Moving Spaces: Choreography, Metaphor, and Meaning

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Abstract

Space is as integral to choreography as time, energy, and the body in motion. In this dissertation, *Moving Spaces: Choreography, Metaphor, and Meaning,* I ask how choreographic space acquires meaning, consider the kinds of meanings it conveys, and discover where those meanings are located within a dance. I explore, then, the ways our perceptions of space are influenced by culture, personal experience, and biology, and question to what degree our responses are universal or unique. I reflect on and analyse a selection of my choreographic work, view the work of other choreographers, and draw on the writings of scholars in dance and other disciplines to describe and think through my dances. I investigate these writers' views on dance, space, meaning, and the body in motion and link them to my practical research. I see the views and theories of four scholars as particularly significant: Gaston Bachelard's insights about imagination and metaphor, and how art reflects our sense of intimate space; Rudolf Laban's notions of spatial geometry and the interconnections between space, time, and force; Ivar Hagendoorn's discussions of neurological research, which offer insights into both the creation and perception of space in dance; and, Yi Fu Tuan's illuminating ideas about the cultural influences on our experiences of space and place. I consider the meaning of space in my dances, and examine how these works articulate my own cultural and personal experiences of growing up and living in New York City and as an expatriate in Hong Kong. Through this close reading of my choreography, and with an understanding that there are no universal terms for viewing space, I suggest the importance of taking into account a multifaceted approach to understanding space in dance, including the reflections and insights of artists.

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INTRODUCTION

As a dancer and choreographer, I enter into a dance and connect with its meanings by understanding its specific use of space. As a dancer, I learn a movement phrase through an understanding of my orientation and relationship with the space around me. As a choreographer, I also enter into a dance and feel where it is going through its use of space. When I begin a new work I ask myself questions concerning its spatial principles or foundations. These questions help me to understand where my work is located and where it could go. Although I have these inclinations in my approach to movement, the ideas for this dissertation crystalised more fully for me in something I read by chance.

Leafing through a 2003 book by the psychologist Dorothy Rowe, I came across her observation that when patients suffering from depression were asked to express their emotional states visually, the drawings they produced shared a common essence or thread. According to Rowe, these drawings revealed someone enduring a terrible isolation, as if alone in a prison (2003, 2). Rowe's observation led me to begin my musings. As I reflected further, I wondered if these common images were the result of cultural or biological influences; how these ideas relate to art making, and choreographic practice in particular; if, in certain emotional states, we share common spatial perceptions and physical sensations; and, to what extent our perceptions of space are shaped on the one hand by universal codes, and on the other, by our particular cultural and personal experience.

I became intrigued by these questions. In the dance studio I began to explore a sense of imprisonment. What ways would I choose to move within a tightly enclosed space? What feelings would this physical restriction provoke in the mover and in an observer? I was fascinated with the ways I could manage the reality of limited space in my choreography together with the imaginary spaces these images could evoke. As I continued to work, my ideas expanded so that I

was not only looking at enclosed spaces but also at how, as a choreographer, I use all kinds of space. This document traces my explorations surrounding these questions.

I have spent the greater part of my career finding ways to communicate my thoughts and feelings through movement, trusting the power of human movement to express what has been deeply important in my world. In this document, however, it is through my thoughts transferred into the written word that I reflect upon and analyse the ways I use space in my choreography. I examine the spatial images and inspirations which prompted the dances I explore in later sections; consider questions and issues which evolved in the process of making these works; and then analyze and reflect upon the ways these works communicate their meanings. Among the key elements I am interested in exploring here are which aspects of our perception of space are personal, which universal, and which specifically cultural. Four main theorists have inspired my explorations: the philosopher Gaston Bachelard, the cultural geographer Yi Fu Tuan, the choreographer and essayist Ivar Hagendoorn, and the dance/ movement theorist Rudolf Laban. Working from different perspectives, their explorations and reflections on our experience of space have opened my studies to the concepts of other theoreticians and writers. The energy from my readings has ignited ideas which I relate to my choreographic practice and vice versa.

My research for this study, then, has been both practical and theoretical. During this project I have created and presented choreographic works which were directly inspired by my initial research questions, engaged in synthesising my theoretical sources with my creative impulses and activity, and gained insight into the relationship between research and the creative process. In addition to addressing this recent work, I also review a selection of my works created prior to my present theoretical explorations, analysing and reflecting on aspects of those works in light of my research questions. I explore the ways I use my personal

visions and sense of space to construct choreographic statements, how these spatial choices communicate meaning to the viewer, and the kinds of meanings these dances convey. In examining these matters I hope to bring insight into the complexity of the creative process in dance, exploring the ways dance expresses as well as impresses its images, feelings, and ideas.

The design of my research emerged as I continued to explore my practical and theoretical material. In this research, I am not only the creator of the dances examined, but also the interpreter of these works. Rather than view these two activities as mutually exclusive, I view them as complementary parts of the same process. In "Some Speculative Hypotheses about the Nature and Perception of Dance and Choreography," Ivar Hagendoorn notes:

> In so far as sensory processing is concerned there is no difference between an audience watching the finished work and a choreographer watching a work in progress. A choreographer will continue adjusting a piece until every aspect has been fine-tuned to its desired perceptual and emotional effect ... when creating or rehearsing a ballet both choreographer and dancers are as much spectator as they are author and composer. (2004, 104)

These ideas are relevant to this study, for while I am not prescribing a fixed meaning to the dances I discuss, in each work I compose the elements I am considering, creating a field within which to view the work. From their initial inspiration and throughout their creation, I am in a constant process of reviewing my works, analysing and critiquing them within the process of construction. Along with my dancers, I am the first audience for my work, adjusting and honing those elements presented to the spectator. In this written document, as the choreographer of the works I discuss, I am in the unique position of viewing them from both the inside and the outside perspectives of their creation. Having

created these dances my reflections have a privileged point of view, yet I do not consider them as definitive or complete. There is no absolute way to interpret choreographic space, for there are many routes through a dance and towards an understanding of its meanings. In the preface to *Dancing Texts: Intertexuality in Interpretation*, the dance theorist Janet Adshead-Lansdale contends that a dance can tell many stories and mean in multiple ways (1999, xv). The significance of the spaces of a dance seem to take form in what Adshead-Lansdale describes as the 'interface between dance and the spectator and how she/he might interact with the dance" (xxvi). As the creator of the dances I reflect on in this document, I consider the ways I utilised space in these works and the kinds of meanings these dances convey to the audience. Within these works I interweave ideas, emotions, and meanings to be shared with the viewer.

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In "Movement Analysis: Piecing Together the Puzzle," Ann Daly poses three questions that are relevant to my research. They are "(1) does movement have its own meaning?; (2) if so, how does movement mean? and (3) if so, where is the locus of meaning?" (1988, 42). As I focus my attention specifically on the human body moving through space, these questions thread through all my theoretical and practical explorations for this project. I have always trusted the power of movement in space, its ability to communicate, to resonate and have significance, yet how does it transfer its meaning? Movement, and especially dance movement, fades away almost as soon as it appears, as if written upon water, its qualities and dynamics irretrievable, leaving only a trace of sensed memory. As Merce Cunningham stated, dance by its very nature is "continuously changing ... its permanence in fluidity" (Cunningham vii, 1966). To briefly capture the dances I reflect on in this document and their continuously changing moments; to reflect on and analyse their shifting shapes, structures, and spatial patterns; to see deeply into them and discover their hidden truths; and to hear

their orchestrations of energies in space has been the challenge of this document.

In order to understand the ways movement resonates through its use of space, it is important to define what elements of space I am examining. When I was teaching at Laban in London in 2002-2003, I was struck by the intense interest of my colleagues in the ways architecture and dance are related. A number of collaborations between architects and choreographers were receiving government funding at that time.[1] One of my colleagues, the choreographer Rosemary Butcher, had been involved in a number of these projects. In conversation with her in 2003, it was said that in these particular collaborations, although extremely productive and thought provoking, there was always a gap in understanding because architects and choreographers employ very different approaches to space. Architecture is designed to accommodate people living, moving, and working in space. Once completely created these spaces remain static and do not change over time in the same ways as the spaces created by dance. For Butcher and myself, dancing is about creating movement in space. While concerned with the movement of people through its spaces, architecture is about designing forms that remain still. The spaces of dancing and architecture are different, for although both deal with three-dimensional objects in space, those of architecture are inanimate and for the most part fixed.

Dance is concerned with human bodies moving through space and the relationship of the body to the space around it. The spaces of a dance reveal themselves through time in a process of unfolding. A dance takes place within the architecture of a theatre, a studio, or another site, and is often presented within a setting designed specifically for it. These fixed elements are components of a

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[1] On 28 Oct, 2002 at the Royal Festival Hall, London, the seminar "Defining Space," co-hosted by Dance UK, Dance Umbrella and RIBA (Royal Institute of British Architects), examined the meeting-points between choreography and architecture. At this forum the architect John Lyall, who had collaborated with Rosemary Butcher, and choreographers such as Carol Brown and Siobhan Davies and her collaborator, architect Sarah Wigglesworth, discussed their experiences.

specific work, yet dance is not static: it is always in the process of becoming. In some of my choreography, I have used architectural elements. In *Maxwell's Demon's* (1996), a nine-foot wooden ramp was set on stage. The dancers ran up the ramp, slid down, and disappeared behind it. In *Juanita* (1980), the dancers moved around, under, and above an open-framed wooden house which had been specifically designed for this work. As *Juanita* progressed, the dancers assembled and reassembled the parts of the house, placing them in new positions, creating new visual perspectives and dynamic relationships. In other sections of this document, I discuss a series of works I created in which the dancers themselves move objects, such as balls, boards, and blocks, that allow for new possibilities and relationships in the dance. As I analyse the spaces of my works, I am aware of the fixed structures within which these dances have taken place. My dances have been performed in such places as dance studios, black box theatres, and gymnasiums, on proscenium stages, and on beaches and lawns. In each of my dances I consider the kind of space in which the work will take place, its size and my approach to it. While these elements are relevant, in this study I also examine the changing relationships inside these structures and consider the dynamics of space within and between the dancers' bodies, the relationship of the dancers to the space around them, and the ways these relationships take on significance.

The main focus in this dissertation is on the ways choreographic space acquires meanings according to the interplay of artistic intention and audience perception. It considers the kinds of significances it conveys, and seeks to discover where those meanings are located within a dance. I explore the ways our perceptions of space are influenced by biology, personal experience, and culture, and question to what degree our responses are universal or unique. I reflect on the ways space accrues meaning for the viewer and how from the point of view of the choreographer there is an interchange between the work and the

viewer. I also take account of the textual nature of choreography and acknowledge the wholeness of the way we look at dance.

Our experience of space in dance is shaped by a complex web of cultural, personal, and biological influences. In this project, I consider the nature of space inherent in my dances from multiple contextual viewpoints and acknowledge the many facets at work in their creation and perception. My reflections, descriptions, and interpretations have evolved from my own experience as a choreographer, yet my reflections here are stimulated and inspired by the work of the scholars Bachelard, Tuan, Hagendoorn, and Laban. In exploring their ideas, which range across geography, aesthetics, anthropology, psychology, neurobiology, and movement analysis, I consider the multiple and layered ways space in dance can accrue meaning through a confluence of the personal experience of the choreographer and the personal experience of the audience and what those meanings might be.

Each of these thinkers connect differently to the ways I view space, and I have organized the readings of their work and ideas into three main areas: those exploring what I call near or personal space; interior space; and far space.[2] Their concepts cross the boundaries of their disciplines in many instances, and it has been these crossovers and the synergies they create which have made my explorations stimulating.

I see the writings of Yi Fu Tuan as reflections on far or social space. As Tuan postulates the ways in which culture influences our perceptions of space, his concepts move through many aspects of spatial experience. His far-reaching views are linked to the writings of other humanist geographers, such as Doreen

[2] I am loosely borrowing terms from Laban Movement Analysis, but I am using them within my own purview. Laban uses the concepts of near, mid and far space in relation to the body's kinaesphere; here I am using these terms to organise my various readings and the ways these concepts encompass ideas concerning social, personal and biological space.

Massey, and anthropologists such as Drid Williams and Cynthia Novack, who was also a dancer and choreographer.

I view the current surge of new research on the brain as advancing the realm of cellular or inner space. The writings of Hagendoorn address the work of prominent neuroaestheticians such as Semir Zeki and V.S. Ramachandran, who examine the role of the neural pathways of our bodies.

Gaston Bachelard is associated with the study of near or personal space. In his 1958 book, *The Poetics of Space*, he considers the realm of the intuitive and the metaphysical, and illuminates our experience of intimate and personal space. My reflections on space, drawing on Bachelard's writing, connect to the ideas of other artists, poets, philosophers, and psychologists who consider this aspect of space.

No inquiry into the use and meaning of space in dance would be complete without reference to the work of Rudolf Laban. His ideas and the systems he and his followers created permeate the field of dance in numerous ways. Laban's search for the principles that underlie movement through space have provided both inspiration and clarity to my processes.

As I address the relevant literature within each of these themes, I allow these scholars' texts to cross over each other as they inform my ideas. Their concepts spiral back upon each other, making interconnecting pathways, and weaving the fabric of my understandings of choreographic space. In the following pages I will further discuss the work of these thinkers and their influences on my own ideas as well as their relationship to my choreography.

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In this study, I investigate not only the real spaces of my dances, but also the imagined spaces of these works. I discuss the ways I choreographically explore the relationship of the dancers to the space around them, to the architectural forms and structures, dimensions and lines, spatial pathways, and

qualities in my work. Still, I am also interested in what is seen in the mind's eye, and within the created space of these works. In making a dance, I take images and concepts and transform them into choreography.

In *Feeling and Form* written in 1953, Susanne Langer proposes that in watching dance one sees not only the dancers running around the stage but also "the dance driving this way, drawn that way, gathering here, spreading there--fleeing, resting, rising and so forth; and all this seems to spring from powers beyond the performers" (1977, 175). The forms and images in dance, she suggests, are similar to those of everyday life: tension and release, falling and suspending, moving slowly and quickly, with sustainment and sharpness. Langer writes, "it is through this illusion of 'virtual force' that the human body transforms its reality in dance" (1977, 174-175).

Maxine Sheets-Johnstone, in her 1966 *The Phenomenology of Dance*, continues to build upon some of Langer's ideas. Like Langer, Sheets-Johnstone proposes that while dance is based on the lived experience of movement in everyday life, it is through the relationship of the dancer and the dance, and the manner in which time and space is used in that relationship, that a form is created which produces an "illusion of force." She argues that dance "exists within a particular aesthetic context, which is different from the practical or the affective context of everyday life: it creates and sustains *a sheer appearance of force"* (41).

In much of my choreographic work I explore how the simple and the ordinary spaces of our lives can re-form and resonate through dance. In one of my early works, *11111* (1977), five dancers, each carrying six-foot wooden poles, form and move through choreographed designs which seem at some points like shelters, and at other times like either weapons or oars. The manipulations of the poles create moments of tenderness, playfulness, or aggression together with a sense of pure geometry. In their simplicity, the poles appear to assume a range of

textures, qualities, and new meanings, transforming their everyday reality. In some of the dances I reflect on in this document, I have made use of simple objects, such as balls and blocks, to generate and shape my movement material; in others I use everyday movements, like walking and running, and simple spatial patterns, such as lines or arcs. I will examine here how, through my use of space, these movements and images accumulate resonance.

As a choreographer who has studied dance since the 1950s and has made dances since the 1970s, I have seen the ever-changing nature of the field and noted the ways I have absorbed and synthesized these influences. In *The Oxford Handbook of Aesthetics* (2005), art theorist Noel Carroll articulates some aspects of the ways dance expresses. He points out that Langer formulated her theories during the period of such modern dance choreographers as Martha Graham, Doris Humphrey, and Mary Wigman, and her work reflects the conviction that the function of dance is the expression of feelings. He categorises Langer as part of the "expression theory of art" (2005, 589). For her, the function of dance is to make visual the vital forces of life, having to do with volition, resistance to outside forces, the pull of love, or flight. According to Carroll (1981), other dance theorists, such as Monroe Beardsley, took these ideas even further, claiming that dance must possess qualities of energy, power, and expansiveness to an extreme degree; it must be more than real life (Carroll 1981, 94).[3]

For myself, as for Carroll, an excess of expressiveness is not necessary in determining whether something is dance. This can be seen in the small, understated movements in much of contemporary concert dance, and in the abstract patterns in the earlier work of Alwin Nikolais or the mainstream entertainment of Pilobolus. Carroll cites certain dance techniques, such as that of Merce Cunningham, which are "designed to suppress ... and banish any superfluities of expressiveness" (2005, 590). In certain early postmodern dances,

[3] Carroll notes that Beardsley presented these ideas in an unpublished paper given at Temple University in April 1979, as part of a conference entitled *Illuminating Dance*.

such as Steve Paxton's *Satisfyin Lover* (1967) and Yvonne Rainer's *Room Service* (1964), dancers carry out ordinary movement and accomplish mundane tasks. Both of these works are dance, yet they intentionally employ only the degree of expressiveness required in order to fulfill the assigned tasks. While these works may appear to counter Langer's theory of expression, I view her definition of feeling and expression more broadly. For Langer, art formulates aspects of conscious experience, and the 'feelings' she refers to include "the whole realm of human awareness and thought" (1977, 55). They are part of the entire spectrum of our reality, both the mundane and extraordinary, the understated and the excessive, the emotional and the abstract. They are "the way feelings, emotions, and all other subjective experiences come and go" (1977, 7) This definition of "expression" can include those works that do not include overt affect, excess, or superficialities of "feeling."

The works of postmodern artists "express," whether it be a concept, a thought, a sensation, a feeling. Although visual artists such as Barnett Newman, Mark Rothko, or Sol Le Witt were investigating elements of their medium such as line or color, or choreographers like Rainer and Trisha Brown were exploring ideas about the nature of performance or visual perception, their work "expressed" their concerns about these elements. In addition, the works of postmodern choreographers are not part of the everyday, for while deploying ordinary movements, the actions and spaces of these works are "framed" within the performative space and by the spectator's viewing the work. These frameworks take ordinary acts outside of the everyday. I am a American choreographer who has worked since the 1970s and been influenced by a postmodern milieu, though aspects of Langer's theories serve to augment and deepen my reflections. Her concepts, in addition to postmodern ideas, reside within my frame of reference, both informing and stimulating my explorations.

I stated, in an interview in 1980,

> I've never been able to place myself in a category; it makes me nervous and edgy. Call me a post-avant garde, minimalist, classical, postmodern dancer-choreographer or a classical postmodern avant-garde minimalist choreographer or all of the above or none of the above. (1987, 196)

Although much has changed since that time in how I think about dance and movement, I still find it difficult to categorize my work and interests. I have been privileged to have observed, experienced, and been changed by the evolution of contemporary dance from the 1950s to the present. Its transitions in varying degrees informed and changed my own thinking about dance.

To best explore my ideas about choreographic space, it is important not only to explore my theoretical influences but also to recount my personal experience of dance and dance training. Most young dancers begin their training in ballet; I began mine as a small child taking classes in the Martha Graham technique. My uncle, Irving Burton, was a modern dancer who had been an understudy with the Martha Graham Company, and was dancing at that time with the New Dance Group, led by Jane Dudley, Sophie Maslow, and William Bales.[4] Like many modern dancers during that era, my uncle was vehemently anti-ballet. He suggested that I study with one of his teachers from the Graham school who was opening a dance studio around the corner from where my family lived. Her name was Marjorie Mazia; she had been an early member of the Martha Graham Company and was married to the American folk singer/songwriter Woody Guthrie.

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[4] All of them were both associated with the Graham company and dedicated to leftist social action through dance. They were instrumental in establishing the New Dance Group which continued as an influential center for modern concert dance in the 1940s through the early 1960s. For more on the early part of this period see *Stepping Left* (1997) by Ellen Graff.

I started my dance lessons with Mazia when I was five years old, and she taught us a modified version of Graham technique. As we contracted and released or moved across the floor, I could feel the drama of the technique, the passion of the contraction and the liberation of the release. Even as a child, I always felt the space around the body was electrified with the tension of those movements. We moved across the floor on the diagonal in simple triplets, prances, skips, and leaps, and did many exercises that took place in either a seated or kneeling position, or standing in one spot. The Graham technique did not feel like it was about cutting through and moving out into space, but rather about creating tension within the spaces around and inside the body. The pelvis and its energy was the centre of all movement. At the end of class we would make dances up sometimes with scarves or hoops, exploring circles and spirals, or themes like autumn, Thanksgiving, or Easter. I remember Mazia saying that we could never be a tree or a leaf in a dance; we would always be humans, for these dances were about people. In our work, like Graham's, we were to explore the human condition. We had guest teachers such as the Graham dancer Stuart Hodes, the choreographer Sophie Maslow, and the dancer/teacher James Truitte, who taught Lester Horton technique, and eventually ballet teachers like the New York City Ballet dancer/teacher Richard Thomas. But the teacher who had the most effect on us was the choreographer James Waring. Jimmy, as we called him, was a great eccentric who choreographed wry dances filled with dadaist imagery.[5] He taught his own unique and idiosyncratic version of ballet class and choreographed a dance for us when I was twelve years old, the first dance I was in by a professional choreographer. He told us that all we lacked that professional dancers had was a strong sense of focus in space. The dance was filled with wit

[5] Waring gave concerts at venues throughout New York such as the 92nd Street YMHA and Judson Church and many of the people who were associated with experimental dance in the late 1950s and 1960s such as David Gordon, Yvonne Rainer and Aileen Passloff, who danced and/or took class with him. For a more thorough discussion of Waring's work see "James Waring and the Judson Dance Theater: Influences, Intersections, and Divergences" (2003).

and fantasy, yet he worked with great seriousness in having us sense direction and clarity in space through our use of focus. From Mazia and all the teachers at her studio, we learned that the space in the studio was special, different from the other spaces of our lives. It was open, empty, a place to imagine, where anything could happen.

I went to the University of Wisconsin in Madison for my undergraduate degree, majoring in dance. We studied a form of Wigman technique as it was brought to America from Germany by the choreographer Hanya Holm and one of her assistants, Louise Kloepper, who was the head of the program at Wisconsin at that time.[6] Wigman's work was concerned with such formal properties of dance as space, rhythm, and intention. It was derived from Rudolf Laban's theories, but Wigman continued to develop it within her own choreography and teaching.[7] The work at Wisconsin was very different from the training I had received from my Graham teachers, although in both there was an understanding that as a dancer and choreographer, one tried to create something original and individual through the act of dancing itself. In our theory and composition courses we dissected and analysed interrelated aspects of space, time, and force. In technique classes we moved through space, walking, skipping, and running in geometric patterns, working to clarify our projection and focus. Space felt alive in this technique as we projected our energy into it, and responded to its pushes and pulls, its ups and downs.

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[6] Margaret H'Doubler created the first dance program at a university in the United States in Madison in the 1920s. She believed that dance was a means to express one's own ideas and feelings through movement. In *Dance: A Creative Art Experience* (1940), she wrote that for her, technique was "training the mind to use the body as an expressive instrument"(xi). She viewed dance as both an art and a science. Kloepper was an American dancer and teacher who trained in Germany with Mary Wigman and taught and danced with Hanya Holm in the 1930s and 1940s. She taught and became the chair of the dance program at the University of Wisconsin after H'Doubler's retirement.

[7] Many of the teachers and students at Wisconsin were also associated with another choreographer within the German school, Alwin Nikolais. The choreographer and dancer Don Redlich, who worked extensively with Holm, also taught and was a prominent influence at Wisconsin.

In 1968 I returned to New York City and studied at the Merce Cunningham Studio. There, I began to feel as if the space I moved in had been liberated. We moved through an open field, detached from the logic of the pushes and pulls of the Wigman school, or the internal drama of the Graham technique. In *Merce Cunningham: The Modernising of Modern Dance* (2004), Roger Copeland observed that Cunningham's

> "decentralising" methods of stage space--whereby a dancer positioned, say, down-stage center assumes no automatic pride of place over dancers positioned "say" upstage left or right--has challenged inherited ideas about spatial organisation that have literally "held the stage" since the introduction of the proscenium arch and single-point perspective scenic design in the early 17th century. (4)

Through Cunningham's ideas we understood that the space around us could stand for itself, the body did not always have to present itself frontally, and movement did not need a front or back. We cut through, over, and around the space, not only in simple locomotor patterns but also in complex rhythms and combinations of steps. Through Cunningham's chance methods of creating, his work admitted the irrational, unpredictable, and accidental nature of events. At that time of change, unrest, and possibility in the late 1960s and early 1970s in America, his work reflected a sense of the world around us. Influenced by Merce's experimentation and the radical nature of the times, younger choreographers were also exploring and experimenting with ways of creating and perceiving space.

In the late 1960s and early 1970s, I danced in the companies of Viola Farber, Dan Wagoner, and Mel Wong. Both Wong and Farber had worked in Cunningham's company and were influenced by his ideas of chance and the

concept that any movement could follow another. Farber's work flung itself through space, and many of the pieces I was involved in had both improvisation and chance elements, allowing the dance to unfold in different ways each time we performed. In Farber's work I was acutely aware of the fleeting nature of each moment in space, of the constantly changing nature of movement.[8] Wong approached space like a visual artist. His work was intuitive, dense and exploratory, it asked you to view the whole space and the juxtapositions of movement and visual art elements, rather than focusing on one or two dancers.

In 1970 I also worked with Twyla Tharp on a site-specific work, *Dancing in the Streets of London and Paris, Continued in Stockholm And Sometimes Madrid,* which we performed at the Metropolitan Museum of Art. Tharp was in the early experimental phase of her career. We rehearsed for hours every day, often working within the museum after it closed. We spread our dancing through the spaces of the museum. Streaming up and down the grand staircase in the Great Hall doing Tharp's complex stepping patterns, we alternated between seemingly pedestrian actions and rigourous group movement, depending on split-second timing as we passed the movement from one dancing group to another. I was affected by Tharp's rigourous way of working, in the ways she split up and reconfigured movement, but also by the experience of moving in that great museum. The space inspired alternative ways of thinking about performing in both its immensity, and in the moments of intimacy it allowed with our audience as they moved around us.

Dance in New York during that period seemed to be bursting with energy and ideas. Meredith Monk was also taking dance outside of conventional spaces and exploring alternative ways of seeing. In 1969 she choreographed *Juice: A Theater Cantata in Three Installments,* which took place at the Guggenheim

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[8] Farber was one of Cunningham's most distinctive dancers in his early company and has been described by Cunningham as having a dissociated quality of being "like two persons, another just ahead or behind the first" (Lubow, 2009).

Museum, The Loft (a small space in Soho), and Minor Latham Playhouse at Barnard College. These three very different spaces shifted the perspective and the scope of the materials she was exploring. Later, Monk made *Butch Cassidy and the Cisco Kid*, which was performed in the arboretum at Connecticut College and which she called a real live movie. In it she explored cinematic techniques, such as close-ups, pans, and zooms, in a real-time performance.

Other choreographers and artists also stimulated my ideas about dancing space and its possibilities. In 1965 I saw an early in-progress version of Yvonne Rainer's solo *Trio A,* which became part of *The Mind is a Muscle* (1966) in a small space, The Toilet, on St. Mark's Place.[9] I was stimulated and excited by Trisha Brown's early work exploring perspective and alternative spaces such as *Roof Piece* (1973) and *Walking on a Wall* (1971). I saw the work of other choreographers, such as Lucinda Childs and Laura Dean, who were making formalist, and sometimes austere, dances. They worked with concepts similar to those being explored by the minimalist composers Steve Reich and Philip Glass, echoing in space their spare and repetitive patterns. I remember watching Steve Paxton and a group of students from Oberlin College roll and tumble on mats at a gallery in Soho in 1972. The work, *Magnesium,* marked the beginnings of the form known as Contact Improvisation. The dancers moved through three-dimensional pathways, and in this work as well as many others created during this period, the space became democratised.[10] All points in the space were considered as having equal value.

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[9] At the end of the performance Steve Paxton stood up and asked Rainer about her processes in making the work and her use of her visual focus within the work. She said she never allowed her focus to engage the audience, and her neutral and task-like actions seemed to be stripping away the conventions of dance and theatre. Yvonne and Steve were both part of the Judson Dance Theater, a circle of experimental choreographers in the early 1960s who sought to develop new choreographic processes and concepts, redefining dance and the ways we see it and serving as an inspiration and springboard for many of the influential choreographers of the following decades (Banes 2001, 350 - 361).

[10] For further discussion of these issues see also C. Novack's *Sharing the Dance: Contact Improvisation and American Culture,* (1990).

In "Looking at Movement as Culture: Contact Improvisation to Disco" (1988), Cynthia Novack points to the ways movement is connected to social and cultural ideas and institutions. She states, "Cunningham's aesthetic dictum that any movement could be considered dance proved a powerful concept for younger dancers engaged by re-emerging ideals of social equality and community" (107). I was one of those young dancers, and these ideas of the possibilities of dance, of questioning what dance could be, and examining alternatives to the traditions of the past, were not only part of my dancing life but were important to how I thought about the spaces of the world I lived in. At first the ideals of the 1960s, of community and social equality, were explored by avant garde choreographers in their inclusion of pedestrian, everyday movement. By the early 1970s the movement became more free flowing, with energy thrown out through space in multiple directions. Contact improvisation used the entire 360 degrees of space around the body to tumble and roll, and these uses of spatial energy also appeared in the very different works of Trisha Brown, Laura Dean, Lucinda Childs, and the choreographers with whom I worked with during that time such as Viola Farber, Dan Wagoner, Mel Wong and Twyla Tharp.

I first began showing my work in New York City in 1975. I was influenced by the dancers and choreographers I came in contact with and admired. In addition I was affected by the social and cultural values of the changing times. Adhering to the Cunningham aesthetic in my first works I used sound as an element independent from movement. In 1978 I started to explore other relations between music and dance, in the way these elements might coincide, collide, overlap, and contrast. In her introduction to the second edition of *Terpsichore in Sneakers,* Sally Banes notes that independent choreographers in New York in the 1980s began to explore the possibility of narrative, theatricality, virtuosity, expression, and content (1987). I, too, became involved in exploring these interests, for as the environment and my personal and professional priorities shifted, the concerns

of my work, along with those of my colleagues, changed. The philosopher and writer Brian Massumi maintains that "a body is defined by what capacities it carries from step to step. and these are constantly changing. Our body's ability to affect or be affected isn't fixed" (in Zournazi 2002). Massumi's work suggests that as we navigate our way through life there are different pushes and pulls that propel us forward. These ideas resonate with me, for my interests and processes shifted. During the 1990s I taught and choreographed in Asia, yet I carried with me the influences of those teachers and choreographers who inspired me to more clearly see and feel movement in space. I also continued to be influenced by the memory of the spaces I had moved through, the places I had lived in.

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The following sections of this dissertation are organised into two main parts, each with four chapters. In Part 1, I examine the scholars who have influenced and inspired my research. The first chapter focuses on Rudolf Laban, his systems of movement analysis, and his examination of the correspondences between the geometry of space and emotions. His wide-ranging investigations provide a lens through which to view the spaces of dance. I next look into the writings of Gaston Bachelard, who reflects not only on the "poetics of space," but also on the ways we embody images transforming them through an act of the imagination. Bachelard explores our near, and personal spaces by examining the works of poets and philosophers. In chapter three, I explore Yi Fu Tuan's and other social scientists' ruminations on the ways culture, society, and environment affect the ways we live in and conceive space and place. I view these scholars as investigating our far and social spaces. Next, I discuss the writings of the theorist Ivar Hagendoorn and neuroscientists such as V.S. Ramachandran and Semir Zeki. As these works investigate how the brain perceives and conceives space, they explore our inner spaces.

These writers' strands of thought weave through my reflections and analysis in Part 2, where I discuss seven of my choreographic works. In chapters 5 and 6, I consider two works I choreographed in the late 1990s in Hong Kong, *Scenes from a Mirage* and *Different Trains.* Both of these dances create a strong sense of place and explore the relationship of time and space as well as memory. In chapter 7 and 8, I reflect on three dances, *Being There, Ten Blocks,* and *Break/ Down,* which I created between 2002 and 2004 during an intense period of transition as I moved first from Hong Kong to London and then from London to New York. In these three pieces I use objects which the dancers manipulate, and which serve as metaphors for states of being as they change the dancing space. In Chapter 9, I consider two works I choreographed which I view as companion pieces, *Moving Space* and *Moving Spaces.* In each I limited the space of the stage. In *Moving Space*, a solo, the dancer moves in isolation; in *Moving Spaces,* a group piece, the dancers move as an interrelated community.

As I focus on my dances in Part 2, my theoretical and practice-based influences surface and resurface in different ways. The ideas about space I explore in Part 1 are not applied to these dances linearly, but appear in fluid fashion where appropriate within the text. Throughout these reflections I refer back to my original questions: How do I use space to create choreographic meaning? In what ways do those choices convey meaning, and what are the meanings they convey? How are the ways we conceive and perceive the significance of space the result of personal, cultural, or biological influences?

PART 1:Thinking about Space

CHAPTER 1: Pathways through Space: Laban's Influence on this Study:

No inquiry into the use and meaning of space in dance would be complete without reference to the work of Rudolf Laban (1879-1958). His work covers a methodology for analysing the elements of movement, its pathways through space, and the effort, shape and drive of motion. His ideas and the system he and his followers created, Laban Movement Analysis,[11] permeate the field of dance in numerous ways. Laban's search for the principles that underlie movement have provided both inspiration and clarity to my processes. While my approach to creating and viewing dance is not primarily via a Laban perspective, nor do I follow a particular "school" of Laban, at various points in this study his theories have provided a lens through which to view dance and space. I have studied his theories from 1987-1989 in classes at the Laban/Bartenieff Institute of Movement Studies (LIMS) in New York City, and I have read his writings and those by Laban scholars such as Vera Maletic and Valerie Preston-Dunlop. At the University of Wisconsin, I studied with teachers who had been influenced by the German dancer/choreographer Mary Wigman, originally a protégé of Laban, and her student, Hanya Holm. In 1993 I also studied with Robert Dunn, an influential choreography teacher, who used many LMA principles in his classes.[12] Laban's concepts, such as those concerning the relationships of energy and space, together with his thinking about space as multidimensional, having height, width and depth, have served as tools for me to better observe and analyse movement throughout my career as a dancer and choreographer.

In creating movement in the studio I have often been inspired by Laban's concepts of multidimensional space. These ideas have opened possibilities for a

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[11] According to Ann Daly, LMA refers to any system developed by Rudolf Laban and his students, such as Warren Lamb, that is based on Laban's theories (Daly 1988, 41).

[12] I discuss Dunn's role in Judson Dance Theater later in this section.

movement's development and variation. I often utilise the tools of this system to further comprehend and clarify my "seeing." Laban's legacy for me has been his spirit of inquiry into movement and dance. In *Body, Space, Expression: The Development of Rudolf Laban's Movement and Dance Concepts*, Vera Maletic notes that Laban's aim was to "awaken dance insights" (182). She quotes him as stating.

> I invented a few means and instruments to serve as a starting point. It is the task of future choreutic research to investigate these amazing relationships [...] for the building of symbolic forms with their dynamic transformations into different planes and plastic shapes is one of the most profound inventions of man's imagination. (1987, 182)

It is in this spirit that his work has sparked and enriched this study.

Laban identified the formal elements of movement as weight, time, flow, and space. His theory exploring spatial structures and relationships is known as Space Harmony or Choreutics. One of the strengths of his movement system of analysis (LMA) is its acknowledgment of the complexity and dynamic quality of movement. My study focuses primarily on the ways space is used in choreography; however, one cannot view spatial issues in dance without considering time and energy factors as well. Laban's theories take into account the unity of space, time and effort. Maletic makes clear Laban's holistic approach. Laban, she writes, viewed body movement as creating space, as an unfolding in space, time, and effort (103-104). Laban wrote that a word for the logic of movement could be "'confluence' because it is the peculiar form of the flowing together of several movement constituents, which gives character to any meaningful dance-movement" (in Daly 1988, 45). In considering my works, I appreciate Laban's view of space as a complex interweaving of spatial, temporal and effort factors and his sense of how these contribute to a dance's meanings.

Laban also sought to discover an interrelationship of pathways in space and emotional moods, or what he refers to as "dynamic stresses" (Maletic, 54). Here his work appears to point towards a key in the intriguing relationships of movement and meaning: He suggested that there is an affinity between efforts used in movement and its spatial unfolding.[13] To Laban, spatial nuances or shifts can show mental and emotional attitudes. He held that one can relate the moving person's feeling for dynamics to the space pathways in which that person moved, that there are affinities between the space one uses and one's feelings. Space influences the feeling of movement and vice versa. Moving on a diagonal, according to Laban, conveys a sense of instability, while moving on a horizontal plane conveys a sense of stability. He believed, for example, that when moving close to the earth, in a low spatial level, there is a natural affinity to use strong weight; that as one advances in space there is an affinity to move slowly; and in moving backward an affinity to retreat suddenly. The observer can identify these changes and understand the shifting emotional states of a mover. This does not mean that the mover must move with these efforts, that they are solely linked to these spatial pathways; it is that the "affined" dynamic is the dynamic which one would be most inclined to move in. According to Laban it is the more dominant way of moving in that direction. The mover can fight against moving in that way, working with deviations from these affinities, and move in their disaffinities, and that this can increase the intensity of their actions. Space for Laban influences the "feeling" of movement and vice versa. The internal world of the mover is linked to the external world, and to his actions. (Maletic 1987, 77-79, 172; Dalby and Newlove 2004, 55-56). Recognising the possibility and potentials of moving into space with and against these natural affinities can be useful choreographically.

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[13] These ideas were further developed by Warren Lamb into the method known as Effort-Shape (Daly 1988, 48).

The concept of spatial affinities raises questions of whether, and how, movement and meaning are linked. Does movement, for example, have intrinsic meaning? For me, the concept of spatial affinities recalls psychologist Dorothy Rowe's observation that people associate depressed states with imprisoned spaces (2003, 2-3). This points towards a pathway to understanding some of the ways artists use space to convey meaning .

Laban's perceptions about movement and his system of analysis, though thorough and detailed, can seem culturally specific, reflecting its Western perspective on the "affined" relationships of spatial pathways and movement qualities. For example, regarding his descriptions of the affinity between spatial pathways and their associated movement qualities: Is light movement always most harmonious at high level? What about flamenco dance, which predominantly moves through a high level yet can have extremely strong qualities? Laban's emphasis on the harmonic aspects of movement often do not take into account other possibilities. In Robert Dunn's composition class at Columbia University's Teachers College in 1993, he spoke of the choreographic power of using disaffinities, such as low space and light energy, and the possible tensions and resonances created through unexpected and "disharmonious" choices. He suggested, that what we perceive of as the disaffinites of movement can often hold a richer sense of interest and expression for the creator plus the observer. While there are limitations within Laban's approach, and although his methods are not my primary tool, my awareness of his concepts of movement analysis enriches my perceptions of movement as a process, not as static action, and of seeing the depth of movement in space and its relationship to time and energy.

CHAPTER 2: Bachelard's Explorations of Near & Intimate Space

The French philosopher Gaston Bachelard (1884 -1962), who lived and worked during the same period as Laban, investigated space from a literary and poetic perspective. He explored the ways the intimate spaces of our lives can enter into our physical selves and become part of the ways we both perceive and conceive art. His perceptions are relevant to this study for his subjective method of analysis and in the manner he explores our experience of space, the imagination's role in re-envisioning these spaces, and memory and space.

Bachelard's thinking was interdisciplinary and kaleidoscopic. His interests ranged from science and philosophy to Jungian psychology and poetry. In *The Poetics of Space* (1958/1994) he examines the imagery of various poets and writers, and their works provide the subject matter for his views on the imagination. Empathising with these texts, he identifies with the inner impulses of their authors. Conceiving space in its metaphoric and poetic dimensions, he focuses his study on images of a house as he explores our near and personal spaces. He spins the imagination through other worlds, as he illuminates the process by which both the creator and the reader re-envision the everyday through an array of images: the rooms of a house and its furnishings, its cellar and its attic.

Throughout *The Poetics of Space,* Bachelard explores language, the images created by the poetry of words. He is not interested in describing the systems and structures within literary works. His method of analysis consists of a deep yet subtle reading of a text, and his explorations illuminate the poetic image and its relationship to our intimate spaces. Bachelard looks at one moment within a poem, revealing images individually, rather than considering a work's overall poetic structure and rational relationships. Bachelard contends that the poetic "image comes before thought [...] Rather than being a phenomenology of the

mind, it is a phenomenology of the soul" (1994, xx). Poetry, for Bachelard, is not about the objective or rational; it must remain a subjective process.

Bachelard is interested in the experience of art, in the process of taking the spaces of a work not only into the mind but also into the physical sensations of the body. He is concerned with the ways words can ignite a reader to sense and imagine texture in space, and to more fully experience sensations. For him, "it is not a question of observing, but of experiencing being in its immediacy" (234). He writes of the kinaesthetic aspects of space, and points to the ways it is alive and changing. He quotes the poet Rilke, who viewed a lived-in house as "not really motionless it integrates, it always possesses kinaesthetic features." It is not just "a building, but quite dissolved and distributed inside me ... the whole thing is scattered about inside me" (57). Bachelard is interested in the qualities and character of these images of space, for his work is not solely about language, but about the ways poetry can evoke a physical and material sensation: the smell of wood of an old chest of drawers, the sense of light as one remembers one's mother's attic, the feelings of comfort as one sinks into a familiar chair. Bachelard perceives space as a living and breathing entity, and his concepts are particularly applicable to dance as they suggest ways of seeing, as well as creating, choreographic space.

Bachelard also points to the ways space can contain our past. He states, "inhabited space goes beyond and transcends geometric space" (1994, 43); it is filled with our memories, which "are motionless and the more securely they are fixed in space the sounder they are" (9). Our thoughts of the past are held in space, the sites of our lives, for memory doesn't record duration; Bachelard writes that "we can only think of (the past) in the line of an abstract time that is deprived of all thickness" (9). In our minds we "cover the universe with drawings we have lived. These drawings need not be exact. They need only be tonalized on the mode of our inner space" (12). Bachelard proposes that memories must

be re-imagined through our imaginations. Stating that, "we have microfilms in our memory which can be read only by the living light of imagination" (161), he went on to write of the ways memory changes, for poetic images elaborate on lived memories eventually displacing lived memories, and become memories of the imagination".[14]

Similarly to Sheets-Johnstone and Langer, Bachelard contends that images of everyday space are not simply reproduced in art, they are transformed and reformed through an act of the imagination. We gain understanding of our world through our experience of it, yet it is through the depths of our imaginations that we transform these images and experiences and are able to find their significance. Bachelard does not study the literal architecture of space, the geometry of its lines, arcs, and intimate spaces; his images are not bound by concrete reality. For Bachelard the poetic image is not fixed but resonates and transforms that which is around it.

Bachelard suggests that in art, we invite the viewer's imagination to enter the spaces of a work. A poetic image cannot be static; it must have elasticity, for the creator of a poem does not set the threshold of the reader's dream. He states, "all we communicate to others is an orientation towards what is secret without ever being able to tell the secret objectively" (1994, 13). For Bachelard, the creator of art does not prescribe the way we must see and interpret the work; rather the artist gives the reader an impetus to set them on their own reveries of space. Bachelard argues that an observer must approach a work through their imagination; they cannot remain removed and analytical, for art's intrinsic nature cannot be appreciated solely through a critical eye.

Art communicates through what Bachelard calls its trans-subjectivity, moving between the creator and the observer, from one imagination to the next.

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[14] In later sections of this document I discuss the ways I have used space in my choreography to convey aspects of memory and times past. For a further discussion of Bachelard's concepts concerning the imagination see "Gaston Bachelard's Philosophy of Imagination: An Introduction" (Kaplan, 1972).

The reader of a poem or the viewer of a dance does not need the creator's memories but one's own, for in reading a work of art one thinks of aspects of one's own life, entering into a work with one's intimate thoughts. We, thus, "produce in ourselves a reading pride that will give us the illusion of participating in the work of the author and in the act of creation" (Bachelard 1994, 21). I agree with Bachelard and find that in dance the works which are the most challenging and stimulating for me are those which allow the viewer to imaginatively move through their literal as well as figurative spaces. Bachelard contends that an audience is part of the creative process "at the level of the poetic image, the duality of subject and object is iridescent, shimmering, unceasingly active in its inversions" (1994, xv).

For Bachelard, it is through the primal image that art is able to transfer from one person to the next, from creator to viewer. In "Gaston Bachelard's Philosophy of Imagination: An Introduction" Kaplan contends that Bachelard defined this primal image or archetype as an image all humankind shares, always simple and always understood (Kaplan 1972, 7). Rather than presenting the actual image of a particular house, the artist gives us an orientation which suggests certain qualities and states. These primal images reveal the depths of the psyche, in that they reveal the primitive and eternal. Yet even as Bachelard explores these cosmic and primitive images, he is still interested in their concreteness, their physicality, and specificity.

As he reflects on the relationship of our images of the house with our personal psychology, he illuminates the ways these spaces can resonate with power. These images touch memories of our own experiences of home and "get inside us [and] become part of our psychology." In exploring "the drama that attaches to the dwellings of man" (Bachelard 1994, 43), Bachelard likens the house to our psyche, and relates the cellar to our unconscious, the attic with the spiritual, and "the geometry of the small box and the psychology of secrecy" (82).

He contends that as the artist presents us with the image of the house, its primal image "will be the voice we all hear when we listen as far back as memory reaches, on the very limits of memory beyond memory perhaps, in the field of the immemorial" (13). In his 1977 article "Gaston Bachelard and the Phenomenology of the Reading Consciousness", Hans states that for Bachelard the image leads us towards certain qualities, and these qualities, not the individual image of a particular house, are what we react to in the same way (Hans, 318).

Bachelard writes, "all great images reveal a psychic state" (1994, 72), and we all respond to this psychic state in the same way. For example, we all experience images of our first (or primal house) in similar positive ways. We respond to its qualities, such as safety, security, etc. Although we experience these images subjectively we respond to their qualities in a way that Bachelard terms "trans-subjective." According to Hans (1977, 317-318) for Bachelard these images are shared and through art can be passed from one person to another. As I consider and analyse my dances these concepts have illuminated for me the ways choreographic space can acquire significance and the relationship between an artist's intention and the audience's perception

These ideas once again recall Rowe's observations of her patients' visual representation of their states of depression in images of imprisonment, and relate to my original questions for this project. Earlier, I asked whether particular kinds of spaces convey similar meanings, whether the image of a dancer in a small, tight space would convey the same kinds of meanings to us all. Bachelard contends that while there are 'prime' images which all of us share, the imagination is both a dynamic and creative force that works differently in each individual. These primal images are vital and changing (52). For Bachelard both the subjective and the trans-subjective exist within each of us. He argues that the unconscious cannot be controlled and that "the psychoanalyst cannot cling to the superficiality of metaphors or comparisons." As one analyses an image one must

not reduce or try to explain it. He proposes that one is awakened through the revelations of a poetic image, yet one must "go beyond all psychology and psychoanalysis" and its languages to allow an image to take root (xxiii-xxiv). For Bachelard, art is complex and gives us back our dreams.

Bachelard's subtle, discrete, and sensitive examination of poetic images and on the ways art communicates provide another layer as I reflect upon choreographic space. One must explore a dance's details together with the context of movement and its images, taking into account the work's subtleties and shadings, its treasure chest of possible explanations. The meanings of space in dance cannot be fixed or overly simplified. A dancer moving in a small, tight space does not always convey the corresponding sensations. In one dance, a small space can represent a place of safety, while in another dance it becomes a place of confinement and restriction. In two different dances, or even within the same dance, the same movement, such as an unfolding of a leg, will not signify the same idea. Movements are not always symbols, and their resonance and reverberations are not necessarily fixed because their correspondences with the world outside dance are too subtle and complex. The meanings of a dance are affected by many factors and choreographic space comes to mean much more than an objective and fixed reality. Bachelard's writings suggest that the creation and perception of the poetic image is multilayered. For him, as for Langer and Sheets-Johnstone, art changes reality and creates another realm which then becomes its own reality.

Bachelard is an astute reader, as he reveals insights and revelations of specific images. Yet, he does not take into account the ways these images relate to the wholeness of a work of art. In exploring choreographic space as well as any aspect of an art form, one must look beyond the isolated image to see how the structures and images refract, relate, and build upon one another. One cannot only see the spatial fragments and isolated images of the work, for one must view

a work in its wholeness. Furthermore, the historical and cultural past do not count for Bachelard. He states, "One must be receptive to the image at the moment it appears: if there is a philosophy of poetry, it must appear and reappear ... in the very ecstasy of the newness of the image" (1994, xv).

Taking into account cultural influences, and the psychological particularities of both the creator and viewer of a dance, are essential to an understanding of a work. As we view an image, it is also important to examine it within the context of the entire work as well as its culture and historical past. The primal images that are the foundation of much of Bachelard's work, which reside within the subjective realm, do not allow for a full enough connection to other aspects of the world. Bachelard's reflections can become limited in that they do not extend towards the full horizons of a work. Although Bachelard probes what he characterises as primal images, images which are basic in each of us, his work comes out of a specific historic and cultural framework, and he takes only Western ideas of a house into account. For him, the house is imagined as a vertical structure, polarised by the space between the cellar and attic. He casts the cellar as the dark entity of the house and the attic as where the rational prevails and fears effaced (Bachelard 1994, 17- 18).

Such images do not have these same meanings in cultures with other kinds of dwelling places. For example, the traditional Chinese courtyard house is a structure without a cellar or an attic, whose rooms open only into an interior space. In this manner, everything faces inward towards the centre, rather than outward towards the horizon. These environmental factors influence the poets, visual artists, and choreographers in those cultures to envision the spaces of their work differently from Western artists, reflecting both the commonalities and differences across cultures regarding our concepts of shelter and intimacy. While many Western houses do not have picture windows, it is considered a sought-after luxury in Western culture. In the traditional Chinese courtyard house, there

is no picture window looking out into the vast horizon. Painters and poets in Chinese cultures do not write in the same ways as Western artists might about the vast horizon before them. Echoing these ideas, traditional Chinese dance is different from Western dance in the ways it deals with the far reaches of space as well. Chinese dance movement tends to remain more on top of its centre, over the vertical axis. Its movements are initiated not from the periphery but from the centre of the body. Appreciating the differences, as well as similarities across cultures in conceptualising space, holds special relevance for me as a choreographer who has worked within a culture other than my own.

CHAPTER 3: Tuan's Pathways through Far Space

Focusing his explorations of space and place from a Western poetic and literary point of view, Bachelard's perceptions of the ways our shelters shape our thoughts, memories and dreams, spring from and exist within the culture he knows. In his book *Space and Place* (1977), Yi Fu Tuan considers the experience of space and place from multiple outlooks across cultures (70). While examining space in terms of its simple components, Tuan also views space and place as "images of complex and often ambivalent feelings"(7). He probes both the shared ways we perceive and experience space, and the manner in which different cultures attach meaning to and organise space. Both geographers and choreographers spend time involved in ideas about space and place, so that while not directly related to dance, Tuan's observations and reflections enrich choreographers' theoretical and practical explorations. He explores both the cultural variety as well as commonality of our experiences and perception of space and place. His work is especially valuable as I explore the ways our biology and culture factor into our perception of space in dance, and the affect of both our common spatial perceptions and our culture on the creation and reception of dance.

Tuan proposes that as children we are immediately influenced by cultural factors, yet the imperatives of our biology impose kinds of learning and understanding that are common to us all (Tuan 1977, 19). Our bodies are our central reference point as we perceive space. Knowing the world through all of our senses, we know space mainly by way of our sense of sight, but also through touch and kinaesthesia. These universal perceptions are the fabric of the ways we understand our world. Tuan points out that each of us understands space through the experience of stretching our arms and legs, sensing the length of our spine from head to tailbone; we locomote through space on our feet; we lie in a prone position. Dance, too, is understood through our lived body, for it is an

embodied art. We experience dance within our own kinaesthetic flow and feeling, and understand it via the expressive nature of our bodies (Fraleigh 1996, xiv). We know our world, as well as the art of dance, through our bodies and its movements, and it is by way of these commonalities that we can view dances made in Africa or India and respond to their humanness, and that audiences in South America or Malaysia can be enthralled and stimulated by choreographies of European or American artists and vice versa.

For Tuan, it is through these experiences of our bodies and other people that we organise space so that it serves our physical and social needs (Tuan 1977, 20-34). We sense front-back, right-left, up-down in relationship to our upright body position, and it is through our physical body we impose a scheme on space. When I go into the dance studio I am constantly dealing with the condition of my body and the possibilities of my arms, legs, torso and head and their relationship to the space around them. As an audience views a dance, they share a common understanding of the human body. We understand the feeling of standing upright, and how this standing position can take on a sense of assertiveness, while the prone position suggests a sense of submission. In almost all cultures, what is superior is associated with high level, as in physical height, and what is inferior is associated with low level (Tuan 1977, 37). A king sits on a throne high above the heads of his subjects, and he is perceived as powerful; a beggar falls to the floor in submission. Such perceptions come in part from our biological selves. The human body in space, with both its possibilities and restrictions, is the material of the dance. We understand distance in relation to our own selves. We often see the meaning of physical closeness as being emotionally intimate, and being physically far apart as emotional distance. How many duets of friendship or love have been choreographed with the dancers in close contact, or the outsider in a dance portrayed through their distance from a group of dancers? Through our human shape and posture our body also has a

front and back. Our eyes are in the front of our head, so we see what is before us and perceive front space as "illuminated" and back space as "dark" (Tuan 1977, 40). I have wondered what kinds of dances would be made if we had three eyes instead of two, or eight legs. Think of the possibility but also the confusions. In two of the works I created during this project, *Moving Space* (2004) and *Moving Spaces* (2005), I explored the body's relationship to its front and back space, through a simple upstage, down-stage pathway.

Although we share these physical commonalities, how our perceptions of space are understood, acted upon, and given significance varies and carries different sets of meanings in different cultures (Tuan, 58). The way we move through space in our daily lives as well as in our dancing space reflects who we are, our ideas and values, and how we know ourselves. Cynthia Novack explored the ways our movements' patterns and qualities can be connected to certain cultures and times. She notes that the way we walk, sit, and move are, in part, culturally constructed, stressing that the ways we move our bodies are a reflection of the mind and vice versa (Novack 1988, 103). Having lived and worked in Asia for many years, I was often struck by the differences in how Hong Kong Chinese and Americans walk. Hong Kong people seem to be able to move through very crowded spaces without ever touching one another, in an extremely upright and contained stance. Moving within a narrow pathway, never looking side to side, they seemed to remain enclosed within what Laban would term their own kinaespheres. Americans, in comparison, seem to inhabit space in a much less contained manner, using a looser gait and broader actions. On a visit to Taipei after having lived in Hong Kong for a long time, I was amazed at the loose and open gestures, the wilder, broader energy of the Taiwanese as they moved through their streets, their way of inhabiting space so different from that of the Hong Kong Chinese, a reflection of their very different political and cultural circumstances.

Tuan explores the effects of culture on our experience of space in terms of environmental factors. He states, "although space is a biological, social, psychological and spiritual need for all humans, space and spaciousness carry different sets of meaning in different cultures" (58). That is, the ways we use and perceive space in dance are deeply interwoven in aspects of culture and environment and embedded within it. These ideas were further clarified for me in a 1999 conversation with the Australian choreographer, Nanette Hassell. She noted that Australian contemporary dance and its dancers seem to use more space as they move, cutting through space with larger and more open movement then their New York counterparts. She felt that New York dancers and choreographers lived and worked in smaller, more crowded spaces, the view from their windows not as expansive, the vision of their world ending at the borders of New York City. In the dances created in the New York artist's loft, dancers move more over their own centre and around their body's axis, using more "near" space. Nanette and I agreed that Australian dance makers choreograph in what Laban would term as "far" space, their movements reaching out into space. Australians envision their less populated world with open spaces and plains, and their more spacious-seeming dances reflect their world-view.

The relationship of movement and culture are especially germane to this study, as much of the work I analyse for this project was influenced and produced during the time I lived in Hong Kong, in a culture other than my own. Deidre Sklar is another dance theorist who has written about the ways movement in space must be considered as embodying and reflecting cultural knowledge. In "Five Premises for a Culturally Sensitive Approach to Dance," she writes, "the way people move is more than biology, more than art, and more than entertainment. All movement must be considered as an embodiment of cultural knowledge, a kinaesthetic equivalent, that is not quite equivalent, to using the local language" (1991, 1). In his 2003 *The Geography of Thought,* the cultural

psychologist Richard Nisbett writes of the differences between Asians and Westerners in their perception, experience and use of the spaces of their worlds. He asserts that Eastern cultures are relatively interdependent in their thinking, while Western cultures cultivate independence of thought. In Eastern cultures, he proposes, issues are viewed in a holistic way; as a consequence, objects and people are seen within a context, and in terms of their relationships. Western cultures regard the spaces of their world in discrete units, viewing ideas and objects individually. Nisbett describes an experiment in which Japanese and Americans were asked to look at underwater scenes. In each, there was a bigger, more brightly coloured fish amongst smaller fish. Seeing the fish within its background, the Japanese focused on the total environment of these pictures, whereas the Americans focused on the bigger fish. They saw the world in terms of discrete objects. According to Nisbett's theories, Easterners perceive the spaces and objects of their world through a wide-angle lens. They view objects in relationship to their environment and see events in context and as interrelated. In contrast, Westerners, focus on an object and its properties, having a more narrow view (86-96).

Nisbett's concepts resonate for me as I think of the differences I observed in the use of space in my Hong Kong students' and colleagues' choreography. I was always amazed at the way my elementary dance composition students visualised their choreography in terms of the complete stage picture. They were able to take into account not only the spaces transcribed by the dancers' bodies but also the complete dancing area. They were better than my Western students and colleagues in being able to perceive both the foreground and background of the space. More than Western choreographers, they worked with visual images, approaching their choreography with an understanding of the importance of the total stage design, the relationship of the dancers to each other and the entire stage picture. These elements are evident in the extremely imagistic work of such

well-known Asian choreographers as Shen Wei and Lin Wei Min of Cloudgate Dance Theatre, yet I observed this understanding in even the most novice choreographers I worked with in Hong Kong. After having lived and worked in Asia, I have no doubt that Easterners and Westerners perceive and utilise space differently. In this study I examine the ways these cultural differences have affected my own choreographic processes. A complex interweaving of spatial, temporal, and effort factors contributes to the construction of significance in dance. Space is deeply bound up with ideas of time, for one can not conceive of space without time or vice versa. Tuan writes of the relationship of time and space, stating that we sense space because we move, and time because "as biological beings, we undergo recurrent phases of tension and ease. When we move we experience space and time simultaneously; space as the sphere of freedom from physical constraint and time as duration in which tension is followed by ease" (118). Dancers are trained to feel time through our sense of movement in space. In a choreography workshop I took part in, taught by Merce Cunningham in the 1970s, one of his classroom exercises involved moving in silence and stopping only when we felt one minute exactly had passed. Measuring time through the distance we moved in enabled us to sense within our bodies the deep connection of these two dimensions. Often, in watching a group of dancers moving together in a tight space, one is struck by the way time can seem to speed up, while spreading these dancers out across a large space can seem to make time slow down. Time can also give a sense of spaciousness. If one moves in a slow, languid manner, space can seem to open up, or moving quickly and jaggedly can seem to contract space and time.

Languages across cultures also reflect the deep connections of spatial and temporal concepts and are significant to understanding the ways we think about movement in space. In "The Metaphor Time as Space Across Languages", the linguist Gunter Radden has noted the powerful impact of spatial orientation on

our concepts of time, for time is often viewed in spatial terms. For example, we speak of a "point in time" or a "stretch of time" or a "life span" (2003, 236). Conceiving time in terms of space is not only reflected in our use of language. In this document I discuss the ways cognitive linguists explore our use of what is termed conceptual metaphors, as part of our conceptual structure of the world. We understand one experience in terms of another. In our lives as well as in our dances, we use spatial concepts to more deeply understand concepts of time (235).

Tuan explores the ways distance can imply time. Actions taking place further from the viewer can appear as if taking place in a more "distant" time, those closer to the viewer, more in the present. This concept is shared in many cultures. Tuan points to our childhood fairy tales, examining the phrase "long ago and far away," and the association of this phrase to a remote place with a remote past, where special magical things happen (Tuan 1977, 119). Choreographers often use distance to express ideas about time.[15]

Other aspects of the relationship of time and space are germane to understanding dance. Movement in space can be one-directional or circular. Tuan points out that the symbol for time can be an arrow, a circle or a pendulum, and in these symbols time and space merge. In thinking of an arrow, one can sense both direction and movement towards a goal. A goal is both a point in time and space (Tuan, 179). Tuan's observations illuminate the ways the use of horizontal movements which radiate towards various points of the dance space in that dance produce a strong sense of intention towards a future goal.

Aspects of the ways we perceive and experience the relationship of time and space are strongly connected to our cultural orientation. The concept of time moving like an arrow towards a goal is often associated with a Western mode of

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[15] Later in this document I discuss in detail the ways I use perceived associations between time and space in two of my works. In *Scenes from a Mirage* (1997), ideas about a distant time and a distant place, and in *Different Trains (1999),* ideas about direction and intention.

thought, while in Asia the vertical rather than the horizontal becomes a symbol of hope (Tuan 1977, 123-124). In addition, Tuan writes that for many cultures front space is seen as the future, back space as the past. The face commands respect, as can be seen in the Chinese term "saving face." Front space is associated with light while back space with darkness and the profane (40).

Cultures also envision the flow of time through space in varied ways. Drid Williams in *Anthropology and Human Movement* compares the manner in which "English" speakers (I assume she means Westerners) associate the future with the space in front of them, the past as behind them and the present as here or where their axis is. One moves forward towards the future. Williams quotes a Maasai warrior from Kenya, who believes the future comes towards him. He states, "Death comes to me. I stand. Time moves past, around, over and through me. I don't go into it" (Williams 2000, 15). These ideas contrast with our Western ego-centred notions of time's movement through space.

In *Moving Space* and *Moving Spaces,* two works I choreographed during the period I have been engaged in this research, I explore ideas of time and space flowing forward and backward through the dancers, as well as the dancers flowing forward and backward, on an upstage/downstage line, through space and time. It was as if the dancers were moving forward into the future and the future flowing forward and backward towards the dancers. The energies created by the intersections and collisions of these varied cultural notions of the constructions of time and space propelled these projects. Seeing space from other cultural perspectives opens possibilities in the process of creation and enables one to find new connections.

Place is another element which is significant to this exploration. Tuan views space as an abstract concept and place as a subjective and concrete one. Each requires the other in order to be defined. Space provides openness and freedom, as well as the possibility of threat, while place can provide security and stability,

as well as containment. Tuan states that if "we think of space as that which allows movement, then place is pause. Space becomes place over time as we know it better" (6). For him, "place exists in different scales" (149). At one end of the scale there is the familiar and intimate, at the other there is the whole world. Ideas concerning the relationship of space and place have had particular significance in my reflections, for many of the works I have considered in this study were created when I was far from my home "place." In further sections I will discuss the reverberations of my displacement on the spaces of the work I created.

In some of my works, such as *Scenes from a Mirage* (1997), I choreographed spaces which convey a concrete sense of place. In other works, such as *Moving Spaces*, space appears more abstract. As I analyse these dances I reflect on the different ways I constructed these qualities of abstractness and particularity. To experience a sense of place, in everyday life as well as in a work of art, one must feel its textures and tone. Tuan discusses aspects of capturing the quality and feelings which can be evoked by a particular place. He quotes Robert Pirsig, who wrote in *Zen and the Art of Motorcycle Maintenance* (1974), "The quality of the places of our worlds are what you see out of the corner of your eye ... and in the sensation of the almost frigid sunlight behind us" (in Tuan, 147). One of the challenges of creating dance is to find ways to carve out and convey the sensations and qualitative aspects of its spaces. For Tuan, "art makes images of feeling so that feeling is accessible to contemplation and thought" (148). He, like Bachelard, believes that the image of a place can be evoked through the imagination of artists and that "it is through the light of their art that we are privileged to savour experiences" (Tuan 148). Both Tuan and Bachelard maintain that we need the poetic image to comprehend the world and that it is through the imagination that we can then transform these images.

For Tuan, art conveys qualities and ideas that cannot easily be stated in ordinary language. This raises the question of whether dance has language of its own and if its spaces can be systematically decoded. In "The Truth about Apples and Oranges," the dance critic Marcia Siegel argues that dance is not a language and cannot be simply understood through a system of signs, or gestures. The structures, styles and systems in a dance, she states, "can overlap, alternate, and resonate off each other ... like a big symphonic piece of music" (1988, 24).

In reviewing dance theorist Susan Foster's *Reading Dancing* (1988), Siegel objects to her thesis that dances can be "read." She takes exception to Foster's attempt to use the structures of linguistic analysis to understand dance. Siegel states, "dance doesn't always mean something in a way that can be written as an equation" (24). Foster proposes that "meanings attach to parts of the space as to parts of the body" and create symbolic webs of meaning. She goes on to assert, "Upward motion is associated with the abstract, the pure, the heavenly, or the ideal, whereas movement occurring on the floor [...] evokes a more primal or earthly existence" (85). Siegel notes that the notion of dividing space and giving meanings to its different parts dates back to the teachings of Francois Delsarte (1811-1871). The translation of movement into these systems can be illuminating, and while Foster's and Delsarte's theories are intriguing as they attempt to decipher dance and its spaces, if held too firmly they can limit understanding of the ways dance signifies.[16] In analysing dance it is important to avoid

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[16] Delsarte created a system in the mid-1800s which could supposedly map the symbolic meanings of basic human movement patterns and pathways through space. He proposed universal rules of correspondence between inner experience and physical action, and described the symbolic nature of straight lines, curves, spirals, and angles and their relationship to human awareness. Laban studied and was influenced by Delsarte, and his theories concerning the affinity of certain movement pathways in space to certain energies and internal movement states appear particularly influenced by Delsarte's work. Early modern dancers, such as Duncan and St. Denis as well as second generation modern choreographers like Martha Graham and Doris Humphrey were also influenced by these concepts. In *The Art of Choreography* (1958), for example, Doris Humphrey proposes that certain parts of the stage and pathways in space mean in certain ways. Works like Humphrey's are proscriptive as they state the ways things should be done and lay out the rules of art. I am not working in this way.

reductiveness and to view a work within its cultural and aesthetic context. In perceiving and understanding choreographic space, it is crucial to consider the multitude of ways the real and the imagined spaces of a dance are thought of as well as thought out (Sklar 2001).

CHAPTER 4: Neuroscientists and Journeys Through Inner Space

In this chapter I look at the work of Ivar Hagendoorn and others who are exploring aspects of the ways the mind/brain perceives the world. Before discussing Hagendoorn's work I will open this section with a more general examination of cognition and space. One of the ways we think about movement in space is through the use of metaphor. We know dance through our senses of vision and motion, yet how do we think in these visual and kinaesthetic modes? How does the mind get hold of these aspects of the world? Thinking is not only reasoning. In his 1990 book, *The Body in the Mind,* cognitive linguist Mark Johnson reframes the process of thinking more broadly as the way humans understand their experience. For Johnson, it is through the imagination that one makes meaning, and is able to abstract from and structure our sensations, including our visual and kinaesthetic sensations. In another work, *Metaphors We Live By* (2003), Johnson together with George Lakoff, another cognitive linguist, proposes that our conceptual system is basically metaphorical (3).

Metaphors permit us to understand one kind of experience in terms of another (Lakoff and Johnson 2003, 235). They allow us to use what we know from our own previous experience to give us new ways of ordering and understanding experiences; some are biological and universal, some cultural and others personal. We all share certain spatial orientations: front, back, up, down, in and out; these cut across all cultures. Yet the manner in which these concepts are understood, and the importance they hold, varies from culture to culture. For Lakoff and Johnson, "which metaphors we have and what they mean depend on the nature of our bodies, our interactions in the physical environment, and our social and cultural practices" (2003, 247).

Metaphors are not merely a tool of language but part of all the dimensions of our experiences of the world, including sound, shape and movement, and are

at the very basis of how we understand the world. Lakoff and Johnson call this phenomenon "conceptual metaphor." Conceptual metaphors allow ideas from space and objects to be "used to draw inferences about other domains, e.g., subjective judgements like intimacy, emotions, justice and so on" (2003, 244). It is not possible to think of ourselves or others without the use of metaphor, for we use it to understand our experiences and relationship to the world.

Works of art recombine, juxtapose, and overlap familiar metaphors. According to Lakoff and Johnson, through their use of metaphor, works of art can "provide, new ways of perceiving the world [and] creating new realities" (2003, 236). Our visual system and our ideas about space form a strong basis for the ways we understand the world. The abstract ways we think about and grasp the world have to do with conceiving it as a space filled with moveable objects. We think of moving from being sick to being well, of giving someone advice. According to the cognitive linguist Steven Pinker, scientists make spatial graphs in order to understand abstract mathematical concepts (1999, 191). Space and movement, along with time, are the basic components of dance. The closeness of dance's form to those of our thought processes is one of the keys to dance's power to reverberate within us.

These ideas are apparent in the works of choreographers as they use simple spatial metaphors, developing and interweaving them to create more complex metaphors and images which allow us to see space in new ways. Even after thirty years, the image of Merce Cunningham fighting his way out of a paper bag at the end of his dance *Place* (1966) affects me deeply. His stabbing motions as he punched at this paper bag conveyed a vast array of emotions and ideas. In the cool, precise work of the minimalist choreographer Lucinda Childs, such as *Calico Mingling* (1973), I remember, dancers moving in unison, and their sudden change in facing conveying a whole new world of images and feelings. Their simple shift of focus opened a landscape of new ideas, as if the world had

cracked open. Seeing a single dancer suddenly fall as the rest of the corps of dancers run offstage in Balanchine's *Serenade* (1934) can resonate far beyond the reality of the stage. In these works, ideas about space, such as change in level, facing, or placement on the stage can evoke such notions as loss, loneliness, or mortality.

In writing this thesis, I use the metaphor of looking through the lens of a kaleidoscope, as its designs have the possibility of moving in multiple directions and opening, changing, shifting, and closing its focus. These spiralling kaleidoscopic images seem appropriate metaphors for my research as I explore the concepts of scholars and their relationship to my own choreographic practice. As the sections of this study interweave and reflect off one another, their shifting patterns deepen and enrich an understanding of space and its meanings.

The theories which Lakoff and Johnson developed within the field of cognitive linguistics refract in and around the ideas of the other theorists I have explored. Lakoff and Johnson propose that in art, conceptual metaphors are used to create new patterns of inferences from one kind of idea, such as time, to another,such as space. Tuan points out that many cultures associate a remote place with a remote past; Lakoff and Johnson, cognitive linguists, examine this through the lens of conceptual metaphor. They propose that metaphors are grounded in the experience of our bodies and arise across cultures and languages from the physiology of these feelings, writing that deep analysis of metaphors has revealed dozens of metaphors that arise across cultures (2003, 249). Not only do these concepts overlap with Tuan's but throw light on Laban and Delsarte's ideas of spatial affinities and on Bachelard's beliefs about metaphorical imagination and perception.

Other avenues of thought have enriched this kaleidoscope of ideas as well. In this section, I review different concepts and sources related to the perception and cognition of space. The science of the particular era we live in shapes the ways

we view the world, and how we perceive and create art. New advances in neuroscience, the study of the way the brain thinks, offer valuable insights that illuminate theories concerning conceptual metaphor and the ways we comprehend the spaces of our world. Lakoff and Johnson consider metaphorical maps part of the way the brain thinks; for them metaphorical thought lies at the heart of abstraction and symbolic expression (256- 257). In *How the Mind Works,* Steven Pinker writes, "models of space and force don't act like figures of speech--intended to convey new insights, they seem closer to the medium of thought itself" (1999, 356). Pinker proposes that those metaphors concerning space and energy, are not literary metaphors, but are more about the ways we actually comprehend the world, for the mind uses concrete terms to understand abstract concepts. Appreciating how the brain perceives and processes is significant to understanding our thinking in and about movement and space. The ways we look at, are attentive to, and grasp the world affect the ways we understand dance and vice versa.

In this study on space in dance, I am not interested in focusing on the mechanisms of brain functions, its anatomy and physiology. My goal in investigating these processes is to understand the thought processes, memories, and emotions one may experience in the creation and perception of choreographic space. In cognitive neuroscience, a field which intersects psychology and neurology, scholars study the neural mechanisms by which we perceive, attempting to understand aspects of human behaviour through the activities of the brain (Kandel, Schwartz and Jessell 2000, 16-17). With the development of magnetic resonance imaging and later functional brain scanners, scientists are now able to measure brain activity, giving them a window into the brain's processes. Scientists are using evidence from these recent advances and their clinical work with patients, to explore the relationship between the mind and the brain.

At present, the field of cognitive neuroscience is blossoming. New books and articles are flourishing, and seminars and conferences about the brain occur with increasing frequency.[17] Throughout history theories and world views about the ways we experience and perceive the world fall in and out of favour. Freud's theories of the ego, the id, and the super ego, which dominated ideas about human behaviour during the middle of the last century, have become less favoured. We currently appear to be in a time where brain studies have taken on a much more significant role; we are in what is called "the century of the brain." [18]

In *Proust was a Neuroscientist,* science writer Jonah Lehrer contends that artists actually anticipated many of the recent discoveries in neuroscience. For Lehrer, "their imaginations foretold the future" (2007, ix). He writes of artists who worked in the early part of the 20th century, such as Gertrude Stein, Paul Cezanne, Virginia Wolff, and Igor Stravinsky, proposing that in their investigations of the human experience they were explorers of the mind and its processes. Each was influenced by the science of their time: Gertrude Stein by William James's psychology, Wolff by the biology of mental illness. As they tried to find answers to their questions about life, they explored not only the scientific and cultural theorists of their day but also their own experiences, and many of their intuitions are confirmed by recent discoveries in neuroscience (Lehrer, xi).

The artists Lehrer writes of were in a continuous process of inquiry through their creative practices. Pablo Picasso, for example, considered himself a researcher. He stated, "I never do a painting as a work of art. All of them are researches. I search incessantly ..." (in Ashton, 1988, 72). Art, like science, can

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[17] According to the listings on the Barnes and Noble website, from October 2008 to November 2009 there have been 149 books published about the brain and cognition. http://search.barnesandnoble.com/booksearch/results.asp (accessed 29 November, 2009).

[18] The 1990s were declared the "decade of the brain" by the U.S. President for the various achievements in research of the brain. In March 2000 there was a Brain Awareness Week, in which there were global celebrations of neuroscience. The European Dana Brain Alliance, among others, has dubbed the 21st century the century of the brain See http://www.dana.org/brain.aspx,(Blakemore 2000).

be understood as part of an exploration which attempts to observe, research and evaluate the world. Both artists and cognitive scientists are interested in exploring the ways the brain forms abstractions and synthesises ideas. Semir Zeki is a prominent neurobiologist and neuroaesthetian at University College London, who studies the visual brain. He proposes that "art abstracts and externalises the inner workings of the brain. ... it is a reflection of the function of the brain" (Zeki 2001). His work has led him to believe that artists are like neuroscientists in their appreciation of the ways the human brain looks at the world. He argues that artists try to find a visual language for those concepts. Zeki quotes a statement by Picasso which he feels anticipates the processes of recent neural imaging techniques: "it would be very interesting to preserve photographically ... the metamorphosis of a picture. Possibly one might then discover the path followed by the brain in materialising a dream" (in Zeki 2001, 52). New techniques, such as functional magnetic resonance, confirm Picasso's prediction as they have allowed scientists to see into the ways the brain perceives the spaces of our world and how certain artists have anticipated these recent discoveries of neuroscience. For example, in his abstract paintings the Post-Impressionist French painter Paul Cezanne can be seen as revealing the ways we actually visualise the world. In the blank spaces of his canvas and incompleteness of his images, Cezanne presents a metaphor for the process of sight (Lehrer 2007, 96-119). Neuroscientists have found that Cezanne's seemingly abstract paintings truly echo our actual way of seeing.

Ivar Hagendoorn, a Dutch choreographer and art theorist, investigates how our neural systems affect the ways we perceive and conceive movement in space. In bringing together an analysis of the experience of dance with recent findings about the brain's functions, his writings open a window into cutting edge explorations in the developing field of neuroaesthetics, which studies the neural basis for creativity. In researching the role our neural processes play in the ways

we respond to and create dance, he contends that to understand what fascinates and moves us when we watch dance, we must examine the brain's processes. For Hagendoorn, "the feelings we experience when watching dance are the product of a myriad of sensory, cognitive and emotional brain processes" (2004,104). These feelings result from brain processes involved in sensory stimulus, as well as the interaction of our expectations, associations, and personal preferences, as they are mapped out in the brain. Hagendoorn's writings address an array of recent investigations in the field of neuroscience and neuroaesthetics and the ways these explorations connect to choreographic space and how movement takes on meaning.

In "Dance, Perception and the Brain" (2005), Hagendoorn proposes that in terms of sensory processing, there is no difference between an audience viewing a completed work and a choreographer viewing his work in progress. The audience's experience in watching is pre-planned in part by the choreographer, and inversely reflect functions of the creator's original neural processes. For Hagendoorn, the choreographer and dancers attempt to arouse within the spectator a similar mindset to the one they were in when creating the work. The neuroscientist Daniel Levitin also discusses this issue in *This is Your Brain on Music* (2006). The concept can be argued, yet it stimulates interesting ideas concerning the ways the creator can manipulate the viewer's perceptions.

Our ability to perceive movement and spatial orientation, which arises within the body through our kinaesthetic sense, our ability to be aware of the sensations of others as we watch them move, has long been acknowledged. When I was a dance student at the University of Wisconsin in the 1960's, my teachers Louise Kloepper and Margaret H'Doubler often spoke of our kinaesthetic responses to movement. At that time they proposed that the sensations which arise as one is watching someone else dance allow us to learn to dance ourselves. Their concepts, based on experiential knowledge, have been

borne out by recent neural imaging studies. Theorists and teachers in other fields have also observed this phenomenon. Art historian David Freedberg, speaking of the ways we respond to art, has made note of this ability to feel movement in one's bones both when one does the movement and when one watches it, or even views a picture of that movement (Freedberg 2006). These connections between the mind, the brain, and the body are what the dancer and philosopher Sandra Horton Fraleigh refers to when she writes, from the perspective of phenomenology, that "the imagination must move into the dance and roll, tumble, turn, and careen with it [for it is] through the body's remembered experience we are able to move into a dance, to feel it within our muscle memory, our wholeness of consciousness" (1996, 182-183).

These kinaesthetic responses play a part in what makes us intuitively understand where movement "should" go in space, and where it "wants" to go in space. This is an aspect of what happens when a choreographer senses where a movement should happen within a dance, or when a dancer senses where a movement phrase "feels like it should go." In addition, as we observe paintings or photographs of a moving figure, such as a dancer at the height of a leap, we use our kinaesthetic memory sense to understand these images; we link the visual world with our kinaesthetic sense. Hagendoorn contends "that watching dance submerges the brain in motor imagery" (2004). We sense the feeling of moving without moving, according to Hagendoorn; when viewing dance, one is virtually dancing as well. In *Musicophilia* (2007), the neurologist Oliver Sacks quotes Nietzsche: "We listen to music with our muscles" (xi). We can also say that we see dance through our muscles. Sacks argues that a person's propensity towards music goes back to the beginnings of the species. He states:

> The propensity to music ... is a given in human nature. It may be developed or shaped by the cultures we live in, by the circumstances of life, or by the particular gifts or

> weaknesses we have as individuals--but it lies so deep in human nature that one must think of it as innate. (x)

The same can be said of our sense of dance. Where one feels a movement phrase should go in space is influenced by the ways of moving we become accustomed to through our society, traditions, and experiences of choreography. Yet these impulses are also affected by our kinaesthetic and neural systems. These tendencies, both innate and culturally acquired, become part of who we are both physically and mentally, and part of the way our brain works. These ideas formulated through observation and intuition were further clarified through a chance discovery.

Mirror Neurons

In the late 1980s and 1990s, neuroscientists became aware of systems of neurons in the brain which appear to be partly responsible for the phenomenon of sensing the movement of others within our own muscles. Researchers led by Giacomo Rizzolatti, a neuroscientist at the University of Parma, discovered a group of cells in monkeys that fire when they see or hear a subject do an action, as well as when they do that same action.[19] These mirror neurons, as they are called, fire when an action is performed and perceived. Humans turned out to have this same ability in a much more evolved and sophisticated way (Blakeslee 2006). These mirror neurons act as a neural bridge between actions and perception and give rise to a sense of physically moving along with the person one is watching. Hagendoorn quotes neuroscientist Marc Jeannerod, who states, "motor images are experienced from within as the result of a first person process where the self feels like an actor rather than a spectator" (Hagendoorn 2004, 88). Further studies demonstrate that motor neural systems are active even when we imagine and remember movement. Scientists theorise that these systems allow

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[19] See Ramachandran's "Mirror Neurons and Imitation Learning as the Driving Force Behind 'the Great Leap Forward' in Human Evolution" (2000), for a discussion of Rizzolatti discoveries.

one to read the intentions of someone else's actions, almost as if reading someone else's mind (Ramachandran 2000, Gallese and Goldman 1998, Frith 2007)

Anticipation/Prediction:

According to perception psychologists, we perceive the world through a process of inference, involving an analysis of what possibly might happen (Levitin 2007, 101). Within our neural process system there is a delay between our seeing an action and our perception of that action. The brain, therefore, predicts the movement's pathway and dynamics. Our motion perception is predictive, filling in the blanks between movements. Elements of anticipation and prediction are particularly evident in ball sports. Jeannerod (1994) notes that sports fans watching a football game mentally perform the appropriate action to catch the ball and will express frustration when the ball is missed by the player. The vividness of the imagined action can induce in the watchers changes in heart and respiration rates related to the degree of their mental effort (Hagendoorn 2004, 88).[20] Hagendoorn, acknowledging the strong feelings we have watching movement, asserts that when the brain makes predictions of a motion's trajectory and the motion corresponds, it is seen as positive, while if it deviates, it appears negative.

In experiments with music and the ways it engages areas of the brain associated with predictions, scientists have begun to better understand how the brain makes sense of the flow of information it receives from the world. Hagendoorn states that "the idea that the elicitation, undermining and fulfilment of expectations underlie our response to dynamic stimuli is well established in music

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[20] These findings will also be discussed in Part 2 in relationship to my choreography. I will note in *Being There*, one of the dances I choreographed and reflect on, the dancers move with tennis balls. As a result of ways the balls, the dancers and the environment interact, the viewer tries to predict the outcome of the motion, anticipating where the actions of the dance will next go. I choreographed this work before I began my research for this study and was surprised to find these scientific studies which explored those areas I had intuitively approached.

theory" (2004, 99). We can assume similar findings in dance, as well as in other art forms that unfold through time. As far back as 1956 Leonard B. Meyer, a musicologist, wrote the pioneering work *Emotion and Meaning in Music,* which connected music theory, psychology, and neuroscience. In Meyer's obituary in the *New York Times*, Kathryn Shattuck wrote that his work explored the relationships between musical patterns and its emotional responses, in particular, those in which a listener's expectation is delayed or shifted and resolves in an unexpected manner. Meyer also explored the relationship between game theory and music, and how the value of a work is related to how well its complexity engages the listener. He found that works in which the audience's every expectation were met were found to be ultimately unsatisfying. So, too, were works in which no expectations were met (Shattuck 2008, B7). Scientists continue to explore these ideas through the use of functional neuroimaging studies concerning anticipation and its relationship to musical appreciation. In *This is Your Brain on Music* (2006), neuroscientist and musician Daniel Levitin cites his own experiments as well as those of others, such as Aniruddh Patel (2008), who are also exploring the connections between the human brain and music. Levitin argues that "the setting up and then manipulating of expectations is the heart of music" (112).[21]

In watching dance as well as listening to music, there is a constant play between the fulfilment of our expectations and the disruptions of those expectations. According to Hagendoorn, without the interplay of these two

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[21] Levitin cites his experiments at the Laboratory for Musical Perception, Cognition and Expertise at McGill University. He writes of how the brain sets up schemas based on musical styles, genres, rhythms, phrase; and typical note progressions. He contends that the music we are interested in plays with our expectations of those schemas in our mind. Levitin also examines the ways our perceptions of melody as well as chord progression and structure are used by composers to play with our expectations (2006, 118). He also cites work done in the area of auditory perception in individuals with Williams syndrome, a rare neurodevelopmental disorder. In *Musicophilia: Tales of Music and the Brain,* the neurologist Oliver Sacks also relates recent studies of those with Williams syndrome as well as other brain disorders and considers what these reveal about the ways we respond to music (2007).

elements the brain will lose interest, and a work will become too predictable. If too erratic, the viewer will have no positive enforcement and will be unable to focus his attention (2004, 98). In a dance performance, a ballerina completes her 32 fouettés, or a group of dancers slide together across stage into a final repose, and there might be a common sigh of relief, an 'ahhh' from the audience as the motion resolves according to expectation. Yet dance can also go against or destabilise our perceptions, disturbing our perceptual systems, our ideas of space, time and energy, pushing a viewer to the edge of where he thinks dance could and should go. Hagendoorn argues that as we watch dance we are constantly trying to understand the unfolding of a movement sequence. This produces an increase in attention which gives us a feeling of intense awareness (2004, 100).

Biological Motion:

Another element that affects the way we perceive the body's movement in space is our brain's special ability to recognise the visual motion patterns of other humans and animals in everyday life (Hagendoorn 2004, 88). We are motivated to find ways to deal with motion. It is part of our hardwiring. There is an evolutionary advantage to predicting motion; it helps us understand how the world works. As we view a work of art, we are engaged in what V.S. Ramachandran, director of the Center for Brain and Cognition at the University of California, San Diego, calls perceptual problem solving (2004). In the evolution of the human brain it was beneficial and often life-saving to be able to identify objects within one's environment, such as a forest. The brain groups like elements within the environment in order to reduce camouflage (i.e., so as not to be eaten by the tiger lurking behind the bushes). As one views a scene, whether in one's life or in a work of art, the senses begin to find partial solutions to what is going on, looking for patterns and regularities in the spaces of that

environment. At each stage of the process, the brain finds partial solutions to the perceptual problem, trying to figure out the scene and make sense of it.

In watching dance, as we see a figure moving half-hidden behind other dancers, our brain fills in the gaps we cannot see in order to understand that figure's motion. As we view a work we use our past experiences and sense of where movement can go to understand and predict motion in space. As we move we also use these concepts to understand the ways we learn and choreograph a dance phrase. We combine evidence from our different senses as we move through space doing this phrase. From our eyes we know where we are in space, how far from the wall, how close to another dancer; from our sense of touch we sense the way our foot hits the floor; we feel the motion of our arms as they swing forward; from our ears we might hear the rhythm of the music and feel its beat. We use our prior knowledge to understand whether we are doing the movement in the desired way.

In the 1970s, Gunnar Johansson developed a technique in which an actor was filmed with small light bulbs attached to his joints. It was found that people could identify the actions these actors performed (such as climbing stairs or hammering) and in subsequent studies identify acquaintances as well as themselves from these point light displays (T. Beardworth and T. Bukner 1981, 19-22). Hagendoorn cites these plus other recent experiments which suggest that through our visual system we are even able to extract information about the intentions, and biological attributes, such as gender, personality traits and even emotional states from simple movements (2004, 88).[22]

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[22] Hagendoorn refers to the work of J. Pinto, M. Shiffrar, (1999) who experimented with recognition of states through use of point light displays. See 'Subconfigurations of the human form in the perception of biological motion displays", Acta Psychologica 102, 293–318.) Another researcher into visual perception and cognition, Nikoluas Troje, of the Bio Motion lab at Queen's University in Ontario, uses a Motion Capture system with reflective markers placed on the body to explore how biological motion contains information which allows us to recognize intentions and personality attributes and gender and even a certain percentage of emotions. See a demonstration of this work at www.biomotionlab.ca/demos.php.

These theories, together with other recent studies of visual perception and recognition, suggest that we can understand and recognise movement's meaning with little information, and we are able to recognise the meaning of those actions. These findings concerning mirror neuron systems, visual perception, and cognition, although still at an early stage, suggest possible aspects of the ways we perceive meaning in our motion through space, and some of the ways we perceive feeling and concepts in dance.

As I noted earlier, mirror neural systems become active both when a movement is perceived as well as performed. When we move, characteristic patterns of activity are activated in the motor area of the brain. When we watch someone do an action, our corresponding mirror neurons fire and allow us to understand their intentions and perhaps even the meanings of their behaviour and emotions (Ramachandran 2000, Blakemore and Decety 2001). We mentally imitate what we see someone else doing and use this information to discover something in the mind of the person we are viewing, in the case of a choreographed performance, into the mind of the creator. These mirror neuron systems can give us clues to how and why we are able to empathetically understand other peoples' actions.[23]

Semir Zeki further expands on these issues. He contends that while we share common brain structures, variability is one of the chief factors in determining our evolution as a species (2001). The brain is the most variable and fastest evolving of our physical structures; it is this variability, according to Zeki, that enriches cultures and allows society to change. Innovative ways of thinking provide new inventions, and creative problem solving allows us to find new ways

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[23] Many experiments have explored the regions in the brain involved in reading the minds of others. In *Making Up the Mind,* Chris Firth writes about Julie Grezes, who developed studies which scanned the brain's of people as they viewed videos of others in action. She found which parts of the brain become activated as the viewers tried to read the hidden intentions of the actors, actually developing a method for studying aspects of mind reading (2007,180). One can only imagine the activation of parts of the brain as one watches a dance concert, trying to read the mind of the dancers and the choreographer.

to deal with the world. For Zeki, art is a reflection of these possible variabilities within the structure and functioning of the cerebral cortex. He argues, however, that it is our common neurobiological structures which allow us to communicate about and through art. He states, "'no theory of aesthetics is likely to be complete, let alone profound, unless it is based on an understanding of the workings of the brain" (1998, 99). Yet there is a reluctance to associate our aesthetic feelings with the electrical impulses that move through our nerve fibres. Zeki acknowledges that "hard experiments in neurology cannot be applied to the problem of aesthetics, at least not at the present time" (1999, 217). He examines the process of looking at art through the workings of the brain, yet he contends that one can say little about why one viewer prefers one work over another, why one artist works in a certain style or what is the power of certain works to affect or disturb us. Zeki also notes that different modes of painting (and this may apply to different styles of dancing as well) use different areas and pathways in the brain. He argues, however, that explorations of the functionings of our brains as we perceive and conceive different forms of art further enrich our appreciation of both art as well as the structures of our brain. (Zeki 1999, 217).

Fifty years ago C.P. Snow pointed out the "mutual incomprehension" between art and science. He stated that "their attitudes are so different they can't find much common ground" (in Lehrer 2007, 190). Science seeks out the universal principles that govern the world while art explores that which is individual and original. In more recent times the neuroscientists Ramachandran and William Hirstein prompted a lively debate on the subject between art and science. In their article "The Science of Art" (1999), they audaciously present universal principles which they suggest cut across cultural boundaries and may be considered common underlying themes in all styles of art. Their proposals can be debated and appear reductive; however, they can be illuminating and thought

provoking in considering the spatial choices I and other choreographers make in our work and the kinds of responses elicited by those choices.[24]

Ramachandran and Hirstein are not denying the role of culture in the creation and appreciation of a work of art. However, they suggest that while a large percentage of the variance in art may be attributed to cultural diversity, they are interested in the perhaps 10% that is universal, that which is common to all brains. In their original paper (1999) they presented eight principles, which Ramachandran extended further in 2001: peak shift, grouping, contrast, isolation, perceptual problem solving, symmetry, abhorrence of coincidence/generic viewpoint, repetition, rhythm, and orderliness, balance, metaphor. Ramachandran does not speak of how these principles would be applied, in what combinations, or argue that all are applied equally to every work, but they propose that these appear in works of art across cultures and time (2004, 40-41).

One of Ramachandran's chief principles is the peak shift effect. Ramachandran contends that artists accentuate certain traits as essential. Hagendoorn, on the other hand, considers that artists emphasise some features of a work, which they believe are important to the ideas they want to express. Whether they are essential or not isn't the point. Rather it is that they become essential within that particular work. He suggests that art is about leaving out, and abstracting, and emphasising what remains (2004, 102). In reflecting upon the ways space acquires meaning in dance, one must recognise the ways a particular dance emphasises and/or isolates certain elements of space, while other elements become less significant. In certain of his works, Merce Cunningham emphasises the sense of shape and line of the dancer's body, de-

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[24] In 'The Neurological Basis of Artistic Universals', Ramachandran wrote, "Science and art seem like such fundamentally antithetical pursuits; one is a quest for general principles whereas the other is a celebration of human individuality — so that the very notion of a 'science of art' seems like an oxymoron" (2001). He goes on to propose, however, that with our more sophisticated knowledge of the brain and its processes we can begin to speculate on the ways our ideas about art are based on the workings of brains systems and structures.

emphasising concepts of momentum and flow through space. George Balanchine emphasised the relationship between movement and music in his dances. He created patterns through space which acted as musical visualisations, and often consciously left out aspects of narrative story line in order to illuminate his concerns.

In "Art and Reductionism," the physicist Erich Harth discusses some of the criticisms of Ramachandran's "laws of artistic experience" (2004). Harth contends that "the human brain is shaped not just by the bottom-up influences of our genes, but also by a wealth of top-down effects of past experiences, including what we generally refer to as culture" (114).[25] Ramachandran's and Hirstein's approach, as they try to find the causes of "artistic rules" in our neural systems, seem to ignore the complexities imposed by culture. For Harth, their principles do not offer "significant insight and invite the common criticism of what is sometimes called a 'reductionist approach'" (115). While knowledge of our brain functions is not irrelevant to our appreciation of artistic processes, it is also not the sole means of our understanding art.

Harth suggests that Ramachandran, Zeki and other neuroscientists overemphasise the brain's functions in understanding art. In *Inner Vision*: *An Exploration of Art and the Brain*, Zeki, however, more fully explains his concept of the brain's role within the artistic process.

> At an elementary level what happens in the brain of one individual when looking at one work of art is very similar to what happens in the brain of another, which is why we can communicate about art and ... through art without recourse to spoken or the written word. (1999, 218).

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[25] In discussions on the brain's role in aesthetic experience, there are often questions about the role of the top-down effects of culture as well of the bottom up effect of the senses. For further discussion of the role of free will in the brain and our sense of ourselves as free agents see Frith (2007, 184 - 193).

In *The Art Instinct: Beauty, Pleasure, and Human Evolution* (2009), the philosopher of art, Dennis Dutton explores ideas concerning our commonalities and more specifically focusing on the universal basis of art. He proposes that our tastes are not only cultivated by culture but also by natural selection. He questions the view that art appreciation is culturally learned, and contends that art appreciation stems first from evolutionary adaptions. Some of his research is intriguing, as he points out that in experiments across cultures, people like blue best, and people prefer art works depicting landscapes with hilly areas containing water as well as a pathway. These are the savannahs we evolved from and those escape routes are important as part of our survival. Dutton argues that we descend from people who took those roads and their preferences persist in our minds. Looking at dance, then, our responses to certain uses of space are perhaps partially determined by evolutionary factors. Do we thrill to the sight of a group of dancers moving as a flock on a diagonal across the stage because it revives in us some deep memory of our ancestor's flight through the plains or the power and necessity of the group? Do we experience excitement as we watch a dancer cut quickly through a mass of other dancers because it reaches into an ancestral past in which we darted through the forest for survival? While Dutton concedes that while artists work in different styles and that this is conditioned by culture, for him, it is between our genes and our biology that we can understand art.

In discussions concerning the relationship of the mind, the brain and dance, my colleagues express a scepticism in accepting these neuroaestheticians' concepts and biological approaches to art. Like Harth, they seem concerned that these ideas appear simplistic, negating the possibility for free will and aesthetic choice. These scientists are not denying the enormous role of culture in art.[26] For

[26] For further discussion see Ramachandran's, "The Artful Brain" in *A Brief Tour of Human Consciousness* (2004).

them and for myself knowledge of the brain can only enrich our appreciation of the varied ways each of us may conceive as well as perceive space in dance.

Many of the researchers exploring the brain and the arts address these concerns. Zeki, for example, recognises that we cannot reduce the processes of the creation and appreciation of art to a formula. He states that "hard experiments in neurology cannot be applied to the problem of aesthetics .. at least not at the present time" (1999, 217). We cannot always say why one viewer prefers one work of art over another or one artist works in a particular style. For Zeki, however, "knowledge of the brain's operation and its products (i.e. art) enhances the sense of wonder and beauty, because we not only admire the (art) but also the organ (the brain) that produced it" (1999, 218). Hagendoorn also acknowledges that each person's individual experience of a dance performance is the product not just of perceptual processes, but also of their interaction with memories, associations, and personal preferences. He states, "experiences, tastes, and preferences may change over time. But then again, these memories and preferences are also laid down in the brain. Their content may change over time or differ among individuals, but the brain processes that connect them are the same" (Hagendoorn 2003).

The implications of these new discoveries into the workings of the brain and their relationship to the ways we respond to viewing motion in space, and dance in particular, are not yet fully understood. In their paper, "Motion, Emotion and Empathy in Esthetic Experience," Freedberg and Gallese propose that the ways we respond to art encompasses a simulation of the actions, emotions and bodily sensations we perceive within the work, and that these processes are universal (2007). This basic level is fundamental to our understanding of both everyday images and works of art. Historical, cultural and other contextual factors "do not preclude the importance of considering the neural processes that arise in the empathetic understanding of visual artworks" (Freedberg and Gallese 2007, 197).

This point of view, of course, extends to our understanding of choreographic space as well.

Choreographing and dancing combine a unique blend of both physical and mental processes. Understanding the ways choreographic space takes on meaning involves aspects of "the mind, brain and body which span sensation, perception, cognition, emotion and movement control" (deLahunta, 2004). I will now consider how biological, cultural, and personal factors figure in both the creation and perceptions of space in my choreographic work.

PART 2: Moving in Space

INTRODUCTION

After seeing a performance of Chinese dance by the Hong Kong Dance Company at the Hong Kong Cultural Center's Grand Theatre, I went backstage to see some friends who had performed in the concert. The back curtain had been pulled up after the performance, exposing the back wall of this large and deep stage. In the middle of this back wall there was a brightly painted green door with an exit sign above it in both English and Chinese. I felt as if a light had gone on in my head. Here was the door to the dance I had begun to create in my head. At the time I did not know how I would use this image, but I did know it connected, and in some way would become a part of my new dance's world. It seemed an exit to another time and another place, yet even more as a metaphor for a passage from one state of being into another. The philosopher Brian Massumi explores the concept of the "biogram," examining the ways our bodies become sites of our identities and histories and seeing the body's ability to affect or be affected as not fixed and bounded. A "biogram" can be thought as the relationship of our personal experience, and emotions to the actual state and biochemical responses of our bodies. In an interview in *21c magazine* Massumi states that "the present boundaries are never a closed door. It is an open threshold--a threshold of potential. You are only ever in the present in passing" (in Zournazi 2002). The door I saw that day in 1997 while living in Hong Kong, far from home, just before Hong Kong's handover to China, perhaps came to represent that threshold.

In her 2007 essay "Mind Yourself: On Soundwalking, Race and Gender," the cultural theorist Karen Shimakawa contends that when the normal ways we move through the world are disrupted, we become more aware that we are no longer comfortably located within our own 'biograms" (2007, 34). It is at these moments we begin to sense new possibilities and new configurations. Shinakawa's essay discusses walking tours through others' biograms, and although during my period

of living away from America I was not a tourist, my sense of my biogram was interrupted, opening a sense of new possibilities and potentials. I am an American choreographer and teacher who was born and brought up in New York City. From 1978 through 1989 I toured and performed with my New York based company, Rosalind Newman and Dancers, in the United States and Europe. In 1989 I relocated to Hong Kong with my family, to teach and choreograph at the Hong Kong Academy of the Performing Arts, returning to New York City after my contract ended in August 1991. In 1993 I returned to Hong Kong to resume my post of senior lecturer at the Academy and remained there until July 2002. In August of that year I moved to London to become Course Leader for the Masters of Choreography program at Laban. After this intense time of moving through different places and spaces, I returned to a much changed New York City in 2004.

Oftentimes friends and colleagues have asked me how my time in Asia has changed my choreography. I answer that it is complex and not quite the way one might expect. I have not used Chinese music (or just not yet) or conventional Chinese dance steps, yet my ways of conceiving dance and the spaces of my work have shifted. As I influenced the thinking/dancing of my students and colleagues in Hong Kong, the places and spaces of their world deeply affected me as well. Massumi proposes that "when you affect something, you are at the same time opening yourself up to being affected in turn ... you have made a transition" (in Zournazi 2002). In this section I explore some of the dances I created during this period, and the ways these works, through their intermingling

of energies, created a new space, or what the cultural geographer Doreen Massey would call a "meeting place" (2005, 4).[27] As the dancers and I stepped into these new spaces we were both changing them, as well as being changed by them.

[27] Doreen Massey explores the dynamic and changing nature of place and our sense of it. Her work as well as Brian Massumi's and Karen Shinakawa's continues to expand and enrich the ideas explored by Yi Fu Tuan on the interplay between culture and our perceptions of space.

CHAPTER 5: Scenes from a Mirage:

I created *Scenes from a Mirage* whilst I was living and working in Hong Kong, in the period preceding its handover to China. On 30 June 1997, Hong Kong, which had been a British colony since 1898, was returned to mainland China. As my students, colleagues, and friends grappled with the prospect of Hong Kong returning to the "motherland" after almost 100 years of British rule, I, too, was affected by this momentous and historic change. The majority of Hong Kong's people, although ethnically Chinese, had never lived in China. China was the country their ancestors had left, often under harsh circumstances. How would the handover affect their lives, as well as my own, and that of my family in residence in Hong Kong? It was a time of uncertainty and we all tried to understand Hong Kong and our relationship to it even as we sensed its eminent change. What would be lost? What would be found in its place?

As the city and the people of Hong Kong searched for their identity, I explored my own as well. Hong Kong is mostly Chinese in population and culture, and although I was never treated as an outsider and felt accepted during my time in Hong Kong, I could never truly be part of traditional Chinese culture. I was always an expatriate, and felt at times the "other" or out of [my] place. Living half-way around the world from my home, I experienced what Massey calls "a sense of disruption and fragmentation," and I yearned to become located (2008, 257-258). Uncharacteristically for me, I joined a Jewish Community Center (they also had a great swimming pool), and it was in the library, housed within this Jewish Center attached to the Oheh Leah Synagogue in Hong Kong, that I researched the Jewish diaspora, providing inspiration for *Scenes from a Mirage.* It is a dance referring to Jews in the late 19th century in Poland and Russia, choreographed by me, an American Jewish choreographer in Hong Kong in the late 20th century, and danced by Chinese dancers from Hong Kong, China, Malaysia, and Taiwan. Within this geographic fragmentation and spatial disruption, I experienced a

longing for place or community, even if it was one which only existed within my imagination.[28]

As I reflected upon these ideas of identity, transition, and loss, I felt the need to create a very specific place within this work. It was as if the the uncertainty of the world around me propelled me to create a space of safety, of the known. In many of my other works, although using recognisable elements, such as folk or popular dance motifs, I had built more abstract worlds. In *Scenes from Mirage* I wanted to create a world that was more concrete. In *Space and Place*, Tuan states, "human places become vividly real through dramatisation. Identity of a place is achieved by dramatising the aspiration, needs and functional rhythms of personal and group life" (1977, 178). What were the specifics of the world I wished to create in this work? These concerns led me to reflect upon my relation to the places I had lived, as well as to the lands of my ancestors. As a Jew whose grandparents had emigrated to the United States in the early part of the 19th century from the ghettos of Russia and Poland, I asked myself what I knew of my roots. What did it mean to be Jewish, to be an American? I could only know of the spaces of my ancestors' ghettos in my imagination. I became fascinated with the idea of rootedness and "home". How did I relate to it? How did others?

As I reflected upon these ideas of identity, transition, and loss, I came across a book of poetry in the library at the Hong Kong Academy of Performing Arts by the Polish poet Zbigniew Herbert. The opening lines of his poem "White Stone" struck a chord in me.

> Only close the eyes--
> my steps walk away from me
> like a deaf bell the air will absorb it
> and a voice my own voice which calls from afar
> freezes into a little puff of vapor
> the hands drop
> cupped around the calling mouth
>
> touch a blind animal

[28] For a discussion of effects of fragmentation and disruption as populations migrated and changed in contemporary times, see Doreen Massey's *"A Global Sense of Place"* (2008).

will recede into depth
into dark and humid caves
the smell of the body will remain
wax burning
then grows in me
not fear not love
but white stone

(Herbert 1977, 5)

The poem called forth dynamic images for me. In Herbert's voices, textures, and smells I could see the spaces of loss, of a time and a place that no longer was. These lines caught hold of something deep inside me and resonated. The image of footsteps, their sound, shape and dynamic, reverberated, deeply in my imagination. They awakened a deep truth that suddenly allowed me more clarity about the kinds of energy and spaces I wanted to explore. The poem opened places to daydream my own dreams and to plunge into my reveries.

In the introduction to *The Poetics of Space*, Bachelard writes of the ways a poetic image can "take root within us" (1994, xxiii). As I received the images of Herbert's poem, I was not reading with a critical eye, but accepting his image as an audience. His images took root within my soul, allowing "an awakening of poetic creation" (Bachelard, xxiii). This is often how I must allow myself to be open to inspiration, not by looking at the world with a critical eye, but by allowing the world to reverberate, touching my depths and becoming part of my subjectivity. It inspired me to imagine figures coming into view through a vapor or veil from a far distance and then receding again. I connected these images to my own feelings of the impending loss, spiralling back to the seemingly transitory nature of my world. Herbert's poetic images opened a pathway into the ways theatrical space can evoke a sense of remembering, and into my explorations of distance as an aspect of memory.

I could imagine the textures and timbres of the kinds of music I wanted for this new work. I had used the accordionist/composer Guy Klucevek's music for several of my past works and at that time was listening to a piece of his music

titled *Scenes from a Mirage* (1987). The accordion sound created within me a sense of push and pull. As air is drawn into the instrument and then pushed out, it is as if the instrument is breathing. The vibrations of these sounds felt very moving and kinetic. The bellows of the instrument are like lungs, calling forth images, and as the sounds swelled I felt like my "mirage" began to find its form. The seeming spaciousness of the sound allowed me to feel as if I could walk inside the music. In this solo accordion piece, Klucevsek used experimental techniques and processes combining Eastern European, Middle Eastern and popular contemporary music. The resulting fusion of cultures and approaches created a sound that felt right for this new dance.

I was also interested in using the sound of the human voice. I came across an album of music, *Maramaros: The Lost Jewish Music of Transylvania* (1993) by the Hungarian singer Marta Sebestyen. Listening to one of her slow and haunting songs, I could see the beginning of my new dance in my mind's eye. I felt her voice was calling back the spaces and images of the past. In working with the sounds of Sebestyen's voice in the studio, I began moving with a slow forward and backward rocking motion.[29] I decided the dance would begin with this song and a single female figure. I explored ways this solo dancer could gesture with her arms to different points within her sphere, calling forth her visions. I continued experimenting alone in the studio or with the dancers, and the work began to take shape.[30]

During this initial period of imagining and experimentation, I felt the strands of my explorations coming together in unexpected ways and leading me into new pathways. As I look back on the creation of this work, it was as if I were the

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[29] I realized later this motion is very much like *davenning*, the rocking action used while reciting Jewish prayers.

[30] For me, as a work begins to germinate in this initial creative period, many disparate threads of inspirations spiral around each other, sometimes coming together and sparking new pathways and directions. When my work is going well those disparate threads intersect, come together, and fall into place, making their own new world. When a work is problematic, these threads don't fit together no matter how hard I try. At those times the elements of the work jar one into another in not very interesting or illuminating ways.

conduit as *Scenes from a Mirage* revealed its secrets. The green door I had seen at the Cultural Center; Herbert's poem; Klucesvek's music; Sebestyen's voice; the sense of transition and unrest within Hong Kong; as well as my own feelings of dislocation; each of these images, feelings, and textures reflected and refracted off one another, illuminating my processes and clarifying the pathways the work would take.

These inspirations and influences led me to reflect upon the ways space, and specifically distance, could express aspects of memory. I began to explore how choreographic theatrical space could evoke a sense of remembering, as well as the transitory nature of life. During this time of uncertainty in Hong Kong, as I choreographed I began to build a sense of place and specific time in my studio explorations, creating a place long ago and a time far away.

I had the opportunity to work on what, for me, was a large-scale dance production that inspired me on a practical level and allowed me to explore broader aspects of space. I sensed the elements of scale as integral to the work that had begun to shape itself in my mind. I had access to large rehearsal studios in which I could play with my ideas. For this dance, I was working with sixteen of the senior modern dance students at the Hong Kong Academy for Performing Arts. In using this large cast I could choreographically create a sense of community in the dance. The work was to be premiered at the Lyric Theatre at the Academy. I was excited to create a piece for the Lyric Theatre's large stage, which is 30m wide, 16m deep and 27m in height. In addition, we would not use a rear cyclorama, so the back wall of the stage was exposed. The rear stage of the Lyric Theatre (the area normally behind the theatre's cyclorama) is quite large, 18m wide and 13m deep. By expanding the stage we were able to extend the possible dancing space and create a sense of unending depth, almost into infinity. I decided that the dancers would only enter and exit the space from the rear of the stage. These stage configurations allowed the dancers to be at a great

distance from the audience. Because of this depth, the performers could appear as if fading into and out of the audience's vision and focus, as if fading into and out of this time and place. Subsequent versions of this piece, which is twenty three minutes, were performed for eleven dancers of my Hong Kong-based company, Dance HK/NY, and were adapted for other smaller spaces. There was, however, an attempt under all circumstances to maintain the original sense of unending space and depth.

As I worked on the dance, I continued to explore ways to translate and transform my initial images and inspirations about the spaces and times I was living in, as well as those images from an imagined past. In what ways could I use distance in space to suggest aspects of memory? How could I use choreographic theatrical space to evoke a sense of remembering and the transitory nature of our world? These were the questions that fuelled my musings and practical explorations as I attempted to build a sense of place and time. It was a place in my imagination that seemed to exist long ago and far away from the world I was living in. Yet for me these images also deeply connected on some level with the people and places of that time in Hong Kong.

The DANCE

A dancer appears alone in a small pool of light in the down-stage right portion of the space. The rest of the stage is dark. In this opening solo the dancer's movements and gestures seem to be telling a story as if inviting the audience into her world. As the solo figure rocks forward and backward to Sebestyen's song, she slowly rotates clockwise like a [small turning] figurine inside a music box. She makes small gestures with her hands and arms towards different points in space. Moving in near space, close to her own body, she exists within her own reveries. As the small pool of light around the dancer begins to expand, her gestures and focus begin to reach further into space. It is as if we are inside her mind, entering into her imagination and memories. The stage slowly becomes illuminated and

the space opens onto figures entering from the furthermost depths of the upstage area. These figures appear and disappear, moving forward and backward in groupings. Their distance from the viewer, as well as the smoky vapor and misty lighting effects, give the appearance that they are from a time long ago, and a place far away. The small lit space of the beginning of the dance has opened like a doorway into a world of the imagination. As the viewer enters, this world opens into other places and other times.

Distant space in this dance becomes a metaphor for a distant time. As I have discussed in earlier sections, in our culture as well as many others, aspects of distance are associated with time. In *Space and Place*, Tuan discusses the ways many cultures, including our own, "associate a remote time past with a remote place" (1977, 122). Distance, according to Tuan, is not only a spatial concept, it also implies time (119). In reflecting upon my choreography for *Scenes for a Mirage* I connect these concepts to the ways I used distance to signify aspects of time. In this dance the far upstage area of the stage signifies a distant past, and as dancers move in the upstage area of the space, it is as if they are moving in and out of the past.

As they come out of darkness from the far upstage mist, the dancers advance forward in a slow progression. They face the audience, descending upon them as they move in side-ward motions, criss-crossing one another. Through the use of stage lighting and smoke, dancers appear through a fog, their figures out of focus. The audience and the dancer we first saw in the down-stage left corner of the stage watch as these dancers advance. At first, because of the distance and the lighting and the quality of their actions, they appear small, indistinct, and soft in texture. Moving forward, they become clearer to the viewer, not only because they are seen at closer range, but also because their movements become sharper in quality and more defined. The viewer can see

their actions and physical features with greater detail, perceiving them in a more intimate way.

Viewers' perceptions are affected by their perspective as they watch a dance. The use of spatial depth was an extremely important element in *Scenes.* There was dancing in both the extreme down-stage and extreme upstage of the space so that the audience viewed the dancers both close up and from a far distance. Therefore, my choreography for *Scenes from a Mirage* was particularly affected by my varying visual perspectives of the work as I created this dance. Where I positioned myself in the studio while I directed the dancers' movements, and where I stood within my mind's eye as I imagined the work, seemed to especially change my sense of the dance and the kind of material I created. If I worked among a group of dancers as I choreographed, the completed material felt more intimate to me than the more formal choreographic choices I made when I stood at a distance, observing the dancing. As I directed the first solo, I stayed close to the dancer, often moving in her space. As I created the group entrance, I often stood far back in the rehearsal space, at a distance, watching the patterns the dancers' movements created.

These reflections resonate with choreographer Twyla Tharp's observations in her 2003 book, *The Creative Habit.* In it she notes that each of us "find comfort in seeing the world either from a great distance, at arms length, or close-up" (36). Some artists, she proposes, see the world from far away, giving their work a wide scope. Other artists look at things up close, in tight shots and detail. Some choreographers work like Jerome Robbins from a middle distance. According to Tharp, Robbins's view of his work, his focal distance, was right there on stage. In his productions he often had his dancers onstage watching other dancers onstage. The audience identified with those watching dancers, seeing the dance at those moments through the eyes of the dancers (Tharp 2003, 37). Although I use distant space and wide expanses in *Scenes from a Mirage,* the audience

watches the dance through the eyes of that first rotating dancer. They see *Scenes* through her eyes, she is the protagonist, and although there are different vantage points throughout the work, it is through her perspective that I want the audience to view the work.

Towards the end of this first solo, the other dancers move out of the upstage darkness, advancing towards the protagonist and the audience as if descending upon them, they bring with them an atmosphere of another time and place. To create a place with a strong sense of identity, I used many specific and concrete details. I coloured in the spaces of this work to make them vividly real. I based many of the dancers' movements, rhythms, costumes and gestures on elements of an Eastern European village in the late 19th or early 20th century. Drawing from a range of other cultures as well, the work has a strong ethnic, folk quality. I was inspired by Hungarian male folk dances as well as Chinese folk dance forms, and even Chinese martial arts form such as BaGua.[31] This mixture of cultures allowed me to create a whole world with its own inner logic and internal integrity.

More than many of my other works, *Scenes from a Mirage* seems to have a narrative line. Unfolding like a dream, however, its story does not follow a logical sequence. Ideas overlap and splice together, moving in fast forward and then rewinding back on themselves. Starting from upstage the dancers descend upon the audience and the protagonist. The protagonist joins the other dancers, and a series of events occur: meetings and partings, a wedding perhaps, a celebration, a drunken reverie, like the day in the life of a village. In the middle of the work the dancers form a circle, wrapping in upon itself as the members of the group face each other. There is the suggestion of a Jewish wedding, as a male and female dancer are lifted high by the group. As the group interacts in circle

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[31] BaGua is a form of Chinese martial arts in which the body is in continual motion, using constant circular movement to generate power.

and line dances, diverse elements come together, establishing a socially connected group.

At the end of the work the dance reverses, retreating gradually upstage. Through this process of reversal the work becomes like a film played backwards. Movement themes that had moved forward now move backward: a dancer's arm that had reached towards the audience in the first section of the dance now pulls away; a lift that had advanced now retreats into the distance, becoming indistinct as if disappearing back into the foggy past.

LONG AGO AND FAR AWAY

In thinking of the past, one often imagines it in stillness, like a picture. The memory recalls a pause, a frozen moment in time, and it is within that pause that we are able to establish another time and place. In *Scenes from a Mirage,* as the dancers progress forward towards the audience, they arrange themselves into a series of group pictures, similar to those slightly yellowing photographs in a grandparent's chest of drawers. I connect the power of these frozen moments in *Scenes* to Bachelard's reflections on the relationship of space, time, and memory. As I discussed earlier, Bachelard contends, " we are unable to relive duration that has been destroyed ... Memories are motionless and the more securely they are fixed in space, the sounder they are" (1994, 9).

As the dancers move into the down-stage area of the stage they arrange themselves into frozen portraits, much like Bachelard's motionless memories. *As* the dancers pause in these still images, the viewer can also pause in reverie, allowed to reflect on a lost past. In *On Photography* (2001), the cultural theorist Susan Sontag also explores the connections between still images and memory. Both Bachelard and Sontag's concepts connect to the ways I employ pauses in movement to capture and provide a sense of the past in *Scenes*. For Sontag it is through our photos that we construct a chronicle of our family and its past, and in the process possess moments of lost time. Photos, she writes, "give us slices of

time, not flow" (2001, 17), telling us what is no longer there as they incite us to reverie. They call at our mortality, she states: "photos state the vulnerability of lives, of our heading for destruction. They are fragments which drift in a soft abstract pastness, open to any kind of reading" (71). In this section of the dance, these memories are like snapshots, two-dimensional, flat, lacking thickness. They are like Sontag's "fragments" of an abstract pastness.

The "snapshots" created through the dancers' stillness in *Scenes* exist in the vertical and horizontal dimensions, known in Labananalysis as the door plane. Laban's theories are useful in characterising the function of the shifting dynamics and the effect of directional movement within the group in this section of the dance. Discussing his principles, Laban scholar Vera Maletic writes, "Dimensional directions, along one of three axes, are the carriers of stability while the diagonals guarantee flow" (1987, 113). For Laban, the dimensional scales, vertical, horizontal, and sagittal, evoke a sense of centeredness and stability. Movement in the diagonal dimension evokes a sense of off-centeredness, instability, and mobility (Maletic, 57-79). These concepts are especially germane to this section of *Scenes from a Mirage,* for as the dancers strike these poses they appear captured and unchanging in time. As the dance continues, the protagonist gestures from afar. Inhaling deeply, she then exhales, blowing her breath towards the tableaux the frozen dancers' bodies create. She seems to animate their frozen images, as she literally breathes life into their still figures. Responding to her gestures, the dancers move out of these frozen flat moments, and the space again appears three-dimensional. As the dancers begin to travel into the diagonals of the space, the protagonist tries to join them by inserting herself into the group. These diagonal formations introduce a sense of instability as they shift away from stasis. The protagonist previously remained vertical and over her own central axis. She now falls into the arms of the other dancers, and as they catch her there is a feeling of change in her relationship to

the group. In this part of the dance the groups' diagonal directions and spatial pathways emphasise a sense that they are a dynamic society, one that is no longer frozen in memory. The dancers become a social group that can accommodate change.

As the work continues, the dancers join in a circle dance. The circular form wraps in upon itself as the members of the group face each other. Sealed, concentrated, and enclosed, the circle brings these people into a community and produces a sense of unity, ritual, and timelessness. In the circle the dancers face one another; they do not present themselves to the audience but are involved within their own society. It is within this space that the lives of the individuals within the group unfold. As the dancers move through motifs based on a fusion of Balkan, Hungarian, and Jewish, as well as Chinese folk dance rhythms and formations, it is as if they are going through the ceremonies and rituals of their lives.

In this section of the work I used the music of the American group the Klezmatics.[32] Their music fuses klezmer traditions with more contemporary new music processes. To the raucous sounds of the music, the dancers form lines facing each other, and their feet weave in quick folk dance patterns reminiscent of courtship or mating dances. There is the suggestion of a Jewish wedding, as a male and female dancer are lifted high by the group and carried around the stage. Three male dancers begin a staggering, stumbling dance as the rest of the dancers look on. The movements drawn from male Hungarian folk dances and a Chinese martial arts technique, known as the Drunken form, fuse to create a celebratory and virile virtuosic dance. It is as if we are viewing a celebration in a town square. As the group interacts in these circle and line dances, they establish a sense of community, of a socially connected group bound together through rituals and rules.

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[32] Klezmer is a Jewish musical form traditionally played at weddings and celebrations.

PASSING THROUGH

At the end of this "wedding" dance, the dancers create a pyramid with their bodies, appearing to pause for a final photo. They fall out of this shape, and it is as if a picture is decomposing. Their movements slow down and soften, becoming slightly out of focus and distorted. We are watching not only the structures of this dance disintegrate and decay, but also its world.

In the dance composition workshop I took with Robert Dunn in 1993, he proposed that choreography is in constant tension between lining up and passing through of spatial concepts, rhythms and ideas, time and energy. I often thought of his words as I constructed and deconstructed the worlds of this dance, viewing these transformations as a metaphor for the changes going on in my personal life, as well as the world around me. In *Scenes* there are many instances in which spatial relationships, images, and concepts build up and then dissipate, to appear again in new ways. Groups of dancers make formations which decay, break apart and reform. A circle dance breaks open and transforms into a line dance. The dancers literally climb one on top of the other to build structures with their bodies, only to have them break apart and then reform in another way.

The idea of dance as a dynamic process is discussed by the philosopher Maxine Sheets-Johnstone in her 1984 book *Illuminating Dance*. She views the world as a process of becoming, which can be seen in the "rhythms and organic maturation's and decay of growing things" and movement is part of this dynamic process (63). *Scenes* reflects the ways society can break down and then reform in the same place or in new places, dissolving again to give way to new peoples, societies and spaces. Families are created, change, and disperse; people live and die; buildings spring up, and decay or are torn down. As the structures of the dance form and reform they echo our worlds, coming together and falling apart.

In *Scenes from a Mirage*, a sense of change and loss is also reflected in the ways space is employed to exert force on the dancers, pushing and pulling

them. I had a free-standing green door with an exit sign in Chinese and English built, like the one that had originally inspired me at the Cultural Centre. It was placed in the middle of the rear stage near the back wall. In the last section of the dance, the stage lighting slowly illuminates it and the dancers seem to be drawn towards the back of the space and through this door. Within the dancers' movement there is a clear sense of intense effort against the pressures of the space behind, and in front of them, as if they were being pulled back in time. Dancers drag each other back into the space, and we can see the effort in their intention as they reach forward with their chests, arms, and upper backs, their legs pulled backward as if by outside forces. We are aware of a struggle taking place within the core of the dancer's body. In *Ecstasy and the Demon* (1993), Susanne Manning writes of space in Mary Wigman's dances as assuming "a definite entity, almost a tangible presence in every manifestation of movement. The dancer is no longer an ego in a vacuum but an epitome of the individual in his universe" (Manning 1993, 21). Manning notes that in her dances, Wigman moved with and against the energy forces within the space (21). I connect these ideas to the dancers' use of effort as they move through the space around them in this section of *Scenes*. Oppositional forces of energy seem to press against the dancers; in order to move through the space they must exert a powerful sense of their will and intention. Here internal and external forces create a feeling of yearning, and the energies in the dancing space serve as a metaphor for a kind of longing for the past.

At the end of the work, the dancers exit out of the green door, one by one, disappearing into deep space and time. In this dance, there is a journey, not only through visible exterior space, but also interior space, the space of the imagination. The audience not only views the dance through the eyes of the protagonist, but also sees into this character's internal self, into the spaces which live inside her mind. She, in turn, is a filter through which one can see into the

mind of the creator of the work. The beginning of the dance moves from the small internal spaces of the first solo figure to expansive spaces, and this sense of play between the intimate and the immense, of public and private space, recurs throughout the work.

Scenes from a Mirage is a dance referring to Jews in the late 19th century in Poland or Russia choreographed by an American Jewish choreographer in Hong Kong in the late 20th century, danced by Chinese dancers from Hong Kong, China, Malaysia and Taiwan. Within this geographic fragmentation and spatial disruption, there appeared a longing for place or community, even if it was one which existed within the imagination. Both *Scenes* and the next work I will discuss, *Different Trains,* bring together many disparate elements: Eastern and Western dance, sounds, concepts, energies, and people of different cultures. In these dances, created while I was far from 'my place,' or home, a new kind of place emerged. Doreen Massey's writings about the nature of space and place in the contemporary global world are relevant to the ways space takes on meanings in my choreography. She states,

> Space isn't something we live in, in the sense that it is a volume which we carve up and move about in: rather it is something which is socially created by the way in which we live our lives. We create space through our interactions. What that means, first of all, is that it is full of power because all the interactions that exist between us are imbued with social power. It means you start thinking of space not as something divided up but as something formed out of an incredibly complex network of intersections, interconnections, relations, contacts and so forth. From this perspective, place can be understood as open, porous, and as necessarily constructed through

> interconnection. Therefore, as necessarily hybrid, it is place, precisely, as meeting place ... in terms of a global sense of the local, a global sense of place. (1996, 37)

As the dancers and I worked, I experienced what Massey was writing about, an intersection of ideas. For while I longed to find my place and yearned for what had been lost, within the process of creation there was also a feeling of community: between the dancers, myself, the costume, set and lighting designers. As I watch these works now, they express a strong sense of place, a new kind of place made through the synergies of many elements.

CHAPTER 6: Different Trains:

Different Trains (1999), is another work I choreographed while I lived and worked in Hong Kong. As in *Scenes from a Mirage,* various cultural as well as personal concerns played a large part in the forming of this work. One element which affected these dances was that while I was welcomed and accepted by my students and colleagues in Hong Kong, I was always a "gweilo".[33] This was a strong influence in these dances, for in both I explored my American roots as well as my ancestors' European past. *Different Trains* examines ideas about migrations, displacement, alienation, and a search for a place of safety. Like *Scenes from a Mirage,* this work calls forth images of a time and place in the past. In *Different Trains* it is Europe and America in the 1930s and 1940s. The piece is set to Steve Reich's recording of his music, *Different Trains (1988),* in the which there are threads of events which link to Reich's personal life. Emerging after his "apparent" abstract works, the elements in this music seem to reflect not only social events but also Reich's personal history, addressing the personal within a cultural context. In re-viewing my dance, *Different Trains,* I realise that I was addressing these issues as well.

I revised *Different Trains* in 1999 just after my mother died. I was living in Hong Kong at that time and was teaching and choreographing in Australia, as a guest artist at the Western Australia Academy for the Performing Arts. These circumstances left me on shaky ground. I was searching for a sense of rootedness, for my place in this seemingly unsteady world. In losing a part of my own past, I felt a strong connection to the themes explored in Reich's *Different Trains* of personal and cultural disorientation. Living in a world so far from my home I was looking for a link, and as a Jew I felt a connection with the material of

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[33] Gweilo is Cantonese term meaning "ghost person" or "white ghost" and is often used by Hong Kongers in referring to Caucasians.

the Holocaust and to the plight of those transported on those trains in World War Two Europe, which Reich explored in the music. Living in Hong Kong before, during, and after the handover of the territory to China, I felt a strong sense of a people in transition, of cultural displacement. The themes I was working with deeply connected my personal and cultural spaces. I could feel their personal and cultural relevance.

In the musical score, there are references to train travel in America and Europe in the late 1930s and 1940s and to the events of the Holocaust during that period. The movements and scenes of the dance also refer to these events. I originally choreographed the work in 1989 for thirteen students at the Hong Kong Academy for the Performing Arts. In 1999, I revised it extensively for eight dancers during a residency at the Western Australian Academy for the Performing Arts. The revised version, which is seventeen minutes, was performed by eight dancers at WAAPA and was subsequently performed by the students at the HKAPA as well as by my company, Dance HK/NY, in both Hong Kong and the United States.

This dance was strongly influenced by the pulsating rhythms and atmospheres created by the musical score. The music compares and contrasts the different experiences of train travel before, during, and after World War II. The spoken texts used in the score are excerpts from interviews with Americans and Europeans about their experiences during that time. The sounds of wheels, whistles, and blasts pulsate throughout. The music, as well as the dance, explore both personal and global situations, addressing personal issues within a cultural context.

THE DANCE

Beginning in silence, all eight dancers are on a diagonal, centre stage, facing down-stage right. They are moving together in place, yet it appears as if they are running along a track on the diagonals of the stage. Their movements

suggest instability, as if they were passing through shifting landscapes. The dancers' strong focus and sharply changing angles create a sense of strong intention in space, of a group of people moving towards something with wilfulness. The dancers' arms work against their bodies, making wind-milling motions as their legs maintain their forward intentionality, running in place. These opposing forces of forward/backward motion, of push and pull, produce an internal tension, a struggle within each dancers' body. The group's placement in the centre of the space at the beginning of the work, the dancers' verticality, as well as their strong diagonal focus, contrast strongly to their sudden moments of off centeredness as they fall sharply into each others' arms. They appear to be torn between a desire to stay and a desire to go.

As the piece progresses, the sense of the group's energy cutting horizontally across the stage continues to build, and driving forces seem to thrust through space, pushing and pulling the dancers. The image of a train, moving on tracks as a pulsating force, is reflected in the spatial floor patterns used throughout the first section of the work. The dancers move across the space in criss-crossing diagonals. The intensity of their intentions, reflected in the push and pull of tensions, is apparent within their bodies. The straight, almost spoke-like, lines of the movement; the direct and sharp focus of the dancers; and the sounds and references to train travel within the music re-enforce the sense of an arrow moving through space towards an unseen goal. These lines of energy work as metaphors for one's destiny, the making of a place in the imagination.

Although changing focus, the dancers seem to move in one direction, towards a place in space as well as time. In *Space and Place,* Yi Fu Tuan points out that in various cultures, including much of Western culture, a common image for time is an arrow which can represent directional time and movement towards a place in space which is in the future (1977, 179-180). In *Different Trains,* the dancers' movements shoot through time as the voices in Reich's music call out

the passing years '1939, 1940, 1941' and we are made aware of past, present and future, as images of time and space merge.

These images correspond to a Western notion of time and space, in which the view of one's time on earth is conceived as a journey moving forward through space.[34] In *Different Trains* space is often used as a metaphor for ideas about time. As the dancers cut through the space we can "see" time passing or "flowing by." The dancers seem to move against the flow of time, increasing the sense of tension within the work.

In *Scenes from a Mirage* the dancers appear rooted within their space, within the frame of the stage. Although the work seems to fall forward towards the viewer at the beginning and go back into the past at the end, the piece does not reach beyond the boundaries of the dancing place. *Scenes* deals with an enclosed world and none of the dancers exit the space. In contrast, the dancers in *Different Trains* make many entrances and exits. They leave the space on stage right and left, in all directions, as if trying to move beyond the boundaries of the dancing space; searching for new places as they move horizontally through space. According to Laban, the mover can luxuriate in space or struggle with his surroundings (Maletic 100).[35] In *Different Trains,* the dancers seem to be struggling with the environment, being pushed and pulled, not only against the forces of time, but the confines of the space around them and the twisting tensions of their bodies. The tension in their bodies changes the ways we sense the space around them.

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[34] As discussed previously, Westerners most often associate the future with the space in front of them and the past with the space behind them, the present as here or where their axis is. See page 46 of this document for a more complete discussion of these issues.

[35] For Laban, in moving with a spatial affinity one would feel a sense of harmony, for example, with lightness in high space or heaviness in low space. As one moved against these affined efforts one would move with a sense of struggle.

MUSICAL SPACE

The dance mirrors some of the phrase patterns in the musical score. Reich's score sets up a pattern through its use of voice, establishing one vocal phase or line such as "1941 I think it was." Reich subtly shifts the rhythms of that pattern and then abruptly breaks into another phrase. As he does so, it is as if the space cracks open with the sound to reveal another layer. These ideas connect to Bachelard's contention that sound inhabits space in such a way that it changes the geometry and shape of that space (1994, 60). In viewing the relationship of music and movement in this dance, this concept is especially germane, for Reich's separate phrase patterns appear like beads on a string or a series of rooms one walks through, each distinct and having its own integrity.

Reflecting on this aspect of the music's structure, I shifted the dance phrases and constructed the movement in chunks which repeat as they travel through space. The phrases shift suddenly as if moving into a different environment, the energy of the movement creating a new space. I shifted the space by changing the dancers' body facing and focus, as well as the patterns and rhythms of the movement. Laban's concepts about the ways space, time, and force intertwine are particularly valuable in viewing this section of the work, for as the dancers switch their facing to different points in the space there appear to be new places to move towards, new horizons and goals, new possibilities.[36]

One unit of activity abruptly changes to another, like photos placed next to each other, one after the other. For example, a dancer leaps over someone else's body, then suddenly another dancer waves madly as he circles the group. At another point in the work, a dancer suddenly emerges from the group, then abruptly stops, as another dancer breaks out of the group. These patterns give the piece a sense of constant change, of a continuous search in which one can

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[36] Laban states "the conventional idea of space as a phenomenon which can be separated from time and force and from expression is completely erroneous" (Maletic, 163). For Laban, there is no dead space, for it is alive and changing as it includes an interaction of spatial, temporal and effort factors.

never rest. As the piece progresses, the tight rhythmic construction of the musical phrases seem like self-contained units or boxes. These musical structures appear to contain the actions of the dancers, describing their spaces and constrain them within their rhythmic and driven insistence. They are like boundaries, which both curb and limit the dancers' possibilities. The music is assertive; it will not fade into the background, it pushes against your consciousness. It is a force to be grappled with, fought and struggled against, not to be ignored. The energies of these insistent sounds create a wall for the dancers, which they must move against to break free of the tight construction, of the rhythmic skin of the composition. The repetitive patterns of the music create grids which the dancers must move within, searching for openings to escape.

Laban stated that all the elements of movement, space, time, and force, work together to conjure the meanings one senses in dance. In *The Visual Arts as Human Experience,* Donald Weismann expresses these ideas in another way. He states, "we can break up the elements of work and speak of them separately but they work together and upon each other like charges in electrical field" (1970, 38). In *Different Trains* these concepts seem especially important for the relationship of the elements in the dance; the grids are set up not only in the movement but also the lighting, the drive of the musical phrases, and the spoken text; all create an atmosphere of desperation and danger. These people need to hide, to find safety, for there is no rest in the landscape of this work.

The shifting landscapes in both the music and the dance are meant to keep the viewer in a state of suspension, and expectation. What will happen next? Where will the work go? As I discussed previously, recent neurological research provides windows into some of the ways the brain perceives the elements of a dance, and suggests the ways a fusion of those elements create a work's tensions. According to the neuroscientist and musician Daniel Levitin, "something can hold your attention by small detours. It gives you pleasure in that it surprises,

giving a cascade of different experiences" (Byrne and Levitin, 2007). These disruptions are what draw the viewer's attention, keeping one involved, and are particularly valuable in regarding the shifts and changing patterns within Reich's music. In his 2007 radio discussion with musician David Byrne, Levitin states, "these detours are part of what the brain is about, finding patterns in the world, finding order." Whether in life or in a work of art, as one views a scene, the senses begin to find partial solutions to what is going on, looking for patterns and regularities in the environment. In looking at the shifting aspects of *Different Trains,* the viewer is engaged in this process. One takes in the different elements of the work, moment to moment, and tries to make patterns and sense of what is seen.[37]

As *Different Trains* continues, the spectator begins to enter into the journey of the piece. A dancer begins to leap towards stage right, and suddenly switches direction going against the inherent logic of the movement. A rhythm is set up in the music, and then abruptly shifts gears. The viewer has certain expectations of the trajectory of these sounds and movements, and in both the choreography and music there is a continual play between the fulfilment and the disruptions of those expectations. As a dancer takes off for a leap in *Different Trains,* we anticipate where and how he might land in space, and his deviation or fulfilment of that expectation produces different responses in the viewer.

To reiterate some of the concepts I covered earlier, while the brain gets pleasure from finding patterns in the world, in discovering order out of chaos, it can also be lulled by too much repetition, by a world without surprise. According Levitin, the brain likes surprises, but the viewer will only allow himself to surrender to these surprises, to follow an artist into unknown territory, if he feels a

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[37] As I wrote earlier, evolutionary biologists have proposed that the brain is hard-wired to attempt to figure out these problems in the environment as part of its survival. The brain wants to practice these skills in order to comprehend the world and to survive within it. According to neuroaestheticians this is why we are intrigued by these spatial puzzles. We have a primitive instinct to solve them.

sense of safety as he enters a work. At those moments when the spectator trusts the artist and allows himself to enter into the artist's world, the work can take the viewer to places where language and the 'rational' cannot. It can begin to touch those irrational parts of the brain and the mind (2006, 242-246). In the music for *Different Trains* as in his other work, Reich's use of repetition in this way, allows the listener to find a pattern in the work, and thus to feel a degree of satisfaction or comfort. He then abruptly shifts his pattern so that he undercuts expectation, yet the listener is willing to enter into this new territory. In a similar manner, I used repetition of movement phrases and rhythmic patterns in the choreography as well as sudden shifts and disruptions of expectation. The moments of destabilisation allow the eye to see in a new way, and to understand the world from another perspective.

In exploring the second section of *Different Trains,* analysing aspects of seeing and perceiving from a neuroaesthetics perspective further illuminates the ways the spaces of this dance convey its meanings. In this section, four 6-foot by 3-foot wooden boards are introduced into the space and manipulated by the dancers. As the music's rhythmic pulse had been containing the dancers, in this section the dancers are also framed by and boxed in between these boards, at times literally contained within them. The simplicity of the boards, their apparent flat blankness, allow them to suggest, to metamorphose into new objects, and to create places within the imagination. In the viewer's mind, these boards can transform into the separate cars of a train, with dancers moving around, over, under and between them. The gaps between the boards, and the negative sculptural spaces they create, become part of the picture, participating in the movement of the dance. I was interested in using a simple object which appeared ordinary and which could transform into a multitude of possible meanings; upon

which one could project and in some way envision the ordinary as extraordinary.[38]

These concepts relate to the neurobiologists Ramachandran's and Hirstein's proposed universal principles of art, which they consider common underlying themes in all styles of art, cutting across cultural boundaries. As I discussed earlier, their provocative proposals can be debated; however, it is helpful to consider these concepts in relation to some of the choices I made in this work. Ramachandran's and Hirstein's principle of isolation and understatement, particularly applies to the ways I used the boards in *Different Trains.* According to these scientists, an artist may isolate certain features of a work in order to focus attention, so that the viewer can truly "see." By omitting irrelevant information the viewer can perceive what is there more clearly. In *Different Trains* the boards "leave out" information. Their simplicity allows the brain to ponder and appreciate their physical properties and conceptual possibilities, as well as their effect upon the space around them. They permit the audience to find their own connections to the work. As the dancers move between and among the boards, their movements are framed by the wooden edges of the boards, and the viewer is able to focus more clearly on their motion. Perception of the dance's movement becomes clearer and more defined inside the boards' "frame." In "Dance, Perception and the Brain," Hagendoorn cites recent neurological research which demonstrates that vertical lines provide the visual system a clear frame of reference, and that the human visual system prefers horizontal and vertical lines over oblique lines. These lines allow the visual system to detect human movement more easily (2005b, 137-148).

While the boards in *Different Trains* define the dancers' movements at certain moments, they also obscure some of the movement, contributing to the

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[38] In other dances of mine I also explore interactive objects metaphorically. I will discuss three of these works, *Being There* which uses tennis balls, and *10 Blocks* and *Break/ Down* which use foam yoga blocks in subsequent sections of this document.

work's sense of mystery. Even though one's view is obscured, the spectator still tries to make sense of the half seen and the unseen. This creates a heightened sense of intrigue, of the hidden, and in *Different Trains* enhances a sense of the dancers' possible danger and their search for a place of safety. Here again, the mind of the viewer must engage in a kind of perceptual problem solving, making patterns and finding solutions within the landscape of the work. According to Hagendoorn, the brain tries to make sense of the mystery of the half seen body. The mind interprets what it cannot see and in some way is drawn to it; we want to solve the mystery. In our evolutionary need to make sense of these images, we see between the boards, and the mind fills in the gaps of what it cannot see, making sense of these pictures (2004, 82).

In *The Poetics of Space,* Bachelard considers the most ordinary of spaces, the house, and illustrates how man through the art of poetry can make simple images reverberate with meanings.[39] In *Different Trains,* through the language of movement and the use of a simple wooden board, the imagination can also move into new places as it "spins worlds within worlds" (Bachelard 1994, ix). At one point in the second section of the dance, the dancers line up the boards as if making a wall in the middle of the space, all hidden behind them except for one dancer. She tries to scale this obstacle, clawing her way up this wall-like structure to get to the other side and "safety." The boards take on the appearance of prison gates. At another point the boards are placed together, making a box imprisoning some of the dancers. The spectator views the geometry, the lines, and angles of these "real" spaces and enclosures, but also sees places within the imagination and the reverberations of these images. The historical references in the music to WW II, the driving energy of its rhythms, and the bodily and spatial tensions within the dance create a sense of searching and desperation. These people are

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[39] Bachelard writes of how "these singular, short lived events, constituted by the appearance of an unusual poetic image, react on other minds and in other hearts ... the 'transubjectivity' or transforming action of these poetic image understood through the phenomenology of the imagination" (xviii).

trying to hide, to find shelter from the forces confronting them. All of these elements combine to re-enforce the metaphors at work.

Other factors also influenced the making of *Different Trains.* The spaces of my imagination were reflected in a very different way in the kinds of dances I produced in Hong Kong from those I choreographed before and afterward. Because of the resources available to me at the Academy for Performing Arts, such as large rehearsal spaces and extensive technical support, I was able to explore concepts in ways I had been unable up to this point. The spatial visions I was able to create reflected the kinds of support systems available to me in Hong Kong. I was also deeply affected by my time living in a foreign culture.

CHAPTER 7: Being There:

In this chapter I discuss my work, *Being There* (2001, 2006), which I originally choreographed just prior to my move from Hong Kong to London. There was a moment during my fifth or sixth year of living in Hong Kong while sitting in a School Board meeting when I noticed a change in my own manner of thinking. In these meetings there always was a tension between the Westerners and Easterners. The Western faculty, largely British, American and Australian, spoke out, expressing their opinions, trying to convey their individual ideas to solve a problem. On the other hand, the more reticent Chinese faculty quietly observed. I knew my Chinese colleagues held strong opinions, but why were they holding back? Was it a result of years of colonial rule as part of the British empire? Yes, partially, but there also existed a difference in world-view and in styles of conflict and negotiation. These generalisations did not apply equally to all members of each of these groups, and appear in varying degrees within each of us, changing even within different situations and over time. Yet, there were real differences between my Chinese and Western colleagues' perspectives. As I watched my Western colleagues speak I began to see them as if through different eyes. My world-view changed during my time in Hong Kong, and the individualistic values and independence of thought I held so highly became more tempered with an understanding of the value of looking at these issues in a more holistic way, of seeing the whole picture, trying to find the context, and of the nature of the different relationships at play.

The cultural psychologist, Richard Nisbett, asserts that "the social psychological characteristics of people raised in a very different culture are far from completely immutable" (Nisbett 2003, 68). As I and other of my "ex-pat" colleagues lived in the 'other' culture over a period of time, the cues from the society around us began to change the ways we understood the world. I was no longer the tourist or interested observer walking through this 'other' world, but

part of the fabric of that place. I link these observations to Brian Massumi's view that we are defined by the capacities we carry as we journey through life. Our body's ability to affect or be affected is not fixed (in Zournazi 2002). I changed during my time in Hong Kong, and the kinds of dances I created changed as well.

After living and working in Hong Kong for over ten years, my family and I moved to London in 2002, where I was appointed Course Leader for the newly established Masters of Choreography program at the Laban Centre. This was a period of intense transition and change for myself, my husband, and our daughter. As I prepared to leave Hong Kong and the culture I had come to love, and step into a new space, I was no longer comfortably located within what Shimakawa calls my biogram. (Shimakawa 2007). It is at these moments of disruption in our lives that we sense new possibilities. I began working on the original version of *Being There* during the late spring of that year in Hong Kong as we prepared for our move to London. The spaces of my own life were in intense flux, a precarious balance, and this new work reflected that state of being. I was trying to find balance and equilibrium within a changing environment. I felt I would no longer have access to the same kinds of large venues and technical support I had in Hong Kong. I was interested in paring down my work and simplifying the shapes and forms I was working with.

Being There is engaged with change and continuity. It explores flux, yet also a sense of flow. I chose to work with tennis balls which propelled the movement, driving the work forward and giving the piece its thrust. The presence of the balls affected the actual, as well as the imagined spaces of this dance. Serving as a metaphor for change, yet also continuity, the image of the balls and their physical realities give the piece its energy while providing their own reality. One did not have to assume a circular pattern in space or imagine it, for the circle was there, within the ball's shapes. With their precarious sense of balance and instability, the balls made it necessary for the dancers to work with the

actuality of the situation in real time. As the dancers moved with the unpredictability of these objects, they needed to find ways to cope with their environment within the moment. These props occupy the real spaces of the work, and at the same time imaginary spaces, which reverberate within the mind's eye. I wanted the dancers not to show us these circumstances and concepts but to be inside them. In the foreword to Maxine Sheets-Johnstone's *The Phenomenology of Dance* (1966), Merce Cunningham states, "Dance is movement and its opposite, in time and space. It is this continuously changing fact that gives its structure ... its permanence in fluidity [for] it is its own necessity, not so much as a representation of the moving world, rather as a part of it, with inherent springs" (1966, vii). As I moved from one part of the world to another, I was also interested in exploring these ideas of change, transformation and flow in the spaces of this dance.

THE DANCE

The work was created for four dancers and is forty minutes long; the sound score includes excerpts from *Tattoo* (2000) by Amy Denio. It was originally performed in 2001 at the Hong Kong Academy for Performing Arts, in a large studio theatre. I revised the work in 2006, and it was performed in a smaller studio theatre at Dance New Amsterdam, in New York City. I was interested in exploring a simple circular form in order to discover the complex. The balls gave the work its trajectory, moving into variations of the circle, the curve, the spiral, spinning webs. The work is made up of sections which roll one into the next. The overall structure of the work, as well as the shaping of the movement phrases, have a circular feeling reflecting the sense of continuity I wanted to convey. Each section is separate, but part of a continuum, with one idea transforming seamlessly into the next. These qualities are also apparent in the music and the shaping of the vocals used in the score. One senses the voices in the music as rolling through the piece, as a continuous breath, just as the balls roll through the

work. As in *Different Trains*, the dancers manipulate simple objects. Yellow tennis balls act as metaphors, which I suggest, allude to and create new means of seeing and thinking. These props occupy the real spaces of the work, and at the same time imaginary spaces which reverberate within the mind.

Being There begins with two dancers carrying a table onto the stage with a tennis ball balanced precariously on top. When the dancers move and lean the table in different angles they must confront the ball as an element of unpredictability, its movement left to chance. The dancers move under, around, and over the table, and their movements are affected moment to moment by these factors. There is the sound of a ticking clock, as it marks the passing of time, of the changes taking place as time flows onward. The dancers have to negotiate the unpredictability of their environment and the piece takes on an intense focus and a sense of playfulness. Two more dancers enter, throwing more balls into the space. With the continued sounds of a ticking clock, the quartet's movement and their increasingly complex pathways become more and more interwoven with these elements. The table is taken off stage and more balls appear in the space, creating increasingly precarious conditions for the dancers; the balls disappear, melodic accordion music begins as the piece rolls on. The dancers now incorporate into their movement, into their own bodies, the quality, shapes, circular forms, and spiralling arcs of these balls even more fully.

From section to section, the work continues to change, shifting from a quartet to a solo, flowing into a duet then back to a solo which builds into a final quartet. The sound score moves through different territories as well, sometimes in silence, or with the ticking sound of a clock, sometimes to the rolling, mysterious voice of a female singer, at other points to industrial sounds, or to the simple sound of an accordion gliding up and down a scale of notes. The images of the balls spin these threads together and the dance weaves through variations on this theme. The work's movement qualities, shapes, spatial relationships and

overall structure reflect the physical properties of these rounded objects. In this work, the balls serve as an imaginative and creative metaphor which can give, according to Lakoff and Johnson, "new understanding of our experience ... new meaning to our pasts, to our daily activity and to what we know and believe" (1999, 139).

The rolling action of the ball reminds me of an image from one of Woody Allen's recent films, *Matchpoint* (2005), in which a ring taken from a murder victim's finger precariously balances on a ledge. The fate of the protagonist of the film depends upon which direction the ring will fall. Not only is this image used as a plot device in the film but also as a metaphor for the unpredictable nature of existence and the whims of circumstance.

In *Being There*, the balls become a metaphor for continuity, for the twists and turns of our fortunes, for flow and flux. It is interesting to me that I chose to work with an object that was guided by chance as I was leaving Hong Kong. In Chinese culture there is much emphasis on the idea of luck and the unpredictably of life's road. I feel that in choosing to work with balls, and their curving, spiralling motions, I was coming to terms with my own relationship to Chinese culture and the kinds of spatial concepts that I had absorbed during my time there.

Many of the cultural psychologist Richard Nisbett's concepts concerning the differences in the world views, and perceptions of Asians and Westerners strike a chord of truth for me. As noted earlier, Nisbett's proposal that one's cultural orientation to the world can change over time as one lives in an "other" culture has been particularly valuable in understanding my own journey. He notes, that there is plasticity to the social characteristics of people raised in very different cultures (2003, 68). My time in Hong Kong shifted my personal perspective. Hong Kong's culture influenced and increased my awareness of the interdependence of all aspects of life. As I considered issues, I now valued the context and nature of

their relationships in a more holistic way, and my choreography was affected as well.

In *Being There,* I explore certain ideas of balance and harmony in space. The rolls of the balls, the interactions between the dancers to each other and to the environment, reflected a sense of interdependencies and correspondences. For example, in the duet section of the work, one dancer seems to fit herself into the spaces of the other, fulfilling the arcs and spirals of her moving. The two dance, breathing as if one. The spatial pathways within the work flowed one into another, also reflecting the Eastern concept of harmony or the "Middle Way." Nisbett describes the Middle Way as a kind of Chinese dialecticism, which seeks to perceive things in their contexts. He states, "events do not occur in isolation from other events, but are always embedded in a meaningful whole in which elements are constantly changing and rearranging themselves" (27). According to this world view, to reason and understand the world, one must see it within its wholeness, and to be able to see people, events and objects within their context. This concept allows for contradictions, for the concept of yin and yang, and for the existence of contradictory qualities which exist within and because of the other. In Chapter 26 the Tao *Te Ching* says "the heavy is the root of the light ... The unmoved is the source of all movement" (in Nisbett, 14). The influence of Taoist philosophy is apparent in *Being There,* in that it is a world-view which seems to move in endless cycles. In one of the thematic movement patterns of the work, a dancer gathers the energy of the ball into her center only to let it move out again in fluid spirals; the outward action existing within and because of the inward action.

I was, of course, influenced by the wonderful dancers with whom I first created this work. I had worked with each of them intensively and intimately over my time in Hong Kong. Many of them had been trained in classical Chinese dance as well as contemporary dance forms, and that vocabulary, plus the world

views of their culture, were embedded within their bodies. In addition, they had all studied with me extensively and danced in my company over many years, and there were mutual and profound influences going in both directions, a cross-pollination of ideas. The basic thematic movement phrases in the dance used a convergence of contemporary dance practices and traditional Chinese dance. For instance, towards the end of the work a female dancer enters the stage winding and unwinding a ball up, under, and around her body, rolling it across her body surfaces in motions reminiscent of the many traditional Chinese dances which use props such as fans or cups. Another dancer enters and the repetitions of the movement, and the spatial relationship between the two, brings to mind postmodern dance. And, as a third and then a fourth dancer enters, the formal patterns of their movements, the lines and shapes they create in space and their spatial relationships, with sudden stops and starts, further these impressions of both Western and Eastern sensibilities.

Other aspects of Chinese thought also influenced this work. As I noted in previous sections, according to Nisbett, in the West we see the world as being made up of "discrete objects"; the Chinese, on the other hand, perceive the world as being composed of substances. To the Chinese mind, attempting to understand an object without appreciating its context is not productive. Nisbett states that in "looking at a piece of wood, the Chinese philosopher saw a seamless whole, composed of a single substance, or perhaps interpenetrating substances of several kinds" (Nisbett 2003, 18). These perceptions became a part of and, I believe, were incorporated into the qualitative aspects of the movements in *Being There* as they subtly shift and alter throughout the work, returning, and diverging from a core. There is a sense of *chi,* variously described as "breathe," "air," or "spirit," flowing through this work. This poem from *Tao Te Ching,* one of the basic philosophical writings of Chinese society, reflects a sense of oppositions of energies as they move towards balance.

To shrink something
You need to expand it first
To weaken something
You need to strengthen it first
To abolish something
You need to flourish it first
To take something
You need to give it first
(Tao Te Ching, Chapter 36 in Nisbett, 14)

Chinese orientation was shaped by three philosophies: Taoism, Confucianism, and Buddhism, each emphasising ideas of harmony and discouraging abstraction (Nisbett 12). Concepts from these Chinese philosophies influence Chinese movement forms. In writing about the essence of Wushu (Chinese martial arts), Yuh Niuy, a young female swords-woman during the Warring States period of Chinese history (770 B.C. - 221 A.D.), states,

The Way is so small and simple, but the meaning is timeless and profound.
The Way has an entrance; it also has a Yin and a Yang.
The entrance constantly opens and closes,
Yin and Yang weaken and flourish.
When the Way is battle, be full-spirited within,
But outwardly show calm and be relaxed;
Appear to be as gentle as a fair lady, but react like a vicious tiger.
Though hidden within, the spirit of the body moves;
Though obscured like a setting sun, the spirit moves like an unleashed rabbit,
Catching the body and outrunning shadow like a mirage.
Back and forth in one breath.
The spirit cannot be retained in form.
And, though ever moving, it cannot be heard.
(Liang Shouyu, *An Introduction To Chinese Martial Arts* Translated by Bill Chen and Mike Sigman).

All of the impressions from the culture I was living in seeped into the creation of the work and are woven into the texture of *Being There*. The movement patterns and qualities evident in this work, as in much of Chinese dance and martial arts, possess a sense of pulling inward towards a core, gathering energy before thrusting and counter thrusting, and spiralling outward

into space. The physicalities at play within this work, and the movement of the balls combine to create a strong kinaesthetic response within the viewer. *Being There* is a dance which explores unpredictability and it is particularly valuable to my understanding of this work to bring into account recent research in neurobiology, in addition to exploring its various cultural influences.[40]

As we watch the dancers' spiralling movements in *Being There,* we are able to understand what they are doing by feeling these sensations in our own bodies, not just thinking them. As I discussed in Part 1, in observing an object in motion we form an internal image of the trajectory of that action up to that point, and then are able to make a prediction of where that action might go in the future. Some of the most compelling evidence about the predictive way motion is perceived has come from studying ball sports. (Hagendoorn 2004, 84). These ideas seem particularly relevant in reflecting upon the viewer's responsiveness to the motion of the tennis balls in *Being There,* as they float through the air, or as a dancer dodges in trying to catch a ball, or as another dancer tries to balance precariously on top of the balls' rounded surface. The viewer has the kinaesthetic feeling of the speed, of the effort and shape, the trajectory and dynamics of these motions. The spectator experiences these images as if they are inside the action as an active participant.

As a result of the ways in which the balls, the dancers, and the environment interact, the viewer tries to predict the outcome of the motion, anticipating where the actions of the dance will next go. All of these elements converge to influence the ways we engage with this work and the kinds of meanings it conveys. I consider *Being There*, which I choreographed during the time I was preparing to leave Hong Kong, a companion pieces to two other works which I created afterwards, *Ten Blocks* and *Break/Down.* I choreographed these works during

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[40] I choreographed the first version of *Being There* before I began my research for this study and was surprised to find that neuroscientists were exploring areas of ball sports which I intuitively approached in this dance.

intense periods of transition. In all three I explored ways to find meanings in simple images, trying to reduce the world, almost to simplify its form, in order to perceive it more deeply and sharply.

CHAPTER 8: Ten Blocks & Break/Down:

In returning to New York in 2004, I came home to a city I no longer really knew. Although post 9/11 New York looked familiar to me in many ways, the streets, buildings, dance studios, theatres, and people were no longer the same as before. Neither was I. What was my relationship to this familiar yet foreign place that was my home? I began to work on choreography in dance spaces I had known, yet no longer recognised. I craved a solid place which felt safe.

Perhaps these were some of the reasons I began working on *Ten Blocks* at this time. The 6" by 9" yoga blocks which I used in the work, although made of foam, appeared solid, something to work with and against. They provided something to hold onto as well as a platform to stand on both literally and figuratively. As is often the case in these initial explorations, I was conscious of only some of the elements that were propelling my explorations. I allowed myself to trust my intuitions and allowed my imagination to guide me. In retrospect, I sense that as I stacked one foam block on top of another and built choreographic structures with movement, I was also trying to rebuild the structures of my life. In the studio I found ways to build houses, to balance on top of the blocks, to find shelters and comfort within their confines. In these explorations, my state of being seemed to strongly determine the shape of the dance I was creating.

As I continued to work, the immobility of the blocks presented limitations as well as possibilities. They opened the spaces of my imagination, yet they also presented obstacles. For instance, once a block was placed on the floor it was immobile. The dance at times seemed to become a spatial puzzle as I pondered ways to move the blocks from one position in the space to another. At one point in the dance, the blocks were on the floor in a circular pattern. How, I asked, could I move them into a line? Would the dancer have to pick the blocks up and move them with her hands? Kick them with her feet? Slide them as she stood on

top of them? The spatial puzzles that the blocks presented to me in the studio seemed to reflect the kinds of puzzles I was facing within the spaces of my life, in this city I used to know so well. The structure of these rectangle foam blocks was simple and obvious. The different kinds of blocks I encountered outside the studio, both physical and emotional, were complex and diffuse. In reflection, I see how the process of creating *Ten Blocks* gave me the space to cope with the tangled energies in my life at that time.

As I explored the hidden dimensions of these blocks, their physical properties would suggest and inspire further pathways and possibilities. Making dances is never a linear process for me. I often feel I am in a spiralling process, with one idea arcing back onto another, with images criss-crossing and ricocheting.

During the period I was working on *Ten Blocks* I entered the graduate program at London Contemporary Dance School. Stimulated by my explorations of space in the studio, and my questions of the ways choreographic space accumulates and communicates significance, I deepened my understandings through readings of the works of various theoreticians and the energy from my readings ignited ideas. I connect these concepts to my choreographic practice, and believe that my choreographic practice strongly informs and enriches my understanding of these theories.

Both *Ten Blocks* and *Break/Down,* the dance I created during this same period, use solid black rectangle blocks. As in *Being There,* I was interested in exploring the ways shape and form can convey meaning in dance. The shape of the block, its rigidity, and immobility imposed an atmosphere on these works.

Ten Blocks was created for a female dancer who manipulates the blocks, creating structures which she moves through and around. In New York, I first began working on *Ten Blocks* as a solo dance for one dancer and one block. In the fall of 2004, I came to Laban in London to work with their students on a piece.

I used some of the material I had been working on in this solo and choreographed *Break/Down* for sixteen dancers and sixteen blocks. This fifteen minute work was performed by the students at the Bonnie Bird Theatre at Laban and toured to other venues in England during the spring of 2005. I returned to New York and reworked the original material, this time working with a single dancer and ten blocks. I also created a version of *Break/Down* for a group of fourteen dancers in Hong Kong in the summer of 2005, which was performed in Hong Kong and Malaysia in 2005 and 2006. For both *Ten Blocks* and *Break/ Down* I used selected excerpts from Meredith Monk's musical score, *Mercy.* Some of the movement phrases and qualities were similar in these dances, but the cumulative atmosphere and affect of each work was different.

Ten Blocks exposes feeling states, the emotional journey of the solo dancer as she moves through the work; while *Break/Down* locates the ways a community can build up, and then dissolve or deconstruct. I view them both, however, as exploring related issues. In contrast to the properties of the balls in *Being There,* the blocks appear as solid forms, creating a feeling of weight which affect both the movement qualities as well as structures of these works. In their apparent solidity and stability, as well as inflexibility, the blocks limit the dancers' possibilities of movement in the world of these works. In contrast, the circular shape of the balls in *Being There,* with their mobility and sense of precariousness, allows for a sense of possibility. As a ball spirals and arcs through space one senses the unknown, and the possibility of hope and new adventure around each turn. The blocks seem to transform, at different points, in both *Break/Down* and *Ten Blocks,* from places of safety to prisons, from a border one cannot cross to a stepping stone or to a vehicle to another place. Bachelard writes of the relationship of "the geometry of the small box and the psychology of secrecy" (1994, 82). *Ten Blocks,* especially, seems filled with secrets. The dancer's movements are internal and her sense of space enclosed. In these

works, as in *Being There,* I was interested in the transformative qualities of a simple form, how as Bachelard states, "simple things can reveal strange subtleties"(1994, 110). In coping with the environment created by the objects in these works, the dancers journey through many states of being.

The blocks, in their shape, colour, solidity, and the ways they are used by the dancers create an atmosphere of danger and withdrawal. The dancer is captured within the environment. In *Different Trains* the boards serve to separate the dancers from each other and from their environment, while in *Ten Blocks and Break/Down* it is the blocks which isolate the dancers. Yet in *Break/Down* and *Ten Blocks,* in particular, this separation creates a place, not of shelter or nurture, but one filled with menace. The dancer in *Ten Block*s is trapped and imprisoned and even when encircled by the blocks her movements are spiky and bound. She does not fit. She is a square peg in a round hole. She rubs against her environment, struggling with it. You can see this in the shape and effort of her movement as she presses out with bound energy, pushing against space, and then withdrawing from it. As she tries to balance on top of the blocks they create an uneven floor, and in contrast to the ball dance, her attempts to find balance take on a sense of struggle, an ominous tone. There is danger within this environment.

In *The Poetics of Space,* Gaston Bachelard writes, "space that has been seized upon by the imagination cannot remain indifferent space, subject to the measures and estimates of the surveyor. It has been lived in ... with all the partiality of the imagination" (Bachelard 1994, xxxii). Bachelard's ideas illuminate aspects of the ways space communicates layers of meaning in *Ten Blocks*. This ten minute work is a character study, which through its use of space explores both physical and emotional states of being. As the dancer copes with the physical environment of the work, living within its spaces, there is an intensely dynamic relationship set up between the dancer and her surroundings. For

Bachelard, "humans affect geometrical form, geometrical form also affects those inside it" (60). One can see these ideas within the dynamic exchange of energy as the dancer affects the space around her. She, in turn, is affected by the properties of the blocks and the configurations they create, as they enclose and seemingly imprison her. Space influences the feeling of movement and vice versa. The blocks delineate the external environment of the dancer creating circles and squares within which she is bound, and these spaces come to serve as a metaphor for her internal states as well.

These concepts recall some of the original questions posed in this document. Do people in certain "states of being", such as elation, fear or depression, envision space in similar ways? Do these spatial images, as well as the kinaesthetic feelings generated by those states, convey meaning to the viewer when translated into choreographic form? Often in a depressed state, one feels confined, imprisoned, blocked. How would confining the dancer, blocking her use of space, affect the feeling of a work? In *Ten Blocks*, I explore a feeling state, and how the mind/body perceives internal space and acts upon external space within that feeling. As I created the work I searched for the images, the spatial physicalization of that state. This work was informed, inspired and shaped by these investigations through both my practical research and my readings. *Ten Blocks* evokes a sense of bound and compressed feeling states as the blocks seem to imprison the dancer; holding her back; pulling and repressing her actions; making her movement heavy and inward. The observer responds kinaesthetically as well, sensing these feelings within their own muscles, sharing in some way her physical sensations, and by doing so, empathising with her state of being. This image of a prison becomes an embodied metaphor for the internal states of the mover.

These ideas also correspond to Laban's concepts of space harmony or choreutics, which seek to discover an interrelationship of pathways in space and

emotional moods. Laban argued that spatial nuances or shifts can show mental and emotional attitudes, and that you could relate a moving person's feeling for dynamics to the space pathways in which that person moved. As I discussed in part 1, he proposed movement affinities between expressive actions or feelings and the spatial pathways you use. For Laban, space influences the feeling of movement and vice versa. The internal world of the mover is linked to the external world, and to his actions in space (Matluck Brooks 1993, 35; Daly 1988, 48). Laban's concepts provide a framework to understand and analyse the underpinnings of this work's complexities and dynamic qualities and illuminates how the psychological and physical worlds of the dancer are intrinsically bound. The space around the dancer and the ways she moves within it, strongly reflect her inner states of being. As the work unfolds spatial nuances demonstrate her shifting mental and emotional attitudes.

In *Ten Blocks* the dancer, encircled by blocks, advances forward with slow cautious actions, then jumps suddenly back, pulling into herself, retreating into the boundaries of her body, her prison. One can link this to Laban's observation that as one moves inward towards their core, enclosing themselves, there is an increase in the sense of bound energy. In *Scenes from a Mirage* I used a forward/ backward spatial pathway in the sagittal plane as well, but to a different effect. At the end of *Scenes* there was a backward feeling pulling the dancers; they seem to be suctioned into the rear stage. Although similar spatial pathways were used in these works there were differences in the effort used in these movements which change their meanings (Bartenieff and Lewis 1980, 87). In *Scenes from a Mirage* the dancers are allowing themselves to be pulled back into space. In *Ten Blocks* the dancer is fighting the push and pull of the space around her, rather than indulging in it. There is a war going on inside, and outside her body, which we do not sense in the community of dancers in *Scenes.* As we sense her

externally bound muscular effort, her internal feelings appear to be externalised into spatial tensions, serving as metaphors for her emotional states.

METAPHOR

At the beginning of *Ten Blocks* the dancer moves atop one of these 6" by 9" blocks, precariously trying to balance, cautiously reaching her arms and legs out into the spaces around her, and quickly withdrawing back into herself against the unknown spaces around her enclosed box, her world. The box becomes a metaphor for this dancer's world, its limitations, its darkness and rigidity. Within the dancing space the audience views the dancer standing on a small box. Yet that is not all that they see, for through the action of the imagination a new reality is made, enlarging their understandings. Through this metaphor the viewer becomes part of the dynamic process of conveying meaning in this work. As the dance progresses, the block takes on new meanings. At the end of the work the dancer creates a diagonal with the blocks from down-stage right to upstage left, and as the dancer steps from block to block her journey takes on new qualities. The diagonal, as Laban has suggested, can produce a sense of lability, of change, the world of this work no longer seems fixed and stable. As the dancer walks on this diagonal of stepping stones we feel her journey has changed, she is moving to a new place, no longer stuck in her own dark world.

In *Break/Down* the blocks conjure up other associations as well. At points, the dancers stack the blocks one on top of the other, and these objects then appear as building blocks or bricks which create structures within the space. As these are built up and broken down by the dancers, the spectator senses the construction of a place and a society. Yet as these precarious structures tumble, there is a sense of the fragility of these communities, of their possible deconstruction or even destruction. One can relate this continuous process of lining up, as well as passing through of ideas, structures, images, spaces, rhythms, and dynamics to Massey's concepts of the ways societies build up and

break down. For her, place is made up of the interactions and interrelationships which bind it together. These are not static, and cannot be frozen. Place, then, is always in a state of process, and *Break/Down* and *Ten Blocks* reflected the shifting and changing nature of the places and spaces around me.

CHAPTER 9: Moving Space & Spaces

Moving Spaces (2007), was made during the time I was working on this dissertation and was directly inspired by my readings on space, and particularly ideas of the relationships of time and space. I had been impressed by a film I had seen the previous year, *Decasia* (2002), and the processes the filmmaker, Bill Morrison, had used to put together this work. He had spliced together and re-shot decomposing black and white film clips which seemed to liquify before one's eyes. I was also fascinated by the accompanying soundtrack by Michael Gordon and the ways the sounds seemed to deconstruct. Through its use of sound and imagery, the film conveyed a sense of the decay of time and space. It was as if one could see and hear the past in this work through the scrim of its own deconstruction.

In 2005 Gordon and Morrison released *Into the Light,* a shorter collaboration which dealt with similar themes. Once again, these artists set up a series of profound associations for me. I felt them working between intersections of time and space in their reflections on memory, the distorting effects of time, and the beauty one can find in decay. I was intrigued by the extremely minimal yet romantic score, as the sweet acoustic sound of the violins seemed to try to break through a metallic steady pulse. The work examined issues similar to those I was exploring in my own research. The sounds of the score seemed to advance forward in space with an inevitability, like our lives, where we know death is at the end of our journey. The music gave me a sense of time marching forward through space. It was minimal and repetitive like the ticking of a clock. Similarly to Reich's score, *Different Trains, Into the Light* conveys a sense of time like an arrow, yet Gordon's score is simpler and in its horizontal motion it appears as if on a single track. These associations between the relationships of time and space in the music brought me back to concepts I had been exploring in the studio and my readings.

As I began to explore these elements alone in the studio, other themes and inspirations intersected with these notions. My ideas built up and spiralled around each other as they pulled and pushed, expanding my visions. I sensed that within what appeared to be a single pathway or focus, there could exist a storm of turbulent energies. I also became intrigued with the notion of the atmospheres of the spaces around us, and how those atmospheres can seem to change much like the weather: at one moment chaotic, the next quiet and still. I was interested in exploring the shape and texture of a space in the quiet stillness just before or after a storm. At those moments, it seems one becomes so much more aware of the forces of nature and the power of the natural world. These concepts seemed connected to the forces within Gordon's work.

In the score, turbulent energies juxtaposed against quiet stillness, as if one were hearing the calmness within the eye of a storm. The music gave a sense of impending doom. I wanted to play with the dualities between movement and stillness, between slowness and speed, between the storm and the calm. For inside the tension of quietness in this piece I sensed great power. I was reminded of the Chinese concepts of yin and yang. I began to work on translating and exploring these ideas in movement, to find a way to make them physical.

The ideas I explore in this dissertation directly inspired this dance. As I worked in the studio, even more consciously I began to interweave my theoretical research with my practical work. Each day in the studio would generate new ideas. The way one dancer lifted another; how a dancer looked as he stood in repose in the sunlight; the ways another had mistakenly turned in the wrong direction and had thrown the movement in new directions; another dancer's quiet stillness as he rested after a long series of movements, all these things inspired me in unexpected ways. I felt as though I had struck gold when ideas and concepts from my readings would take off and lead me into movement and then double back, spinning me towards new and related concepts in my theoretical

research. This back and forth from thoughts and images to kinetic action kept the energy of the process going, allowing new creative synergies. The elements I was inspired by and working with, layered on top, beside, and around each other refracted in ways that allowed me to see their dimensions. I began work-shopping these ideas during a teaching residency at North Carolina School of the Arts in 2005. At this time I had formulated my research questions, and was beginning my initial readings for this dissertation. My practical research informed my readings, but I also explored the ways my readings inspired the movement I was creating.

Twenty eight dance students took part in my repertory workshop in North Carolina. With this large group I set about creating a storm in the dance space of swirling energies and pathways, and then sudden stillness as if the space had cracked opened and lightening had struck. I began experimenting with contrasting ideas of slowness and speed, of stillness and order in space. In groups of four or five I had the dancers make walking spiralling patterns. I then overlapped these patterns in space, adding the ticking of a metronome which foreshadowed the pulse of Gordon's music and its sense of time marching on. The space became filled with spiralling, intersecting forces sweeping in different directions. I had all but five of the dancers suddenly fall to the floor. The space which had been so turbulent now appeared silent and still. The fallen dancers were scattered throughout the space like rocks across a landscape. Five dancers stood facing towards the viewer. As the first strands of Gordon's music began imperceptibly, these dancers began to step in slow motion towards the audience. The multi-focus and seeming chaos of the beginning of the work had disappeared. For the rest of the piece the dancers' focus would remain forward (frontal) towards the viewer. I wanted the rest of the piece to become one continuous journey, with many twists and spirals, but never veering off its course towards its final destination. As I worked with these young dancers, I was inspired

by their energy, the storms they created as they moved through the space, the quietness of their stillness, and the architectural forms I could build with their bodies. My work in the studio each day further fuelled my imagination. As the dancers stood grouped together at the far end of the studio and walked in slow motion towards me, I could sense the power in their mass. The dance began to reveal itself to me.

Gordon's music, with its use of decay, suggested a sense of mortality, and the notion of inevitability kept circling back to me. During my residency in North Carolina I read and was inspired by Yi Fu Tuan's *Space and Place,* as well as Drid William's *Anthropology and Human Movement: Searching for Origins.* Both authors address how people in different cultures sense time in different ways. Some cultures feel time moving under, around, and over them, others feel as if they move through time, and others visualise time as a large mass descending upon them (William's 2000, 86-93; Tuan 1994, 118-136). Watching my students move down-stage in a mass with the pulse of Gordon's music I felt time and space conjoined, as if the inevitability of time was marching slowly towards me. The slowness of their footsteps suggested a large rock falling towards me in slow motion. I was aware of its final destination, but unable to move from its path.

I continued to find ways for the dancers to embody my reveries of journeys through the past, the present, and a predestined future; through near space and far space, and the ways these concepts could refract and reassemble around each other. Dancers slowly advanced towards the viewer as other dancers passed through them, sliding through their legs or climbing over and around them, journeying through the landscapes of each other's bodies. As they slowly walked forward in a narrow line, the dancers and I experimented with finding ways for one dancer to replace another in the line. I began to sense the long line of humanity as one generation replaces another in the march through time. My studio time with these dancers stimulated my reveries of time and space further

enriching and spinning ideas and images into new directions. With these explorations and readings reverberating within my imagination. I returned to New York and continued work-shopping these elements with a smaller group of dancers.

In *Different Trains* and especially *Scenes from a Mirage,* their dancing spaces were transformed into places through the use of specific references to outside events and images. In *Moving Spaces* and its companion piece *Moving Space,* I created abstract spaces, which although filled with specific atmospheres and energies, did not address specific and concrete details of the world. The nature of these spaces were influenced by the ways I conceptualised and visualised space and time. As a child, I heard someone speak of time as a journey, with an all-powerful being perched above us, as we passed through life as if in a parade. I envisioned a man sitting on a tall chair like a lifeguard's bench on a beach, as humanity marched by below him. This being sat in the centre of a stage in my imagination as hordes of people paraded by. In time, this image mingled with images from various films, such as Ingmar Bergman's image at the end of *The Seventh Seal* (1957), as characters parade across the rim of a hilltop. At other times, I sensed this journey as related to a long horizontal line moving towards and away from the viewer, like the line of trees in Antonioni's film, *The Passenger* (1975), or the pathway taken by the tramp in Charlie Chaplin's movies. These images, I realise now, influenced my own imaginings about the relationships of time and space, and became recurring metaphors in my work, merging with my own concepts of space and time. These images took an auditory form in the footsteps which move away from the listener in Herbert's poem. These were some of the elements I was interested in exploring in these works.

MOVING SPACE

In the spring of 2006, Allen Lam, a dancer who had been in my Hong Kong company, Dance HK/NY, asked me to choreograph a solo for him which would be presented at the McAulay Theatre at the Hong Kong Arts Centre in the fall of that year. Lam came to New York in June and July, and we worked on the solo during that time. I decided to continue working on the themes I had started to explore in North Carolina in this new work. I was interested in the ways this journey could take a solo form. In this dance I continued building storms of motion contrasted against moments of quiet stillness. As in the group version, the movement grew out of a simple slow motion walk. I restricted the dancing space to a narrow, stark corridor whose seemingly rigid boundaries seemed to confine the dancer. It was as if this abstract space became Lam's partner in a pas de deux of push and pull. The drama of this work was in the tension between the solo dancer and the contained space surrounding him. As in my group experiments for *Moving Spaces,* I restricted the spatial and movement elements of the work so that I could explore them more deeply. I concentrated on developing movement using the forces of space in front and behind the dancer. At points, Lam seemed to be thrust forward and backward, at other times he seemed to be trying to push back at the limitations of the space. In the studio, we experimented with him slowly progressing forward as he found ways to pass through his own body, moving over his own arm, under his leg, around his torso. These movements seemed to transform his pathway, giving it a kind of topography of hills and valleys, of slippery curves, and sudden dips. The space began to have dimension and texture. Space took on a character and Lam danced with it.

In *Moving Space,* I played with the dancer being very far upstage and moving straight down-stage towards the viewer. As in *Moving Spaces* it was as if he were moving through time or time was descending upon him and moving through him. Here too, I explored the concepts of the ways different cultures

envision time that I had been introduced to through my readings. *Moving Space* is restricted and simple in its use of space. Yet as Lam moved through his pathway, it was as if he was struggling with the forces of the whole universe. In the last section of Cunningham's *Place* (1966) which I discussed earlier in this document, Cunningham tried to fight his way out of a paper bag. It was as if this very small and distant figure was taking on the whole world. In viewing the ways I condensed space in this work, I am reminded of these images as well as Bachelard's reflections on the ways one can see the immense within the miniature (Bachelard 1994, 161).

As in *Moving Spaces,* I used Gordon's music, *Into the Light.* To heighten the music's sense of movement within a single track, of time looming and pressing into you, of overcoming you, I restricted the use of space to a confined upstage/ downstage strip through the centre of the stage. In limiting my spatial choices in both of these works I was able to hone in on and focus my investigations. In this work, space seems to be exerting forces, as it pushes and pulls on the dancer, pressing him onward, unrelenting. Reflecting on this work, I paraphrase some of John Martin's vivid descriptions of Mary Wigman's use of space in her dances. While, of course, my dances are very different from Wigman's there are still correspondences, for in *Moving Space* space takes on a forceful character, as Lam engages those forces within him and around him, at times opposing them, at others yielding. His identity in this dance, formed by them (Martin 1965, 230-231). In Lam's solo, as in the other dances that I reflect on, it is clear that space cannot be isolated; it is part of a nexus which includes time and effort factors.

CONCLUSION

I began this project to discover how space and movement are tied to meaning. Reflecting on the ways I create and view space, I sought to understand the factors that contribute to its resonance. I explored the ways our perceptions are influenced by culture, personal experience, and biology, and asked to what degree our responses might be universal or unique to each of us. How did the spaces of my life and dancing affect my states of being and vice versa? How does one think in and about space? In what ways do my dances convey the ideas and emotions I embed within them to their audience? Seeking answers, I looked not only to my own practice, and to the work of other choreographers, teachers, and dance writers, but also to theorists in other disciplines. I was not so much interested in finding definitive answers but in the processes set in motion by the questions themselves. I entered this project primarily as a practitioner with some questions and curiosity about where the academic process could take me. I have come to find, through the process of writing, choreographing, and researching, a much deeper understanding of choreographic space.

This project traces my journey through the places and cultures that I have lived in and the real and imaginary spaces of a selection of dances I created. Drawing from my theoretical readings, I explored concepts concerning meaning, space, and the body in motion and linked these ideas to my practical research. I discovered how in the making of a dance my sense of space could reflect the intimacy described by Bachelard, the metaphorical interactions of space and time or the spatial geometries and emotional correspondences of Laban, the plasticity of the mind or the anticipation and disruption of expectations noted by Hagendoorn. At the same time, I looked at how my dances articulated the cultural meanings of space that I acquired as a expatriate living in a Chinese culture in Hong Kong and as a second generation American Jew growing up in New York City.

Through a close reading of my works, I demonstrated how this mixture of spatial factors and influences combined and converged. Exploring my spatial choices, and the elements I interwove within these works, I reflected on the meanings these dances convey to me. I also looked at the ways the spaces of a dance express significance through a transaction between the choreographer, the work, and the viewer. Throughout this study I highlighted the contextual nature of dance and the ways a confluence of elements contribute and combine to create meaning. I continue to be influenced by Laban's view of movement as a complex interweaving of spatial, temporal, and effort factors. In a dance, one or another of these elements may predominate to create its resonance. Movement in space communicates differently in different contexts. Dancers moving towards and away from the audience on an upstage/downstage pathway in my work *Scenes from a Mirage* make it seem as if the spectator is moving. In another work, *Moving Space,* that same spatial pathway suggests the passage of time, like a road towards one's future, it appears as if time is moving towards the spectator. These spatial perspectives arise from the dances' use of time and energy, and from their interwoven strands of cultural, personal, and biological influences.

Ideas of space cannot be isolated. Space does not exist without time, and through my writing and reflections upon the past spaces of my life and work, I more fully appreciate the ways time affects my own perceptions of space. I am different now than when I choreographed the works I have written about here. My body in space is different and the ways I perceive these past experiences continue to change, just as my perceptions of the present and the future shift. As I look back over my history in dance and the places I moved through and continue to explore as I create dances, issues concerning time and its fleeting nature have increased relevance. In this thesis I undertook a reflective analysis through which a new set of questions have arisen for me concerning the relationships of time and space and the tensions created by one's desire to hold

either of these elements in place. As I go forward within my practice I am continually intrigued by questions related to memory and the organisation of those neural networks deep inside our brains through which we perceive and recall complex experiences, by the manner these ideas affect and enrich my work, and relate to the ways my dances communicate.

As I reviewed and analysed my dances within this document, I sought to contribute to a further dialogue between practice and theory, and to appreciate the importance of artists communicating their ideas both through their art and through their writing and speaking. Often, little time is available to write or communicate their practical findings within scholarly formats. Yet, through theory, by which I mean not only movement analysis but also cultural and personal reflection and examination, one can bring clarity, depth, and richness to their practice and vice versa. Choreographers' reflections on their work can broaden understanding as they add to the existing literature on dance and culture. Critics, too, have written about spatial issues in dance. In her 2007 *Dance, Space, and Subjectivity,* the dance critic and researcher Valerie Briginshaw explores the use of space in dance, and its role in the construction of identity. While her insights are illuminating, and thought provoking, her ideas come from a perspective of an interested, informed, and perceptive observer. My reflections on these issues reveal other perspectives, from my experience as the creator of the works I address. These reflections are valuable as they document insights from within the creative process, and use knowledge gained through and about the body and space to enrich the existing literature. Choreographers since the beginning of Western concert dance have written and spoken articulately about dance. Right now this discussion about choreography and experience is happening via the

internet, and in discussions of the processes of dance-making in studios, classrooms, and cafes, as well as online in chat rooms and blogs (Satin 2009).[41]

These dialogues and studies, like the one I have undertaken here, are especially relevant now. Living in a world of increased travel and almost instantaneous communication has led to a phenomenon which has been called 'time-space compression', and a world described as a global village (Massey 2008, 24). When I first lived in Asia in 1989 I felt isolated from the Western contemporary dance scene I had been a part of. However, when I left Hong Kong, in 2002 this had changed, for I was able to receive emails and pictures from my New York colleagues or read the reviews of their dances online as soon as they appeared in the newspapers. Now I can watch the new work of my colleagues in Asia on YouTube immediately after their work's premiere. Through real time sites a choreographer, for instance in London, can watch a rehearsal of their dance taking place in Hong Kong and give feedback to their dancers in real time. In this era where things appear to be speeding up, and there is a sense of 'time-space compression', it is vital to understand and respect the differences in world views and perspectives between Asians and Westerners in their perception, experience and use of the spaces of their worlds. In my experiences living and working in Asia and through my research for this dissertation, I more fully appreciate the concept that thought is not everywhere the same. I agree with Richard Nisbett's assertion that Eastern cultures are relatively interdependent in their thinking, and issues in those cultures are viewed in a holistic way; while Western cultures cultivate independence of thought and regard the spaces of their world in discrete units, viewing ideas and objects individually (Nisbett 2003, 86-96).

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[41] For further discussion of the interplay between theory and practice in the contemporary dance community see Leslie Satin's "Intellectual Underpinnings" in the Winter (2009) issue of *Dance Research Journal*.

Looking towards the future, these reflections take on even greater resonance not only in terms of the internet and its 'time-space compression' but also as China becomes an even more powerful force on the world stage. Many view the present as the Asian century with power shifting from the West eastward to Asia (Greenway 2008). With China's emergence as a world power, Chinese art has much greater exposure and influence. There is an increase in the visibility of Asian artists and choreographers and their ways of viewing space and movement. My own research, observations, and conclusions along with those of others on the differences in the ways Easterners and Westerners perceive and utilise space, open a series of new questions. At this point, one wonders how the work of Asian choreographers and dancers will influence Western dance makers and audiences in the future. Will there be more trends towards homogenisation or globalisation of contemporary dance? If values, and beliefs between East and West converge, how would the processes of creating and viewing dance transform as well? In what ways will local traditions and preferences continue? In what ways will they be altered? These are questions for future research, and important issues to be addressed in dialogues between Eastern and Western researchers, artists, and audiences.

In addition, dialogues which can extend across disciplines are especially relevant now. Research into human cognition and perception continues to expand, and artists who are exploring these issues have much to add to these bodies of knowledge. Ten years into the 21st century, our methods of examining and measuring how we make meaning of the world have expanded, opening new vistas into how the mind and body thinks and works. Dance practitioners engaged in an embodied art form are at the front line gathering information about neural networks between our physiology and our brain, and their experiences and insights can open a window into those pathways.

My research into these ideas and their relationship to space have broadened and influenced my reflections and practical work, and have opened new pathways for future explorations. My creative journeys through space within my practice allow me to see even more deeply into the ways the brain and the body think in motion. Ivar Hagendoorn, whom I have written about in this dissertation, is among the artists who have been inspired by these new ideas in science. He not only writes about scientific explorations of the brain but also choreographs and has collaborated on various research projects with the choreographer William Forsythe. In a collaborative project, *Thinking in Four Dimensions* (2005), in Melbourne, Australia, Shirley McKechnie led a group of choreographers, psychologists, and cognitive scientists in investigating the ways choreographers and performers create movement, and audiences respond to their experiences of watching dance. Wayne MacGregor collaborated with cognitive scientists and social anthropologists on the Choreography and Cognition project (2003-2004), which culminated in MacGregor's dance, *Ataxia* (2004). MacGregor has continued to use scientific principles as a source to create work; in *Entity* (2008), he explored artificial intelligence and cognition. The choreographer Carol Brown collaborated with the architect Mette Ramsgard-Thomsen, to create *The Changing Room* (2004), exploring space and interactive technologies. Choreographer Jennifer Monson created iLAND- Interdisciplinary Laboratory for Art Nature and Dance, to promote cross-disciplinary research among dancers, environmentalists, scientists and urban designers.

My interests in the neural basis for creativity and the ways my practical research may play a part in developing ideas concerning neuroaesthetics continue to evolve within my choreographic practice as well as my teaching. This past spring I taught a course entitled "The Brain on Art" exploring what art communicates to us about how our brain works and what the brain can tell us about the ways we perceive and conceive art. Within these classes, as well as

my dance composition courses, I incorporate concepts and explore questions raised within this dissertation; issues such as anticipation and disruption, mirror neurons and empathy, Ramachandran's universal laws of art, memory, motion perception, and recognition of facial and body expression. Through both class discussions and the making of work we explored the ways these issues impact on both the appreciation and creation of art. Both the level of work produced and the enthusiasm generated through these discussions and explorations encourage my own investigations and point towards future possibilities in utilising this approach.

These kinds of explorations and inquires are vital, for findings in art and science can nourish each other. There are numerous ways of understanding by which artists, scientists, and those in the humanities, open and discover as they cross disciplines. Artists approach science with some degree of trepidation, worrying that their art may become overly rational. As scientists approach dance they must appreciate the necessity for multi-focused perspectives, recognising that merely measuring is not the same as understanding and that art cannot be reduced to a formula. These cross-disciplinary dialogues are essential. One cannot stay alone in the silo of one's own discipline; it is mutually beneficial to find ways to listen more closely and consider the relationships of one to the other.

Neurologists tell us that the body and the mind are not separate entities; the body thinks and the brain dances. As the maps of our world and the knowledge of our mind and body continually shift and change, our processes of viewing and creating the spaces of our art and our lives need to continue to expand and grow, remaining open and porous. Our beliefs and practices of dance will shift and change along with these perspectives.

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MOVING SPACES:

In this project I am inquiring into the meanings of choreographic space. Through my readings as well as my practical research I am examining such questions as how a choreographer takes his personal visions and senses of space and turns them into choreographic statements, how in their use of space, dances can convey meaning to the viewer. It is an investigation into the ways our perceptions of space are shaped by cultural, subjective as well as biological influences.

Some of my ideas about space will become evident in the work I'm presenting this afternoon. I will be analysing and reflecting upon these concerns in the written portion of my thesis as well. I will talk about that later on in this discussion. Today, I am going to show you three of the works I am examining for this project; they are part of my practice based research. The first piece, *Moving Spaces*, I created this past summer and was premiered in Hong Kong this past September. It was inspired in part by my research for this project on the relationships of time and distance, how we tend to measure time through distance. For instance, fairy tales often begin with the phrase "long ago and far away", equating the idea of a time long ago with a place far away. I was interested in the ways these ideas could be used within a choreographic framework. In *Moving Spaces* I played with the dancer being at times very far upstage and moving straight downstage towards the viewer, as if he were moving through time or as if time was descending upon him moving through him. The music by Michael Gordon also gave me a sense of time marching forward through space. The music is minimal, repetitive like the ticking of a clock. It is very much on a single track, conveying a sense of time as an arrow. To reflect that feeling in the choreography I restricted

the use of space to a confined upstage, downstage strip through the centre of the stage in order to heighten this sense of a single track, of time looming towards you, pressing into you, overcoming you. Here again time has a spatial dimension. In the work, space seems to be exerting forces, pushes and pulls on the dancer, pressing him onward, unrelenting. The space in this dance takes on a forceful character. (Show work.)

The next work is *Ten Blocks* with music by Meredith Monk. Here I was looking at questions concerning the meanings of choreographic space from a different angle. Do we in certain states of being, such as fear, elation or depression, envision space in similar ways? Do these spatial images, the kinaesthetic feelings generated by those states convey meaning to the viewer when translated into choreographic form? Often in a depressed state, one feels confined imprisoned, blocked. How would confining the dancer, blocking the dancer's use of space affect the feeling of the work? This piece has been informed, inspired, and shaped by these investigations both through my practical research and my readings in psychology and neurobiology of such writers as Semir Zeki and Antonio Damasio in his book, The Feeling of What Happens (1999). I'll talk about some of those ideas a later in this discussion, but let's look at the work now. (Show Work)

Other related questions came up as I was working on this piece. How does shape and form convey meaning in dance? The squareness of the form of the block, the rigidity of the shape, as well as the immovability of the object actually imposed an atmosphere to work. However, I kept being intrigued by how many transformations this simple block form could make. I started working on *Ten Blocks* as a solo dance for one figure and one block. I then came to Laban in London to work with their students and used some of the material I had been working on and choreographed a dance for sixteen dancers and sixteen blocks. I

ended up with a very different dance. I then returned to New York and reworked the original material, this time working with a single dancer and ten blocks and again I created a different dance that was the one you just saw. This latest manifestation of *Ten Blocks* brings with it the discoveries I've made concerning the different configurations and emotional narratives which have developed from my explorations.

In Ten Blocks I used a very simple geometric form which allowed me to spin worlds within worlds. In the work the block is used as metaphor, transforming at different points in the work from a place of safety to a prison, from a border one cannot cross, to a stepping stone, a vehicle to another place.

Bachelard writes in the *Poetics of Space* of the relationship of "the geometry of the small box and the psychology of secrecy." This piece seems filled with secrets; it is internal in its movements and sense of space. The piece has taken on that sense of enclosure. It's a work about small spaces, the dancer hiding, unable to break free of the environment. I was interested in the transformative qualities of this simple form, how as Bachelard states "simple things can reveal strange subtleties" As you've seen in Ten Blocks in dealing with the environment created by the blocks the dancer goes through many states of being. For instance, he must deal with the block and its unforgiving edges: even when he creates circular forms or moves in circular ways he must cope with a square world, a world filled with borders and corners for hiding. He can never fit into to his environment. The roundness of the shapes he tries to make with the blocks as well as with his body creates a tension, like a circle trying to fit into a round peg. This seems to further enforce a sense of uneasiness and enclosure within the work.

Now I'm going to show, *Being There* a work which I created in 2002, right before I moved from Hong Kong to London. In the previous dance I showed you I was dealing with blocks, here I am working with balls, moving from rectangular shapes to spheres, and circular shapes. In the process of revisiting and revising "Being There" this past fall as part of my practical research I again became aware of the transformative powers of the simple form, here a sphere, a circle, a spiral. We're going to do some excerpts from this work. The process of revising it has enriched my practical understanding into the ways I use space in my choreography. I'll show the work and then discuss some of these ideas. Here is the first excerpt --- Could you bring out the table. (Show work.)

In revising the work, I became more aware that from the very beginning of this piece, *Being There*, the ball on the table, constantly trying to find its' balance, never in stasis, always in a state of flow sets up the trajectory of the whole work. It is a piece about finding and losing your balance, your equilibrium. As a choreographer I have always been intrigued by Laban's theories and these have played into some of my understandings of the ways I've used space in these works. Those scholars who have written about Laban's work such as Vera Maletic and Susanna Youngerman have spoken of his ideas of dimensional scale and the diagonal scale. The dimensional scale deals with the sagittal, horizontal, and vertical planes, it is about stability, centeredness while the diagonal is about off centeredness, mobility and flow. These theories are open to different interpretations, yet in analysing *Being There* as well as the previous work *Ten Blocks* I was intrigued by these notions and how they helped me to look at the ways I used space in these two works. In *Ten Blocks* the space in terms of the dancer's kinesphere as well as the shape of the prop was a cube. The piece reflected a sense of immovability, stability almost rigidity. In Being There I used many

movements on the diagonal, not only in the floor pattern of the piece but also in the ways the dancer used his body in space, there was a sense of ongoingness. The diagonal is very much about mobility, flow. It is the dimension of change. This work is constantly changing, moving into new places. Here is a solo section from *Being There*. (Show work)

The complete dance which is about thirty minutes long and was made for four dancers has six sections with each of these parts flowing one into the next, again reflecting the idea of continuity. The shaping of the movements I've designed also reflects a sense of spiralling, of a figure eight, of continuous flow. This is an excerpt from the final section of the work which begins with a solo and leads into a duet ending the piece with all four dancers. Here is the beginning of that final section revised for two dancers. (Show work)

I think it's interesting to note in terms of connecting my own personal and subjective sense space to the work, that I created *Being There* during the period in which I was moving with my family from Hong Kong to London. During that time my own personal, subjective space was in a state of flux, it felt ungrounded. I think Being There reflects those states of being, those feelings. In using the ball as a metaphor, the work projects a sense of constantly attempting to find a balance point, of being in a state of change and movement. I have been reading some of the writings of the geographer, Doreen Massey. She speaks of the changing notion of our sense of place, how we now live in a global village. That our sense of neighbourhood is different now then it used to be. People don't live in one town for their whole lives they might be moving from one country to the next or from one continent to the next as I was. Massey thinks of place as being made up of the constant crossing of different energies and forces, very different from the world fifty years ago. I think perhaps

Being There reflects some of those experiences of space. (Talk of parts of dance not seem, balls rolling across floor vectors of energy, of meeting points)

It's also extremely fascinating to look at this work in terms of some of the readings I've been doing in recent neuroaesthetic research about the ways the brain sees and perceives space and motion in art as well as the world around us. For example neurobiologists such as Semir Zeki and Ramachandran talk about the brain's instinct to find patterns in what it sees. As we watch a dance the brain is constantly trying to find patterns in the action, to understand the puzzle. As we watch motion through space the brain projects a certain trajectory of action almost before it happens. The brain is stimulated by the fulfilment of that action (the aha moment) or the deviation from that action.(surprise) In the ball dance think how the brain is stimulated excited as the ball or the motion floats through space and then defies expectation by turning in another direction, taking us by surprise. (Demonstrate)

These examinations into the brains workings are just beginning and there are many as yet unanswered questions but they can serve to stimulate an artist to explore and look at space in new ways. These explorations don't contradict the personal and subjective influences on our ways of seeing and perceiving space. They can add to our knowledge about our experience of space. In this project the combination of these varying viewpoints has enriched and deepened my explorations of ways choreographers transform their experiences of space into choreographic statements. In the written portion of this thesis I am continuing my investigations of these questions through my practical research as well as my various readings looking at space from a personal, cultural as well as biological perspective and how they connect to choreography.