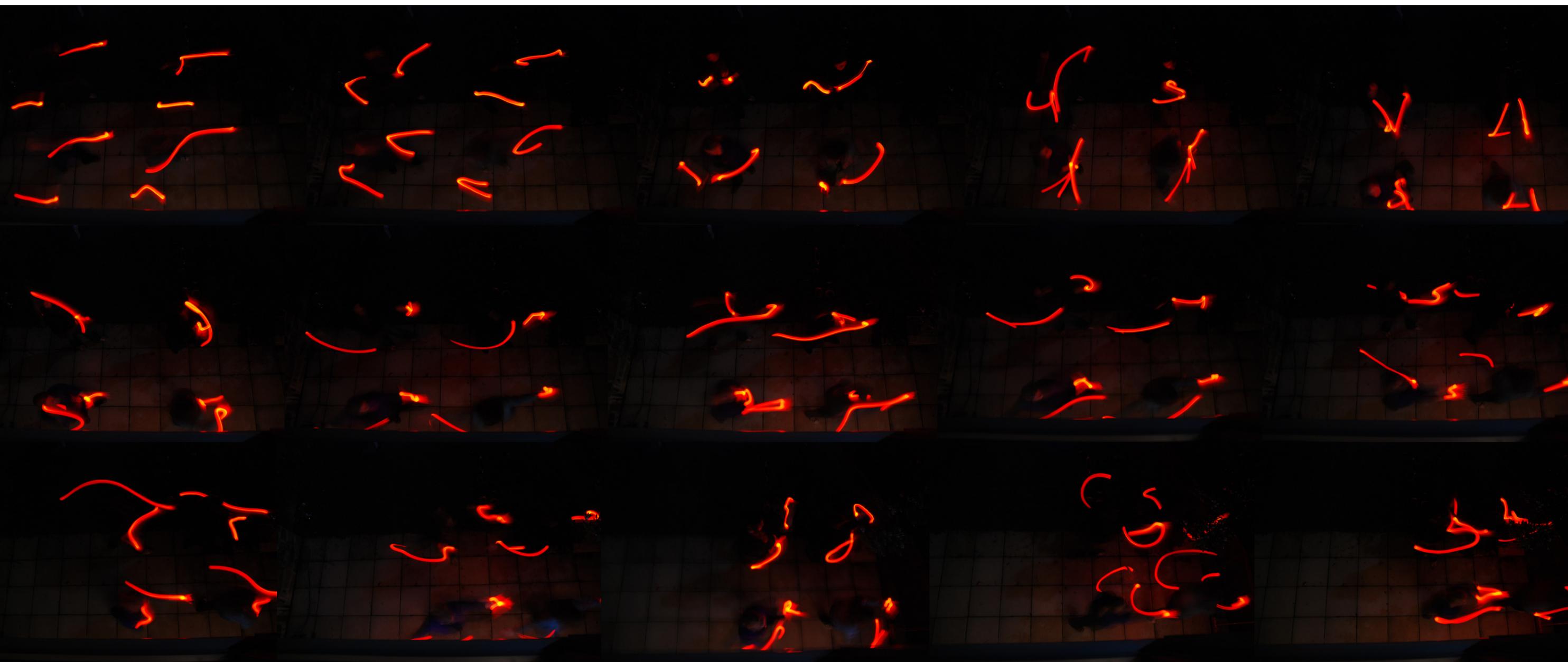


Fig. 33

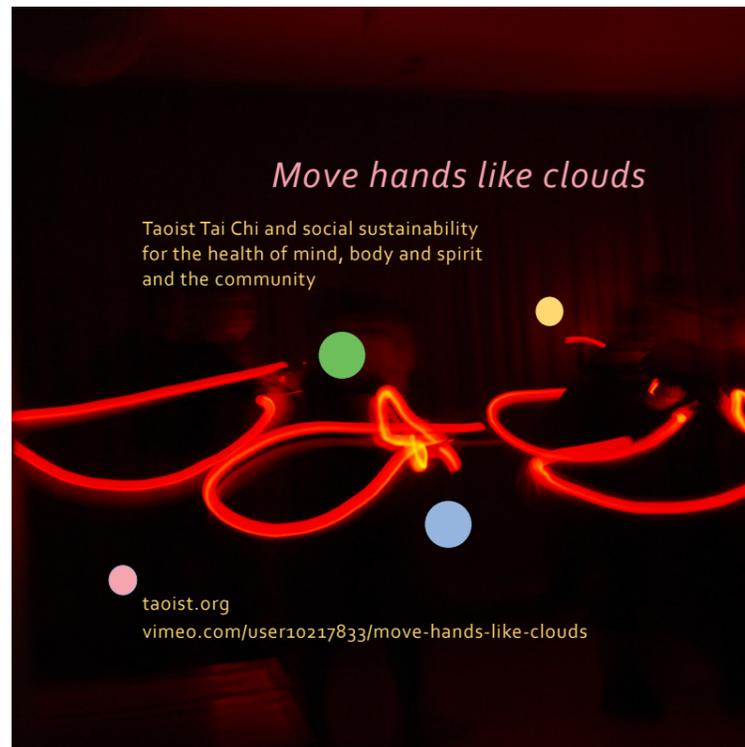


Fig. 34
Card

3.1 The film

The film begins with an individual moving figure and flows into multiple movements which in turn are joined by, merged with and replaced by new sets of rhythmic arcs and sweeps. These take us through a subtly shifting and lifting atmosphere. The many different ways the movements are shown reflects the variety of relationships that practitioners are able to have with Tai Chi. The traces of four practitioners aligned and overlaid in a variety of permutations reveals the differences and similarities between their movements, which in turn reveals the inclusiveness and tolerance of difference embedded in Tai Chi practice, and the value of its community. The invisible traces of the movements have been revealed and these allude to the internal origins and intentions of the movements of Tai Chi.

The exclusion of words from the film is intentional and allows a relaxed and immersive experience to unfold, without the jarring chatter and intrusion of the rational minds constant search for explicit answers (Lash, 1989, p. 7, 22, 30, 35). Any extra explanatory information or visual graphics in the film would break the spell. The inclusion of the bow at the start of the Tai Chi set draws the figure of a person, revealed as the light drawing unfurls. This was unexpected and I have come to see this as an essential element of the appeal of the film. It draws the mind to the human nature of the movements and gives just enough context to allow the audience to feel connected to the narrative without closing off how they might interpret what they are experiencing. Different people can find their own meaning within the film. The more open-ended a piece of design is the more open to interpretation it can be. The ethereal images and the absence of words in my film create the right environment for the audience to bring more of themselves to the understanding, in what semiotician Umberto Eco terms open-work (cited in Crow, 2003, p. 167-173). It is

important the bodily nature is implied without diluting the flavour of mystery. I'm attempting to communicate the feeling – internal and mysterious of Tai Chi. I am not attempting to create an instructional device or an overt selling tool. A soft, intriguing, flowing, open and joyful experience is desired.

The supporting environment

Tai Chi, somaesthetics and social sustainability all value the senses and emotions for enhanced experience. I have not designed a thing, but an experience, which B. Joseph Pine II and James H. Gilmore suggests can give more feelings of happiness and wellbeing than owning things (Pine and Gilmore, 2011, p. 19). People should have the opportunity to sit and relax with the film in a pleasant atmosphere. Communal seating of padded benches may encourage the visitor to linger and watch the film (Pine and Gilmore, 2011, p. 63). The film engages the senses of sight and sound and I would like to also subtly engage the sense of smell, as it has powerful emotional potency (Papenak, 1995, p. 57; Thackara, 2005, p. 178). A scent diffuser helps creates the fresh and open atmosphere desired (Yanagida, 2008, p. 20).

The relaxed atmosphere created by the wordless film is supported by offering people more explicit information, which they can view before or after the film. It is important for the meaning of this project that the audience is put in touch with Tai Chi. Once an interest in Tai Chi is piqued by the film, people can make contact with the International Taoist Tai Chi Society through the information on a take home card Fig.34. It acts as memorabilia, a reminder and prompt to find out more (Pine and Gilmore, 2011, p. 86). A banner marks the venue for viewing the film and provides a small amount of information on Tai Chi and this project.



Fig. 35
Move hands like clouds
as part of Gap Filler
show – Turn Turn Turn

To have multiple encounters within my design, through the film, a banner and a card and through the multiple senses of sight, sound and smell enhances the experiential and increases its memorability (Pine and Gilmore, 2011, p. 59). All the aspects of the design are seamless and work as a whole. The open shutter LED light photographs are the basis for the imagery on the banner and memorabilia card extending the family of 'same only different' (Pine and Gilmore, 2011, p. 73-77).

To experience the film use the DVD enclosed in the appendix of this document or go to:
vimeo.com/user10217833/move-hands-like-clouds

Exhibiting the film in a community context

Bringing people into my process has enriched my relationships with them and enriched my design work. The inclusion of my Tai Chi class and my academic and creative communities has been a pleasurable aspect of this project. They have proved supportive and been intrigued at the unexpected things I have made (Thackara, 2005, p. 109; Chick, 2011, p. 33).

One of the people in the film, Karin van Roosmalen, is a fine artist and she invited me to show the film as part of Turn Turn Turn, an exhibition she co-curated, under the Gap Filler umbrella. Gap Fillers are a series of temporary exhibitions situated in the empty sites created in the aftermath of the Christchurch earthquakes of September 2010 and February 2011. Their aim is to enliven the devastated neighbourhoods, by bringing arts and cultural activities out of traditional gallery and theatre spaces (many of which themselves have been damaged), and into these communities. This philosophy melds seamlessly with the intentions of my project – utilising social sustainability practices, which encourage community, for innovation and collaboration, making a positive contribution.

Turn, Turn, Turn was staged over three days, situated outdoors, across several gaps in the Lyttleton township. Four artists showed informal and interactive pieces. Trent Hiles a Lyttleton artist and co-curator set up the projection system for my piece. This was a lesson in make-do / can-do. The projector was bungee strapped to a ladder and an extension cord provided the power. This was all in the spirit of Gap Filler, reflecting the attitude locals have had to embrace post earthquake.

My work was projected onto a large and dramatic wall, exposed by building demolition. Nightfall revealed the film, shown in a loop – the first time I had seen it repeating and flowing this way. Sound was not possible in the make-shift outdoor venue, and the silent, giant-scaled images in this setting were affecting. The outdoor, night time setting, the scale of the projection and the drama of the wall with its stairs running diagonally zigzag across it, created a compelling experience Fig.35. The figure of a person created by the Tai Chi bow, appearing twice within the film, connected my thoughts to the most affecting knowledge that the earthquake of February 22, 2011 killed 181 people. Seeing 'Move hands like clouds' within this earthquake context – lent poignancy, power and gravity to the work.

Conclusion

In this research project I designed a response to a social issue – the health of the whole person body, mind and spirit – a film, to make visible the beneficial practice of Taoist Tai Chi. It communicates Tai Chi's inclusiveness, encouragement of community and its internal nature. The film *Move hands like clouds* that is the culmination of my research process is experienced in real time and possesses a gentle quality, which grows from the nature of the thing it depicts – Tai Chi. It is screened on a loop, in a continuous flowing succession of movements that reflects the natural rhythms and flowing interconnected nature of Tai Chi, our world and a socially sustainable approach to living and designing.

The inclusive movements of Tai Chi allow anyone to perform them. The film uses light to track the Tai Chi movement; light allows the elusive traces of the movements to be captured graphically without revealing the physical body of the practitioner allowing anyone to imagine themselves performing Tai Chi. The invisible arc traces of movement are made visible and this expresses the internal origins and intentions of the practice. The focus on mindful attitudes that flow to mindful doing and wellbeing is shared by social sustainability, Tai Chi, somaesthetics and design for social sustainability. My process – planning, making and performing in the film – reflects the importance of mindful thinking and doing in these philosophy's.

By layering and aligning the light traces I reveal their similarity and at the same time their difference. This shows the inclusive tolerance for difference of Tai Chi. The multiple drawings of the practitioners embrace the togetherness of community. The continuous evolving light drawings of the film reflects the openness to different modes of engagement that Tai Chi allows. Its inclusiveness is not prescriptive, for everyone, it is embracing, for anyone.

Collaboration was integral to the process of designing the film, the technical expertise of people outside my usual graphic design discipline allowed the outcome to grow in unexpected directions. Collaboration and engagement with my Tai Chi communities enabled the design to come to fruition in a socially sustainable way. I would like to keep learning about how design can approach social issues and challenges by working in the boundaries between disciplines and within communities.

My research process has given me a deeper understanding of Taoist Tai Chi, and the nature of this practice and philosophy of being, is such, that this knowledge can continue to deepen and evolve over many years. As a way of being within our own lives and bodies in the world, it has much to offer. Tai Chi can continue to be the prism through which I explore design for social sustainability. I have barely scratched the surface of this vast and dynamic area of design. This project has made me aware of how much more there is to know, and has opened pathways for future learning. As a tutor at Massey University I can work together with the next generation of designers, learning and exploring with them on how we might contribute to a more sustainable future.

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I have low risk ethics approval for this research activity.



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17 June 2011

Lee Whiterod
31 Hungerford Road
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Dear Lee

Re: Containers and Connections

Thank you for your Low Risk Notification which was received on 8 June 2011.

Your project has been recorded on the Low Risk Database which is reported in the Annual Report of the Massey University Human Ethics Committees.

The low risk notification for this project is valid for a maximum of three years.

Please notify me if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06 350 5249, e-mail humanethics@massey.ac.nz".

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Yours sincerely

John G O'Neill (Professor)
**Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)**

cc Ms Patricia Thomas
Institute of Communication Design
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Ms Karen Curley
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