

## Chapter 4. Enactive gestures: embodying differentiation and wholeness through cell division<sup>57</sup>

Entanglements are not unities. They do not erase differences; on the contrary, entanglings entail differentiatings, differentiatings entail entanglings. One move—cutting together-apart (Barad 2014, p.176).

### Introduction

My exploration of the dynamics of the elements, as related in the previous chapter, while leading to a rich exploration of the body-mind as the play of these fundamental forces, only began to touch on the dynamics of embryology itself. In my desire to extend the inquiry into the ‘mechanics’ of embryogenesis as drawn from Western science and BMC, I decided to bring this elemental perspective to the foundational movement of cell division. According to Western embryology and cell biology, cell division is the basic mechanism underlying the body’s development and ongoing physiology. Cell division is the ‘opening move’ of embryogenesis, the first transformative movement to occur after conception.

Through the course of my research into specific embryological phases, I have come to describe these formative movements as ‘enactive gestures’ to specify the transformative and holistic movements that seem to enact a particular intelligence or organizational patterning. This is an adaptation of embryologist Jaap van der Wal’s (2012) term ‘formative gestures,’ and reflects my attempt to name my sense of the significance of these movements, beyond ‘simply’ creating form. It also stems from Francisco Verela’s ‘enactive view,’ in which the organism and its world are co-created in relationship (Gumbrecht, Maturana & Poerksen 2006). In my reading of the embryo’s transformative movements as enactive gestures, I was drawn to approaching the first enactive gesture, that of cell division, through somatic inquiry. Thus began my next phase of research, which consisted of three two-hour somatic movement sessions with six dancer/researchers, several solo research sessions, and the writing

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<sup>57</sup> The research presented here culminated in a conference paper given at the Science and Nonduality Conference (USA) in October 2012 (Sargent-Wishart 2012b). In giving that paper I sought to invite embodied, experiential access to the material for those who were sitting and listening to me speak. I have preserved some of that approach here in this chapter by referencing the paper.

and sharing of a conference paper.

The somatic research sessions followed a similar format to that of the previous research sessions, and excerpts from participants' writings are included in this chapter. Before discussing the sessions and participant responses, I will first provide some background on the practice of embodying the embryo's enactive gestures, as well as an introduction to the complexity of this gestural event we call cell division.

## Background

And there where I am capable, we are always already many (just as when, if there is a language, that is, a power of speech, there cannot then be one and only one being who speaks it) (Agamben 2000, p.10).

The narrative of embryology as told by Western science is a story of a particular kind of motility and morphological transformation, appearing (lighting up) in a sequence of enactive gestural events. I call these transformative events 'gestural,' although it is not that the embryo is making or performing a gesture as an adult would. Rather, the embryo *is* the gesture, *becomes* the gesture, as the gesture reveals and enacts the embryo's developmental becoming. The noun and the verb cannot be separated. These gestures are enactive and fully embodied—each gesture completely transforms not only the embryo's shape, but its complexity, its functional possibilities, the spatial relationships between its parts and between itself and its supporting structures, its location in space, and even the shape of the surrounding space itself. Each transformative gesture of development introduces a new form-of-life,<sup>58</sup> a novel organisational system with different relationships between parts, and even different parts. Deleuze recognized the embryo's state of turbulence and transformation:

Embryology already displays the truth that there are systematic vital movements, torsions and drifts, that only the embryo can sustain: an adult would be torn apart by them' (Deleuze 2001, p.118).

Each embryological stage opens up new possibilities of activity, expression, self-reflection, and relationship. At the same time, the embryo is always in flux and so is already moving on to the next stage. Western science gives us snapshots of various stages of development, but the most notable characteristic of the embryo cannot be

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<sup>58</sup> This term is from Giorgio Agamben, to describe 'a life that can never be separated from its form, a life in which it is never possible to isolate something such as naked life. A life that cannot be separated from its form is a life for which what is at stake in its way of living is living itself' (Agamben 2000, pp.1-2). I feel this phrase helps to enter the world of the embryo, whose form continually changes in response to what can only be called life.

captured in a snapshot, because it is *movement*. To understand the embryo then, we need to attend to its enactive gestures that tell the story of our becoming embodied, our earliest development—the original entwining of the processes of body and mind that begins at conception and continues to unfold throughout a lifetime, in movement.

Embryology begins with conception. Tibetan Buddhist narratives of conception, as discussed in the previous two chapters, typically involve the interaction of the reproductive substances of both parents, the karmic winds of the reincarnating consciousness, and the dynamics of the five universal elements of space, air, fire, water and earth. It is interesting to note that Indo-Buddhist traditions name a person's conception as his or her birth. In the Pāli Canon conception is described as 'the emergence of the first thought, the first consciousness in the mother's womb' (Boisvert 2000, pp.301-302). The emergence of the first thought that marks conception is, of course, not cognitive functioning requiring a brain. Within this context, we must consider thought not as verbal activity but as a specific and subtle kind of movement within space—the movement of mind, or consciousness—movement that is inherently intelligent. This first thought-as-movement, as an expression of the air element (as noted in the previous chapter), sets into motion subsequent intelligent movement 'thoughts,' which are the embryo's formative gestures of appearance. The stirring of the winds of consciousness, bound to the laws of *karma*, set life into motion in materiality.<sup>59</sup> As Kimerer LaMothe proposes, 'Birth is not the beginning. It is a model and metaphor for beginnings, but it never is or was the beginning. What is born must be conceived' (LaMothe 2015, p.85). To *conceive* means to become pregnant, but also to formulate or devise in one's mind, to imagine.<sup>60</sup> Conception is thought, and thought is movement, beginning to shift into form.

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<sup>59</sup> Karma refers to the cause-and-effect relationship between actions and results. Traleg Kyabgon explains that 'whatever we do creates certain mental impressions, which in turn produce karmic residues that later come to fruition when the appropriate causes and conditions are present' (Kyabgon 2001, p.30). One's rebirth (whether as a human being or into another of several different realms of existence) is taken to be a result of one's actions in prior lifetimes. Rather than a soul that exists through multiple incarnations, 'Buddhism believes in a stream of consciousness that gets transferred from one birth to the next,' which is 'an instance of mental occurrence' that arises 'due to its own internal momentum' (Kyabgon 2001, p.31). It is beyond the scope of my project to discuss karma in further detail, other than to note the role of the momentum of the incarnating being's consciousness in the process of conception. For more on karma see Kyabgon 2001, pp.30-35; Thinley Norbu 1992, pp.84-105; and Trungpa 1973.

<sup>60</sup> My definition is based on the Oxford English Dictionary, retrieved 1 April 2015 from <<http://www.oxforddictionaries.com/definition/english/conceive>>.

Western stories of embryology and cell biology have developed progressively since scientists in the mid-nineteenth century discovered cells, and subsequently discovered ‘that the egg was itself a cell that gave rise to all the cells in the body’ (Wolpert 2009, p.85). The story has become more detailed and dissected as new technologies allow us greater visual access to the dynamics of life at smaller and smaller scales. In the narrative of conception told by Western science, the cast of players as we currently understand it involves the mother’s ovum and the father’s sperm, with the dynamics of their fusion and interaction attributed to the actions of proteins, in turn responding to complex gene signalling. These two entities meet and join in a complex dance of fusion that, despite the detailed parsing of genetic activity that embryologists have achieved, is still quite mysterious. (Conception is one of the few events in life, at least in the Western world, still commonly referred to as a miracle.)

The nuclei of the sperm and ovum each carry half of the genetic material of a mature cell (of the respective parent’s body), such that when these two entities fuse, the nuclei are able to combine, creating a novel and unique genetic combination, the mother cell of the approximately 100 trillion cells that will create and carry the life of that newly proposed human being. This first cell, created in the fusion of the ovum and the sperm, is called a *zygote*, from the Greek word meaning ‘joined’ or ‘yoked,’ the same meaning as the Sanskrit word *yoga*. Our beginning then, our invitation to corporeality, is the yogic fusion of two into one. In the language of BMC the mind, or tone, of this first cell, the zygote, establishes a baseline tone that is shared throughout all of a person’s cells, and a basic pulsation pattern of expansion and contraction, begins (Hartley 2014). What particularly interests me is what happens next:

What do you imagine the tone might be like inside the zygote? A newly formed unique cell, an incoming consciousness with all its karmic history, a one-celled organism pulsating with the potential for a human life, the potential for your human life. What happens? What is the first gesture the zygote makes?

The first thing it does is to divide itself in half. This is the first significant gesture of our embodiment: one becoming two (Sargent-Wishart 2012b, n.p.).

For me, the significance of this first gesture (of becoming two) underlies the complexity of a human organism’s simultaneous wholeness and multiplicity, as well as the experience of being-in-relation (to self and other, between internal and external space, and so forth). By somatically approaching this event from the perspective of the cell itself *as us*, as our ontological essence, the beginning of our human-beingness,



by somatically *embodying* the zygote and its enactive gestures, it becomes quite significant that the first thing we do upon arriving is render ourselves in half. This halving/doubling gesture is then repeated many more times during the first twenty-four hours after conception—the two becomes four, four becomes eight, and so on, the cells becoming more and more tightly compacted into a small cluster, contained by the *zona pellucida*, as the zygote travels along the uterine tube towards the uterus.<sup>61</sup> Before this cluster hatches out of the *zona pellucida* to implant into the uterine wall, ‘we’ will have become distributed amongst/into approximately on hundred cells, all in close contact and communication with each other. As an adult, differentiated into approximately one hundred trillion cells, this basic act of cell division continues uninterrupted, as part of the life-cycle of most types of cells in the body. I feel that this enactive gesture of cell division is fundamental to our embodied (and embedded) lives, and to ourselves as essentially creative and relational beings.<sup>62</sup>

### **Embodying cell division: mitosis and cytokinesis**

The narrative of cell division, as told by Western cell biology,<sup>63</sup> begins in the cell’s nucleus with a stage called mitosis (the division of the nucleus and replication of DNA), and then follows through in a stage called cytokinesis (the resulting structural reorganisation from one cell to two). In my conference paper, I presented the material of this biological narrative through my own embodiment and curiosity, speaking from the explorer’s perspective as follows:

In the *zygote*, as in all eukaryotic cells, the DNA—which carries the uniqueness, the genetic spark of the organism—that DNA is enclosed within the inner sanctum of the nucleus, so it’s protected within the nuclear membrane. Maybe we can relate to that feeling of having our inner essence protected some place deep within ourselves. To prepare for becoming two, the nuclear membrane, the walls of the inner sanctum as it were, dissolves. The strands of DNA disentangle (they unwind out of the double helix), fully replicate themselves (they make a complete second set) and disperse out into the cellular fluid as chromosomes. Each chromosome stays linked to its new duplicate in the flattened ‘X’ shape you may have seen in images. So the spark, the heart essence of the cell, the identifying fire of the individual being, unravels and disperses. Already I feel this, in myself, as an act of trust, generosity, and a sign that our identity is not wrapped up in being one thing, but permeates the field of our existence

<sup>61</sup> This first phase of embryology is often referred to as the ‘cleavage’ stage. In this stage of rapid differentiation, there is no phase of cell growth between divisions, and the differentiating cluster of cells inside the *zona pellucida* does not increase in size from the original zygote; rather, it is developing in complexity and density while staying compact. This achieves the necessary ratio of cellular fluid to subcellular structures that is needed for the cells to function. Beyond this rapid cleavage stage, the cycle of cell division normally includes a period of cell growth, producing daughter cells of approximately the same size as the parent cell (Wolpert 2002).

<sup>62</sup> Wolpert lists the fundamental principles of biological development as: ‘cell division, the emergence of pattern, change in form, cell differentiation, and growth’ (Wolpert 2002, p.10). The developmental approach to biology promoted by Wolpert is complementary to the narrative reading of embryology I am engaging in, especially as he discusses the emerging patterns of human development in relation to that of other animals.

<sup>63</sup> I have not come across the concept of cell division in Eastern embryological accounts.

(Sargent-Wishart 2012b, n.p.).

In the next part of mitosis, following the dispersion and replication of the DNA, the centrioles—organelles within the cell that are inherited from the sperm—move into position at opposite sides of the cell, establishing a polar orientation. This is a clear expression of spatial organization, and it is interesting to note that this action is guided by structures that are received via the sperm, an entity which of course requires a very clear sense of direction through space in order to be successful in its mission. The centrioles then send out tentacle-like spindle fibres that attach to a small structure (the kinetochore) at the centre of the X junction of each chromosome pair, and line up these pairs along the equator of the cell. Until about 25 years ago it was thought that the spindle fibres then pulled the chromosomal pairs apart, but now it is believed that the kinetochores essentially winch themselves along the spindle fibres out towards the centrioles. Either way, there is a definitive parting—a movement directly from the equator to the poles. The force of attraction that fused the two cells into one is now seen in reverse, in an equally forceful separation out into two. We now have two full sets of chromosomes, each regrouping and reorganising into a double helix formation, and each coming to reside within its own reassembling nuclear membrane. When I visualize this activity I see complex dance patterns unfolding, like the bird's-eye view choreography crafted by Busby Berkeley for films such as *42<sup>nd</sup> Street* (1933) or *Footlight Parade* (1933). In these scenes a collective of dancing bodies form intersecting circles, lines and spirals, patterns of motion that dissolve and re-form in new configurations. The similarly choreographic nature of cell division can be seen depicted in a very playful way in several online videos made by groups of medical students dancing mitosis and cytokinesis.<sup>64</sup> For these medical students, dancing the movement of cell division from the inside out is an aid to memorizing the sequence of events, but it is also a way of embodying the process by becoming it. Watching these videos (the showgirls as well as the medical students) I see a collective enacting a whole. The constituent parts come in and out of focus with the whole, in a way that keeps the whole from appearing as one solid thing. As stem cell researcher and Zen practitioner Neil Theise argues, our perception of the

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<sup>64</sup> See for example Baylor University students' 'Mitosis Dance' at <<https://www.youtube.com/watch?v=ZEwddr9ho-4>>; and the flash-mob-esque 'Mitosis Dance - Greek 2013' at <<https://www.youtube.com/watch?v=TQID0jiTtiY>> (both sites retrieved 21 April 2015). These videos not only indicate the movement dynamics of this fundamental life process but also demonstrate how dancing the sequence helps students learn. BMC certification programs employ similar methods in teaching some of the body's more complex choreographies.

complexity of cellular life depends on the scale at which one is observing from:

... each level of emergence arises from interacting systems lower down and participates with other systems to create new systems higher up, one leading to another. Moving upward, bodies organize into communities, cultures, ecosystems. Downward, at the molecular level, cells themselves can be described as having no inherent existence either, but instead are the emergent phenomena of biomolecules. The Buddhist concept of emptiness—that all things are insubstantial, devoid of inherent existence—can be compared to this dependence on scale: what we take as the essence of an individual thing, be it an ant, person, or planet, is nothing more than the emergent self-organization of smaller things (Theise 2006, p.26).

Returning to the movement of mitosis, I feel that this action can be experienced as an activity of the fire element dynamic, as is evidenced by my choice of descriptors such as ‘the spark’ and ‘the heart essence of the cell.’ The genetic material disperses outward and then magnetises back in to a new formation as a chromosome, each chromosome attaches to its pair; the pairs then part to polar opposites, and the DNA strands disperse and regroup into the new nucleus. The one identity dissolves and reorganizes into two, creating a potential field of communication between the two daughter cells, a ‘heart to heart’ connection between two, which are also one. In Buddhist psychology, the fire element underlies the psychological aspects of passion, human-to-human connection, empathy, and love, as well as the forces of magnetism and combustion that keep the cell, and thus the whole organism, alive. Mitosis is the first part of the one becoming two—and already a major shift in identity, especially given the importance we place on the cell nucleus and the DNA in identifying and marking the individual.

As part of my somatic movement research, having imaginatively entered the embodied narrative of the zygote and initiated becoming two through the process (enactive gesture) of mitosis, I asked (of my own experience and of the participants) reflective questions such as:

What then is the relationship between the two new nuclei, these two genetic ‘hearts’? How does sensing my identifying spark in two places feel different to sensing it contained in one place only? How do the two relate? How do they know each other? How does this relationship, as two nuclei, change the relationship to the surrounding space? What possibilities does this being-two provide that didn’t exist while being one? (Sargent-Wishart 2012b, n.p.)

I will return to these questions shortly, and describe the philosophical pathways they led me down, but first we will complete the division of the cell through the next part of the process, called cytokinesis. Cytokinesis is the transformation of the fluid and structural form of the cell to fully, materially manifest the form of two. If conception

and mitosis can be experienced as activity primarily of the air and fire elements, cytokinesis can be seen as the formal follow-through (the fruition) in the water and earth elements, which are denser and more structurally substantial. In somatic research, we can approach this activity from the perspective of the cytoplasm (the fluid within the cell) or that of the cell membrane. I will begin here with the membrane, as that follows the more traditional orientation of cell biology.

The membrane of a cell is the point of communication, or the ‘interface’ (Hartley 2011, p.378) between the interior life of the cell and the exterior environment. This plasma membrane is active, intelligent, highly flexible, and selectively semi-permeable, meaning that it controls what substances enter and exit the cell. The membrane is phospholipid, meaning it is composed of a double layer of molecules that self-organize through a polar attraction/repulsion to water. Water is the cell’s environment. The phospholipid molecules each have a water-loving (hydrophilic) ‘head’ end, which is drawn to face the inner and outer fluid environments, and a lipid, water-repelled (hydrophobic) ‘tail’ end. As the tails orient in toward each other, they create the internal structure of the wall, with the hydrophilic heads creating the internal and external surfaces. In a sense, then, one layer of heads ‘faces’ the interior world while the other layer ‘faces’ the exterior world.

In Body-Mind Centering practice it is common to imagine oneself as a one-celled organism, to engage with a sense of presence and breath through all of the body’s surfaces (as one’s intelligent membrane), and a baseline experience of internal and external space. The activity of cellular respiration—the exchange of nutrients and gasses that occurs through the cell membrane—is one of the primary ‘Basic Neurocellular Patterns’ of BMC’s developmental movement series. This movement pattern entails both the imaginative experience of being one cell, and the somatic experience of all of our 100 trillion (or so) cells breathing. Cells are named within BMC as a distributed, decentralized, ‘bottom-up’ intelligence, consciousness, or mind; within the BMC approach, this consciousness is the basis of somatic intelligence. It is what allows the somatization process to happen beyond the holding of mental imagery. ‘The process of cellular awareness and expression is accomplished through cellular imagination...To hold an image of the cell in the brain is different than imagining directly via the cells’ (Bainbridge Cohen 2008, p.159).

Cellular consciousness relates to a state of aware presence and underlies relationship, connection and the intelligent communication that can occur, via the membrane, between cells and other cells, or between cells and the surrounding fluid environment. This is the potency of being one cell that we enter into when we imagine being the zygote, sensing the flexible, intelligent container created by the membrane. When giving my conference paper I invited the audience into this somatic experience of the membrane, and into the experience of yield, a relational organization that, according to BMC, is foundational to all movement:

You can feel the cell membrane now as your skin, remembering though that the zygote exists in a fluid environment. Through your membrane, or your skin, you can actively meet your environment—tune in to what you sense through all your points of contact and how you bring your presence to that contact with your environment. In BMC we work with this a lot, actively meeting whatever we are in contact with. This is a fundamental movement pattern we call *yield*. So just now, sitting in your chair, can you sense the force of gravity within the contact, and yield your weight into it. Yielding is not about letting go or collapsing, it's more like a priming of the surface, an active meeting, a kind of presence (Sargent-Wishart 2012b, n.p.).

When you are (imaginatively, but historically too) this one cell, the zygote, you can relate to and communicate with your environment. You are one entity, in relation to the field that you exist within, what Uexküll (2010) termed the *umwelt*, any sentient being's sensorially (perceptually) and meaningfully available world. It requires an imaginative leap to consider the embryo, let alone the single-celled zygote, as making meaning or finding meaning in its world, yet the embodied embryology practices in BMC allow that imaginative leap to take place by situating the inquiry in the here-and-now of the adult body-mind. BMC further inquires into how those formative gestures still exist and reverberate within our living dynamics as beings in the world (in our current *umwelt*)? The process *is* imaginative, but also, as Uexküll promoted, and as Theise (2006) demonstrates, the perception of what constitutes 'meaning' and 'a world' is, in part, a matter of scale.<sup>65</sup>

Let us return to the narrative of cell division, where we left off just after the two sister clusters of chromosomes have re-formed at polar ends of the cell. What happens next is that the membrane actively contracts around the equator of the cell, the line where the chromosomes were previously lined up before parting to the polar ends. Just

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<sup>65</sup> Writing on the *umwelt*, Agamben (2004, p.39) claims that 'Uexküll's investigations into the animal environment are contemporary with both quantum physics and the artistic avant-garde. And like them, they express the unreserved abandonment of every anthropocentric perspective in the life sciences and the radical dehumanization of the image of nature.'

inside the membrane, molecules of actin and myosin—the same molecules that make up muscle cells—accomplish this contraction. In a sense then already, on day one, we are priming the flexing of our muscles. The membrane draws in at the equator, folding in on itself from all sides, and pinches off to complete the cleavage. Now ‘we’ are two genetically identical daughter cells, sitting in relation to each other within the outer covering of the zona pellucida. Now, as a two-celled organism, not only can we yield to and exchange with the surrounding environment, but also we can yield and exchange within ourselves. Our ability to communicate now includes internal communication across membranes, between multiple intelligent forms. The zygote’s scale of relationship multiplies, and continues to do so with each subsequent division. The next cleavage sees the two-celled being becoming a four-celled being, creating further surfaces and possibilities for communication among more differentiated cells, fuelled by more replications of the nucleus and DNA. The zygote becomes eight cells, and then as these cells continue to divide (thus multiplying in number), they form a tight cluster called the *morula* (for its resemblance to a mulberry), increasing in density and differentiation but not in size.<sup>66</sup>

To me, this gesture of becoming two not only sets the stage for, but also *embodies* dialogue, relationship, and reflection. Mathematician and philosopher Brian Rotman (2009, p.76) notes that ‘to re-flect is to bend back, to fold something onto itself.’ He continues:

Folding engenders an ontological novelty, it brings a previously non-existent inside/outside difference into being. In psychic terms, reflection introduces an interiority, an interior space of consciousness and subjectivity. A fold is produced by an animate form touching itself, either via infrareceptive (kinesthetic/proprioceptive) monitoring and internal-to-the-brain self-contact, or extrareceptively through the myriad gestures of self-touching and self-survey sentient life-forms engage in. In fact, it would seem that consciousness itself comes into being the moment a (mediated) form of awareness—human, animal or otherwise—folds back on itself.

Thus this first gesture of embodiment, the one becoming two, could be seen as awareness (the awareness that is the nature of the Ground) folding back on itself (in self-consciousness, self-awareness), establishing the possibility of self-reflection.<sup>67</sup>

<sup>66</sup> The image of a cell as a fluid contained by a simple membrane is vastly oversimplified. The interior of the cell is a network of membranes, some continuous with the outer ‘plasma’ membrane and some not. Mae-Wan Ho (2012, p.158) notes that in liver cells, for example, the inner membranous surface amounts to fifty times that of the cell’s outer surface.

<sup>67</sup> Deleuze also engages the image of the fold in his work on Leibniz, writing of the Baroque operation that ‘endlessly produces folds’ in a pattern so complex and labyrinthine that it ‘unfurls all the way to infinity’ (Deleuze 2006, p.3). Though beyond the scope of this current project I hope to bring his work into conversation with cell division (and other embodied processes) at a later time.

Linda Hartley describes the cell membrane as an interface that is both physiological and psychological. In its psychological aspects, she claims, the boundary is ‘*awareness*—awareness of what is self, what is other, and the quality of relationship between them’ (Hartley 2011, p.378). The membrane interface itself is a space of awareness, of the ability to perceive inner and outer, as well as the space that holds the inseparability of inner and outer. The cell membrane is a double layer. My embodied experience of the space in between the inner and outer layers—a space of potential and possibility, of balance, and of relaxed awareness—is perhaps best described via a journal article by Jin Baek, in which he describes the architectural significance of Kitaro Nishida’s philosophy of emptiness. Nishida, the early twentieth century Japanese philosopher known as the founder of the Kyoto School of philosophy, developed a theory of emptiness that included a ‘dialectic of opposites.’ In this account, all opposites—inner and outer, warm and cold, black and white, even being and nonbeing—are identified, and identifiable, only in relation to their contingent opposite, with which they are always intertwined. Baek finds this dialectic embodied in the work of Dutch architect Aldo van Eyck, who named it ‘twin-phenomena’:

For example, the uniqueness of a circular configuration comes from the fact that its rim embodies the duality between the centrality of looking inward to find the communal center and the peripherality of looking outward until one finds the distant horizon.... It was neither about the center nor about the horizon and neither about commonality nor about individualistic heterogeneity but about their copresence (Baek 2008, p.40).

The architecture of the cell membrane could likewise be seen as a ‘twin-phenomenon,’ a space that holds the co-presence of inner and outer, ‘the zone of in-between such as the rim of the circle [that] does not neutralize differences but sustain[s] their simultaneous presence’ (Baek 2008, p.40). Baek quotes van Eyck, noting that ‘this intermediary zone, where opposites coexist, allows “simultaneous awareness of what is significant on either side”’ (Baek 2008, p.40). It is just such simultaneous awareness of inner and outer that is embodied in the cell membrane, an awareness that is then carried through endless enfoldings in creating the complexity of the animal organism. As van Eyck strived for in his buildings, the values of ‘individuality and collectivity’ and ‘periphery and centrality’ are embraced in co-presence, rather than conflict (Baek 2008, p.40), in the cell.

## Embodying differentiation and wholeness – research sessions

Considering embryological development as a result of complex foldings, from the perspective or ‘mind’ of the membrane, can disrupt any fixed sense of inner and outer, interior and exterior environments. As the inner surfaces are created by the enfolding of the exterior surfaces, there is continuity between internal communication (between cells, for instance) and the communication between self and other (through the skin, for instance). This recalls Bachelard’s ‘spiralled being,’ a being that does not have one distinct (‘well-invested’) centre, but a distributed, decentralized appearance that incorporates internal and external space into its make-up (Bachelard 1994, p.214). This is not one entity with a concrete inside standing in relief against a vast exteriority, but a multiplicity with countless insides and outsides. In this narrative of embryology as differentiation, distribution, and enfolding, ‘the dialectics of inside and outside multiply with countless diversified nuances’ (Bachelard 1994, p.216) which, furthermore, continue to appear and disappear in every moment of embodied life. When I engage this narrative of my body as trillions of enfolding, replicating cells while dancing, I experience a sense of infinite articulation of multiple sites of cohesive intelligence. In engaging the dynamics of distribution embodied by my ever-dividing cells I become more somatically and cellularly aware and activated. As I embody the folding-in process I meet new surfaces of my immediate environment and my own interior landscape. I am surprised by new surfaces becoming available, dialogues that open up through new contingencies. I discover my body-mind as an intelligent system always creating itself anew and blooming with possibilities.

Bainbridge Cohen speaks of BMC’s practice of ‘aligning the inner cellular movement with the external expression of movement through space’ (Bainbridge Cohen 2008, p.1). I believe this is possible in part because of the organism’s wholeness that includes integration with space, with the cells being one level of differentiation within this wholeness.<sup>68</sup> After a research session I wrote:

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<sup>68</sup> Neil Theise (2005; 2006; 2009) questions the primacy of cell doctrine, proposing that because cells were what we saw first through a microscope, we assume them to be the body’s basic organisational building blocks. He asks, ‘What if the first structures visible with the new technology had been the nuclei, not cell walls or membranes? Then, a very different answer to the ancient debate would have been conceived. The body would indeed look like an endlessly divisible fluid, only with small little globes suspended in it’ (Theise 2009, p.264). Theise’s assertion points to the importance of one’s point of view (literally, what is *visible* to us) in shaping knowledge, something I have been more acutely aware of by considering embryology from various cultural traditions and times.



Membranes as one of the smallest places in our bodies that create structure and contained clarified form....

If we are a one-celled organism, then we can yield with our environment in every direction.

If we are a two-celled organism, then we can yield with our environment in every direction AND we can yield within ourselves, into our own centre.

If we are a 4 celled organism, then we can do as above with more options for knowing ourselves internally and creating multidimensional strength and support.

If we are a 90 trillion celled organism, the yielding options are infinite, and the support of the earth is interwoven into our entire being, and through ongoing cell division continues to be woven anew.

This multiplying of the internal membrane gives structure and form and supports ongoing differentiation and development. So it's not just a matter of making new cells, it's the establishment of a matrix of stability and yielding presence, which allows us to develop as embodied beings (research notes 10 September 2012).

In the movement research sessions, I introduced cell division dynamics to the participants by exploring from the perspective of each of the five elements. The membrane, as evidenced in my reflection above, embodies the dynamics of the earth element (stability, structure, density of physical presence). After a somatization exploring cell division from the perspective of the membrane and the earth element, one participant wrote:

many surfaces to yield upon  
the whole inside all of me  
yield

boundaries fortified  
such pleasure of gravity

I am a pea on the surface of the world

a series of round surfaces supporting/supported by one another

hold my yield/hold all my membranes  
stillness  
it's quiet

The fire element was most apparent to me in the action of mitosis as I described above, in the redistribution of what I call the 'genetic spark' of the person out of one contained field into multiple sites. Like the passing of the Olympic torch, or lighting several birthday candles from one match, fire spreads, is able to appear in many distinctly separate sites, while coming from a common source. One participant wrote after a guided exploration of mitosis:

My breath fills the space it is endless infinity and infinity as breath divides and separates and I let go to be carried in the vastness where I pause and the fire sparks bellow and I begin again.  
let go  
let go

let go  
breath  
take me where I need to go  
to begin again as me and when I'm lost in my ownness split me divide me and open my eyes to  
be whole in the world around me,  
the world within me  
to get it  
feel whole  
feel full  
feel one  
and divide  
spread my love like a raging fire

Guiding exploration of the space element in cell division, like the folding of the membrane, involved sensing the incorporation of space into structure, with each cleavage presenting more space between things; space always embodying open potentiality. For one participant, space became a third player in the dance of becoming two, without which the two would not be possible. She wrote:

Sense of 3. 1 + 1 + space  
To be 1 or 1:1 need to be contained *by* something  
Where and when is 'mind'  
For 1 to be 1:1 there has to be 'mind'  
*space for possibility*—comes from where?  
1 does not become 1:1 without external intent?  
1 responds to 'space' to become 1:1  
If 1 is not alive/no chi/no movement—then no response to space

The element of space, for her, introduced the possibility and the question of mind. Questions of intent and source arose for her in exploring the space element—from where does the intent to transform and develop arise? This participant has also noted the sense of the container of space that the formative gesture occurs within—both anatomically, as in that created by the zona pellucida, but also perhaps in a more allegorical or experiential sense—in order for such a major shift of identity to occur (from being one to being two), we need both the possibility and the container of space. As she notes, 'if 1 is not alive... then no response to space.' The formative, enactive gesture we are exploring here is foundational to embodied life.

In the Tibetan Buddhist framework, the main property of the water element is cohesion. What was most interesting in my own experience of exploring cell division from the mind of the cytoplasm (the fluid inside the cell) was the sense of self-cohesion creating the structure and shape of the cell. In researching this with participants, I suggested the dynamic of the cellular fluid itself reorganising into two distinct halves, like a drop of water becoming two, which then drew the membrane in

as container. Rather than the contractile efforts of the membrane doing all the work, with the fluid passively getting divided, I found that the water itself could be accessed as a self-organizing principle. My writing after moving:

Pomegranate seeds  
fluid pressure contained just so  
not too tight, not too loose

here

This property is evident in the way water readily changes shape to accommodate any container or force such as gravity, or the way beads of moisture form on a window. Revisiting cell division from the perspective of the self-organizing principle of water changes the dynamics: the cellular fluid parts along the equator of the cell, to form into two distinct 'drops.' In response to this shifting fluid array, the phospholipid molecules of the membrane self-organize into new membranous formations.<sup>69</sup>

Embodying cell division from the mind of the five elements in turn created a palette of different qualitative experiences. The reflective writings from the participants, after exploring the cleavage process from each of the elements, show a sense of simultaneous wholeness and multiplicity that engendered ease, release, presence and possibility for action:

A combination of being very solo and very everything all at once

Fully supported 3D body with divided cells—less effort—less work—less isolation. I've spent my whole life alone, feeling lonely but now you're here and here and here and here.

Do I meet you differently if I remember that neither of us is just one thing?  
envelopes folding, envelope-ing  
origami bird, but not paper  
earth origami.  
It's been done, there's nothing to do.

Movement has duality and flow and connectedness and opposition and RELATIONSHIP—  
INTRA more than INTER

And my own stream-of-consciousness writing after one movement session:

It's a blank page until it's in my hands then

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<sup>69</sup> Although not taught in traditional cell biology this might not be so far-fetched. More recent developments in water and cell research by Dr. Gerald Pollack (2001) suggest that the cellular fluid is structured and gel-like, and that the dynamics of cell function (including cell division) can be attributed to an activity called 'phase transition' that this fluid engages in. In this new paradigm, the role of the membrane as container and protector of the cell is being radically challenged.

well, what is a mark, a signature?  
we meet, we greet, we resonate,  
we catch a cold and our ideas go viral  
through the container of space coherence of thought in a dispersed intelligence  
Mind with a big M  
pervading this whole parade

this is where I loosen my controlling grip,  
dissolve or at least soften  
the membrane  
and yield to something fuller.  
Bucky Fuller?

It's a matter of scale  
me by myself only contained within  
feels less complete than  
me as expression through this collection of substances  
interdependent with everything else.

## Further reflections and enfoldings

In further reflection, I have been struck by the resonance between the embryological processes of creation-through-differentiation and the views of creative activity as found in sources as varied as Taoism, quantum physics, and new materialism/posthumansim, as well as BMC's presentation of cellular consciousness. Although outside of the Tibetan Buddhist perspective that supports my current research, I feel it is productive to note some of these connections and suggest them as areas for further interdisciplinary inquiry. These disciplines offer provocative perspectives on the dynamics of wholeness and differentiation in creative activity, that create potential bridges between somatic experience, science, and Eastern and Western philosophies. In Taoism, for instance, the Tao, literally 'the way,' is akin to the Buddhist idea of the Ground as the intelligent basis of all that is. Chung-yuan Chang (2011), in his work on creativity and art within Chinese philosophies, relates that, 'Only Tao, the mother of all things, is invisible and unfathomable, but it is through her manifestations, nevertheless, that all things are produced' (Chang 2011, pp.81-82). The Tao itself is creativity. Chang describes the display of the inherent creativity of the Tao as 'a process of differentiation from nondifferentiation,' represented in the Taoist classic, Lao Tzu's (est. sixth century) *Tao Te Ching*, in terms of 'the one' and the 'ten thousand things':

From the Tao, the One is created;  
From the One, Two;  
From the Two, Three;  
From the Three, Ten Thousand Things (Chang 2011, p.82).

This teaching of the ten thousand things as differentiation of the one is intended to foster intuitive insight into the dynamics of appearance of all things out of wholeness, ‘the realisation that the multiple diversities of existence emanate from the unity of the absolute realm of *Tao*’ (Chang 2011, p.82). Creativity itself is effortless reflection, like geese flying over a lake, effortlessly casting their image, and the lake effortlessly revealing the geese’s beauty through reflection, without intention (Chang 2011, p.83). The enactive gesture of cell division is creativity; the folding of the cell membrane embodies the creative process of differentiation out of nondifferentiation, creating surfaces of reflection, awareness becoming aware of itself through embodiment. We could even imagine this enfolding process being led by the dynamics of reflection itself—material life caught up in the doubling-up movement required for awareness to know itself, enacting re-flection. In Taoism, as in Buddhism, the context is of an intelligently aware universal whole, and so there is never anything outside of oneself to be attained, achieved, or created. Creativity, within this view, is already always occurring, is the very nature of this intelligent basis of everything. To quote a founder of Taoism, Chuang Tzu, ‘...all things create themselves from their own inward reflection and none can tell how they come to do so’ (*Chuang Tzu Ch. VIII* in Chang 2011, p.92).

In the story of when we became two, within twelve hours of our conception as a whole (a one), there arose the possibility for self-reflection and self-knowing through differentiation.<sup>70</sup> Deleuze (2001, p.250) described the embryo as ‘the individual as such directly caught up in the field of its individuation.’ As individuation can only be considered in context of community, in terms of *other*, differentiation through cell division creates individuation and community simultaneously. Through the yielding relationships that occur at and across the cell membrane, a community creates the organism across and through multiple interiors and exteriors. Georg Simmel (1994) claims this as a distinctly human gift: the ability to differentiate and separate, and therefore to make connections. He notes that ‘we can only sense those things to be related which we have previously somehow isolated from one another; things must

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<sup>70</sup> The English language limits me to the passive voice, or traps me into choosing actors of cause and effect: By becoming two as our first enactive gesture, we created the possibility of self-reflection. Or, the dynamics of self-reflection created the possibility for us to exist as something more evolved than one-celled organisms. Or, perhaps both arose simultaneously, our presencing an expression of the movement inherent in the Ground’s compassionate resonance. Bainbridge Cohen says ‘there is something in nature that forms patterns,’ (Bainbridge Cohen 2008, p.1) without attempting to name what that something is, yet being able to clearly embody and dance it.

first be separated from one another in order to be together' (Simmel 1994, p.5). Is this perhaps part of being human, to be, 'in the immediate as well as the symbolic sense, in the physical as well as the intellectual sense, ... those who separate the connected or connect the separate' (Simmel 1994, p.5)? Simmel points to the human inventions of bridges and doors to illustrate the human being as 'the connecting creature' who must invent separation (the river banks) in order to connect (the bridge). In the fundamental gesture of cell division we create separation through reflection—the duplicated nucleus appears like a twin but also like a reflection in a mirror, an opportunity for knowing, for relationship. Across this span of difference is a bonding coherence, a continuity of consciousness, providing for and strengthened by the transfer of information in what could be called a field of affect in operation as a collective. Erin Manning, drawing on Gilbert Simondon, suggests that

Affect is the feeling of individuation's process. It is trans-formative, and it is collective. Affect is collective because it folds individuation back to its preindividuated surface where the individual is multiple, a group-subject (Manning 2010, p.122).

Thus the coherence of a body across all of its differentiations: 'the body in-forms. Relational across strata it co-constitutes existence in the making, active as an assemblage of force-taking-form' (Manning 2010, p.118). I propose that the relational field that creates '*a life*,' is related to the coherence created by the movement of thought across and between cells; that is made possible, or made manifest, through the process of differentiation, distribution, and enfolding. I feel it is the same principle as that which coheres across other communities at other scales—as represented by the water element dynamic, it is the perception of coherence itself. Agamben (2000) calls this coherent force 'thought,' the 'unitary power' that binds the multitudes of humanity into something greater than the sum of its parts. Cellular intelligence communicates across space, as witnessed in the physiological force that brings individual heart cells into a unison rhythm. This is reflected out in larger systems, for example as that which keeps groups of musicians and dancers in time.

When a cell becomes two it introduces the possibility of touch across membranes. Identities are clarified via the membranous boundaries established, but also enfolded, complicated, and called into question. Karen Barad (2012, p.206) asks, 'when two hands touch, how close are they? What is the measure of closeness?' What is the span of the bridge between these two shores?

Many voices speak here in the interstices, a cacophony of always already reiteratively intra-acting stories. These are entangled tales. Each is diffractively threaded through and enfolded in the other. Is that not in the nature of touching? Is touching not by its very nature always already an involution, invitation, invisitation, wanted or unwanted, of the stranger within? (Barad 2012, pp.206-207)

What do we know of ourselves through the inner touch of our trillions of surfaces, which are continually spawning and dying off? And what intelligence, like the optimal pace of a heartbeat, is shared between and among them? All of these questions lead back to a nondifferentiated field in which and as which the differentiated matter resides—pondered by many scientific, philosophical and spiritual traditions. In Buddhism, this is the nature of the intelligent Ground of being:

Being's undivided wholeness... is analogous to an immense sea of energy, which, although nothing as such, is ever active in the quantization of itself through its radiance or effulgence or lighting-up. This very activity is the totality's excitatory intelligence in the process of organizing itself as a consistent whole. In emphasizing processes involving spontaneous structuration, which in living systems such as human beings manifest in a multilevel autopoiesis and its systemic connectedness by homologous dynamics, the Buddhist thinkers seem to have intuitively discovered the principle of evolution as an open-ended learning process (Guenther 1987, p.6).

Guenther parallels this with physicist David Bohm's notion of *holomovement*, in which 'an unbroken and undivided movement is taken as a primary notion' (Bohm 2012, p.94). The essential nature of Bohm's implicate (enfolded) order (Bohm 2012, p.129), holomovement is presencing and emergent, like that embodied by the embryo's autopoietic gestures—unfolding through sequences of appearance and dissolution and occurring simultaneously at many different levels, from the grossly apparent to the deeply (almost invisibly) subtle. Bohm himself noted similarities between his theory of holomovement and elements of Buddhist thought, particularly the idea of interdependent origination: 'I think this is very close to the implicate order, which says that everything comes out of a ground and everything is interrelated, and that underlying it there is no substance that can be defined' (Bohm 2012, p.133). This description of holomovement matches my experience of engaging in dance improvisation, and of witnessing experienced improvisers, perfectly. Bainbridge Cohen (2008, p.1) notes, 'there is something in nature which forms patterns' (without naming that something, but claiming it as the basis for her approach to body-mind dynamics). Perhaps some intelligent force creates separations to create connections, is awareness becoming aware of itself, is 'touch touching itself' (Barad 2012, p.212), as a newborn discovers himself through his mother's touch, the yielding support of gravity, and the feel of his fingers in his mouth.

I have discussed the creative dynamics embodied by the activities of duplication, dispersal, distribution, division, and coherence, as well as the qualities and possibilities of reflection and meeting, all of which have arisen through approaching cell division through a narrative and embodied phenomenological approach. To conclude this chapter, I now turn to the nature of the duality that is created in becoming two, the fruition of division, which is represented by the material presence of the two. The somatic exploration of cell division—imagining oneself as one cell dividing into two—introduces certain questions. Where is the enfolding/dividing surface? Do you imagine becoming left and right halves? Top and bottom? Front and back? When an imagined division occurs in any of these planes, what is the relationship between the two halves? These are the three basic planes around which a body is organized. In imagining the first three cell cleavages with your present body-mind, which cleavage comes first? Does one cleavage support the development of another?

In some animals, the first three cleavages are thought to underlie the basic organization of the body into planes—i.e. the sagittal plane that creates left/right differentiation, the vertical plane that creates front and back, and the horizontal plane that divides top from bottom. In humans, it is still unknown whether there is a correlation between the placement of these initial cleavages and the establishment of the body's three primary spatial axes.<sup>71</sup> In other life forms that have been studied more extensively, such as the *xenopus* and the zebrafish, the axes are determined by the polarity of the oocyte (egg) before fertilization. In these organisms, the first cleavage creates the midline and establishes left and right body halves. The second cleavage establishes front and back, and the third divides what will be the body into top and bottom. Personally, every time I have somatically embodied these primary cleavages, my experience has occurred in this same order, although other people, including some of my research participants, have experienced different sequences. I have wondered about this sequencing in terms of yogic anatomy's description of the embryo forming primarily around a central channel of vital energy (Tib. *lung*, Skt. *prana*) (Labdrön and Harding 2003). In this system of anatomy, there are two

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<sup>71</sup> For an indication of the complexity of this issue, and the creative strategies scientists use to trace cell movement and cell fate, see Takaoka & Hamada 2012; Stephenson et al 2012.



secondary channels to either side of the central channel, one side containing ‘male’ energy and the other side containing ‘female’ energy. Tantric and yogic meditation includes breathing and visualization practices that aim to redirect one’s life force through the central channel, where it is transmuted into enlightened energy. Reading this in light of the present discussion, perhaps the central channel creates a system of binaries in which it occupies the meeting space, the place where one and two coexist. What separates out into two at the onset of material embodiment reunites, through practice, into the one inseparable ground.

The establishment of two sides—the one hand and the other hand—underlies a gesture common in many religions worldwide, that of bringing those two hands together in a *mudra*. From the Sanskrit for ‘seal’ or ‘sign’, a *mudra* is ‘a form of embodiment manifesting the dynamics of enlightenment’ (Levin 1987, p.245); an enactive gesture that ‘seals’ one’s intentions. I feel that this gesture of bringing the palms together, called in Sanskrit the *anjali mudra*, demonstrates, embodies and recalls the primary organizing dynamic of simultaneous wholeness and differentiation into two. Mudras are gestures that are performative, but more importantly transformative, infusing the practitioner with a specific felt sense or imparting specific wisdom. As Levin explains it:

The ritual practice of *mudra* makes use, in effect, of corporal schematizations—ideal schemata, or symbolic images, of a more enlightened human embodiment. These schemata prescribe meditative postures and gestures, and the imitative repetition of these patterns helps us to focus on our bodily felt experiences in a way that puts us in touch with the intrinsic potential that calls for development. The process of ‘focusing’ puts us in touch with the ‘felt sense’ of the gesture, so that we allow the gesture’s depth of sensitivity, its innate resources of awareness, to develop. In this way, we cultivate a skill whose potential of energy is, as we discover, always already with us (Levin 1987, p.267).

In my experience, working with embodying the gesture of cell division as the primary activity of embodied life (indeed of creating the possibility of a body to be embodied *as*), has revealed a deeper significance of this ‘common’ *mudra* of putting the two hands together. The *anjali mudra* is a gesture of respect, greeting, and composure as well as prayer. It connects the right and left halves of the person—‘literally connecting the right and left hemispheres of your brain. This is the yogic process of unification, the yoking of our active and receptive natures’ (Rea 2007, n.p.), connecting the male and female energies. In child development, finding the midline by bringing the hands together is also a significant developmental milestone.

Occurring at about one year of age, finding midline underlies the ability to reach across the midline space, to integrate left and right body halves and perform complex movements.

## **Conclusion**

It was during this phase of somatic research that I began to experience a tangible and productive ‘dialogic encounter’ (Wall 2012) between my somatic practice and my academic writing practice, and the co-production of theory that arose in the cooperative meeting of these multiple ways of knowing and processing knowledge. This process, of integrating movement research and philosophical discourse, continues to open up the inquiry. The biological gesture of cell division embodies a dynamic and creative model of complex wholeness as expressed through the movements of differentiation, distribution, coherence, enfolding, and relationship. It suggests a perspective on the creative relationship between emptiness and embodiment that is different to, yet compatible with, the dynamics suggested by the five elements approach. The primary movement gesture of one becoming two, and the dynamics it reveals, points to a consideration of creative embodied appearance as the enfolded, distributed, and self-reflected awareness of the ultimately indivisible ground of being. This is most clearly embodied by the earliest movement gestures of the zygote, the beginning of each person’s relative ‘big bang,’ and is evidenced throughout all embodied cell-based life.

As the embryological narrative progresses and these cells continue to divide and specialize, the embryo and its supporting structures and spaces organize around a central axis. In the next chapter I investigate gastrulation, the self-organizing of the embryo into three distinct and specialized layers that create the intricacies of our inner and outer worlds. I explore the dynamics of gastrulation as another significant enactive gesture of the embryo, one that I find echoes the Buddhist doctrine of ground, path and fruition and connects us to our ongoing creativity. The path of research slightly alters here, on entering the next phase, as I bring somatic and philosophical research to the path of composition and creative arts, in the creation of the dance/film *cast*.

## Chapter 5. *Cast*: embodying ground, path, and fruition in early embryology

### Introduction

Bonnie Bainbridge Cohen, the founder of Body-Mind Centering, has described the body as being like sand, and the mind like the wind, noting that ‘...it’s difficult to study the wind, but if you watch the way sand patterns form and disappear and re-emerge, then you can follow the pattern of the wind, or, in this case, the mind’ (Bainbridge Cohen 2008, p.11). As I have described previously, ‘mind’ in BMC is not just the brain, but a process of consciousness that manifests and expresses through movement and presence at all levels of embodied appearance. In somatic approaches such as BMC, mind and movement are never separate processes. Over my many years as a practitioner of BMC, dance, and Tibetan Buddhism, I have taken a view of the body as dynamic display of consciousness. This perspective is at the heart of my dance-based research into early human embryological development—the beginnings of the body’s creative appearance.

The previous two chapters recounted an emergent somatic research practice based in BMC methods, exploring some of the fundamental forces of embryological and biological poiesis and morphology through movement inquiry. In this chapter, I turn to the next phase of research, developing the dance/film *cast* through investigating a particularly transformative and crucial early stage of embryological development, that of gastrulation. This stage, at approximately two weeks post conception, is marked by the formation of the embryonic germ layers from which specialized tissue function arises. The process of investigating this stage of embryology began by utilizing similar somatic methods as in the previous research projects. In this case, however, my intention was focused on the creative outcome of the dance/film<sup>72</sup> *cast*. The two dancers who participated in this phase of research were engaged as dancer/performers rather than research participants, and thus were not asked to write about their experiences. Their participation in rehearsals did include discussions, some of which

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<sup>72</sup> I am using term dance/film to describe my approach to crafting the moving image. Although I find the term awkward, I feel it is more descriptive of my work than the more commonly used ‘screendance’ or ‘video dance.’ My works are created choreographically, but rather than being a choreography intentionally created for the screen, I choreograph with the filmed images during editing. Some of these images include dancing bodies and some do not, but the film overall is treated choreographically. I hope to find a more suitable term in the future.

were recorded. Their feedback and reflections contributed to my evolving understanding of and theorizing about the material, as well as the overall shaping of the piece.

The creative project itself provided a site of inquiry and a tangible materiality with which to engage. At every step of the piece taking shape, further evolution occurred in my understanding. The process of making the piece—handling the materials of movement, place, and film—along with glimpses of the form of the piece in the act of taking that form, provided a continually responsive reflective space that deepened my understanding, as well as my questions, about the embryological and philosophical material. As Barbara Bolt writes, drawing on Heidegger, ‘we come to know the world theoretically only after we come to understand it through handling’ (Bolt 2010, p.30). In making *cast*, these ways of knowing—theoretical and sensorial (through handling that is somatic as well as visual and manual)—didn’t operate sequentially in the manner Bolt cites. Rather, the interaction of these multiple ways of knowing felt more like the back and forth of a dialogue, in which the material of theory and the material of practice inform each other in a less predictable timing.

As with the earlier phases of research, here I consider embodied narratives of how the developing embryo expresses consciousness and the dynamics of universal, creative forces. This phase of inquiry, and the generation of *cast*, specifically concerns an early stage, known as gastrulation, in which the embryo appears as a three-layered gestalt (comprised of the three germ layers of endoderm, ectoderm and mesoderm), which I find to be strikingly resonant with Tibetan Buddhist teachings on the threefold dynamics of ground, path, and fruition. This path of research, culminating in the dance/film *cast*, explores the embodiment of endoderm as ground, ectoderm as path, and mesoderm as fruition. The choreography for *cast* was created in collaboration with the two dancers who perform in the film, through a studio research process. In the present chapter I discuss the dynamics of this embryological stage of gastrulation through a philosophical lens, and the process of embodying the material through dance and the moving image. In the next and final chapter, I will discuss the film artefact in relation to notions of fruition and embodiment in art, somatics, and Buddhist philosophy.

## Ground, path and fruition in embryology and Dharma Arts practice

At nearly two weeks after conception, our cells organize from a spherical cluster into three interrelated but distinct germ layers, designated as endoderm, ectoderm and mesoderm. It is here in this early pattern of organization, marking the first specialization of our embryonic cells into distinct functional relationships, that I sense an expression of (an embodiment of) the dynamics of ground, path and fruition. These terms are found frequently throughout Buddhist teachings, and, like many Buddhist terms, their specific meaning varies depending on the context in which they are used.<sup>73</sup> In this study, I primarily use Chogyam Trungpa's explication of what he calls 'threefold logic'—the interactive and interdependent dynamics of 'the background of manifestation, the potential of manifestation, and finally manifestation altogether' (Trungpa 2008, p.128). These three aspects of ground, path, and fruition are, of course, inseparable; the 'manifestation' of form is none other than the 'background' of emptiness, the immeasurable and undifferentiated potential out of which and as which all form arises. In this sense the ground, path and fruition doctrine is another way of highlighting the inseparability of form and emptiness, while also naming the mechanics of the path 'between' them—that which allows emptiness to appear as form and, perhaps more importantly in terms of the Buddhist practitioner's path, that which promotes recognition of emptiness as the nature of all form. Despite being ultimately inseparable, the distinct articulation of these three aspects highlights the process dynamics of appearances, which is very useful when investigating embryology and art-making, two disciplines concerned with how things come to presence. The threefold perspective helps us to remember, when we view something

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<sup>73</sup> In Buddhist philosophy the experience of reality is generally presented in terms of two simultaneously existing 'truths'—the ultimate truth of reality as-it-is and the relative truth of reality as we experience it. The term Ground (with a capital G) can indicate the primordial, everything-as-nothing Ground at the *ultimate* level of truth, before any hint of differentiation into form. 'This origin of inspiration, primordial in nature, is without beginning: It is not only before the first dot on paper, but it is also before the paper itself' (Olmsted 2012, p.188). 'Ground' is a symbol, a metaphor, a good-enough name for what is unnameable: the formless, nonconceptual, pre-ontological, undifferentiated mystery, which 'plays for reasons hard to express' (Germano 1992, p.60). At a *relative* level (in our everyday engagement with the world as it appears to us), the ground means the basis of any situation—the blank piece of paper, the empty room, the parameters of a project, as well as the baseline tone or state of the body-mind at any given moment. Nagarjuna (founder of the Madhyamaka school of Mahayana Buddhism) taught that only through investigating and contemplating relative truth, as it happens in our daily lives, would practitioners begin to understand ultimate truth, a message that is repeated throughout much of Buddhist literature. In other words, 'if we ignore or reject our experience of the world as it is, we can never gain any insight' (Kyabgon 2001, p.76). According to the tradition of Buddhist meditation begun over 2500 years ago, although the idea of Ground can be approached intellectually, any understanding of what (and how) Ground *is* arises through embodied experience and mindful awareness of the dynamics of one's personal everyday perceptions of the ordinary world, and not through purely intellectual speculation or through any conjuring of a transcendent world that is separate from ordinary experience.

like a work of art or a human body, that we are viewing a process of appearance (of presencing, or poiesis) rather than an independent, fixed form.

Within the Shambhala Dharma art teachings, Trungpa Rinpoche described this threefold logic as ‘a way of presenting a complete world’ (Trungpa 2008, p.127)—an arts practice that is responsive to the ground of making as much as to the thing being made. Dharma art practices (including calligraphy, poetry, flower arranging and Miksang photography), like somatic approaches to dance and movement, attune the senses, beginning with a basic sense of existence, of ground, then developing ‘slowly through the threefold process of perception: the sense of being, the sense of doing, and the sense of linking together’ (Trungpa 2008, p.76).

Many artists would recognize the experience of being with the pure potential of the unknown (ground), noticing a flash of insight or moment of perception (path), and the manifestation of this into form (fruition). Some have expressed this directly, such as the poet Allen Ginsberg, who organized his Mind Writing Slogans into the three categories of: 1) Background as ‘Situation, or Primary Perception,’ 2) Path as ‘Method, or Recognition,’ and 3) Fruition as ‘Result, or Appreciation’ (Ginsberg 1998, pp.197-207). The painter Agnes Martin suggested a similar threefold dynamic in the work of self-expression, dependent on a developing awareness:

Behind and before self-expression is a developing awareness in the mind that expresses the work. This developing awareness I will also call ‘the work’. It is a most important part of the work. There is the work in our minds, the work in our hands, and the work as a result (Martin 2005, p.67).

Martin’s formulation echoes John Cage’s encouragement ‘...not to make a thing but rather to make nothing.... by making something which then goes in and reminds us of nothing’ (Cage 1961, p.129). Martin and Cage, like Ginsberg, understood the artist’s path of action to be one of beneficial activity, through which the fruition (the something) aims to lead the perceiver back to the ground (the nothing). As Ginsberg professed, ‘the only thing that can save the world is the reclaiming of the awareness of the world. That’s what poetry does’ (Ginsberg in Olmsted 2012, p.191). Ginsberg’s words serve as a reminder here that from a Buddhist perspective, the main function of arts practice and production is to foster enlightened awareness of the emptiness and interdependence of all things, to reclaim awareness of what arises. The path ultimately

leads back to awareness of ground.

Even outside of a Buddhist-inspired art paradigm, any creative arts practice, having an implied aim to make a something that warrants being paid attention to, presents a visible example of threefold poetics in action. Often, creative practice will be described using metaphors from gestation and birth, although this rarely goes beyond the realm of metaphor.<sup>74</sup> What is less visible is the actual narrative of embryology as it describes the creative process of our embodied appearance as a threefold logic of its own.

Bainbridge Cohen teaches an embodied approach to embryology that, like Dharma art practice, acknowledges the spaces, the basic ground, in which and as which the embryo appears. In BMC, the embryo *is* the realization of space. As I have described in previous chapters, this approach engages movement practice to sense fundamental dynamics (like the wind) in our present embodiment (like the sand) that relate to structures and spatial relationships that are no longer present (Bainbridge Cohen 2008, p.167). Through this process we animate an embryological narrative, beginning with the fruition, the form, to inquire into the ground and path as the form's essence. The shape-shifting embryo, continually in flux, shows us at our most mercurial, when we were always becoming, and not yet attached to any identity, with each stage of development presenting a full-body *gestalt* that is foundational to our current organization.

### **Introduction to the three germ layers**

The embryological stage that inspired *cast* occurs at nearly two weeks post conception, when our embryo transforms from a spherical cluster of pluripotent cells (created through a rapid succession of cell divisions from the primary zygote cell) into a flat two-layered disc with a differentiated front and back. The dorsal (back) layer, called the ectoderm, comprises the cells that will give rise to the nervous system and our external surfaces such as the outer layer of skin, the lens and cornea of the eye and

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<sup>74</sup> Dix (1985) notes Akenside's poetic use of terms from conception and gestation in describing the creative process in the eighteenth century. Dix credits this writing, as extended by William Harvey, as seeding the development of an 'organic theory of art' rather than the 'mimetic' art that preceded it. While interesting historically to read the connections these authors made between the conception of an idea and the conception of a foetus, to me they read as superficial and painfully misogynistic, and therefore haven't added much to my consideration of embryology and the dynamics of creative forces.

the outer ear. The ventral (front) layer, the endoderm, will give rise to the gastrointestinal tract, the inner linings of many glands and organs, the bladder and lungs. In this transformative gesture the front/back relationship of the body is established first, through the relationship of endoderm and ectoderm. It is this primary relationship that creates the conditions for the appearance (in humans and other bilaterally symmetrical creatures) of a third, middle layer (the mesoderm) in the space between them. The appearance of this third layer is more complex and results in the embryo as a trilaminar disc, or gastrula. The entire process of reorganization into a three-layered disc is called gastrulation.

The gastrula is continuous with a yolk sac in front (providing nourishment) and the amnion behind (providing a protective space). The developmental narrative of this stage is thus in the context of these adjoining front and back spaces, created by the same cells as form the embryo proper. In the embryo's subsequent enfolding into a cylindrical organism the front and back layers, along with the yolk and amniotic sacs, become our interior and exterior worlds, respectively. Bainbridge Cohen describes this as a process of the embryo creating its own primary space of nourishment to support its earliest development, as well as its primary space of protection, the immediate environment 'in which it swims' (Bainbridge Cohen 2008, pp.163-174). Drawing on her extensive study and practice of Tai Ch'i, she associates the yolk sac and the amniotic sac with the internal and external 'sea of chi,' respectively. My own experience is that embodying these spaces enlivens and strengthens the sense of support (both physical and energetic) that I receive from them.

I am struck by the notion of the embryo creating its own nourishment and protective space, and curious how this might relate to the Tibetan yogas of food and clothing, 'techniques for contemplatively generating constant dietary nourishment and warmth without relying on ordinary sources' (Germano 1997, p.295). Germano notes that these practices indicate a deeply body-based approach and '...represent powerful attempts to come to terms with physical embodiment and the need both to draw energy from a nourishing exteriority (food) and to maintain protective barriers from a disruptive exteriority (clothes)' (Germano 1997, p.295). Such practices generate inner heat and create a kind of nourishment and protection, eliminating the need for the practitioner to wear clothes or take in food (Germano 1997). Not having experience



with these practices, I cannot comment further except to note the striking connections between these yogic practices and the dynamic first appearance of the embryo's inner and outer spaces that arise interdependently with the embryo proper. From an external view the yolk sac and amniotic sac might appear to be simply accessories, important to but separate from the embryo. However the fact that these spaces are created from the same cells that create the embryo (are made of daughter cells of the same zygote) suggests a different relationship, one in which the identity of those supportive spaces melds with that of the developing person. I am fascinated by the implications of this for considering a person's relationship to her or his internal and external spaces and wonder how this material embryonic connection might underlie some of these advanced yogic practices. On a related note, throughout my movement exploration of these developing layers and spaces, I have noted that my own sensations of what Bainbridge Cohen (2008, p.163) describes as 'the embodiment of space' (rather than/in addition to structure) suggest a connection between Western embryological narratives and those presented by Tibetan embryology, in which the body forms primarily as energetic channels (Labdrön and Harding 2003, pp.185-204).

### **The dance/film *cast***

*Cast* was developed in the studio over a six-month period in 2013, with the two dancers who appear in the film, Fiona Cameron and Jason Marchant. We met weekly for two hours per week beginning in April 2013, with a few interruptions for travel, until the film shoot at the end of October. The rehearsal process involved somatizations exploring the three germ layers in detail and long periods of movement improvisation. Although we experimented with various compositional strategies, including generating solo choreography and teaching each other movement phrases, the main focus of our movement development was in improvisational partnering. This form allowed the most latitude for exploration and embodiment of the material. Partnering presents an opportunity to measure the quality of meeting, the quality of presence, while the open frame of improvisation kept the movement fresh and responsive to the evolution of the research. I decided to have the dancers improvise the movement for the film shoot as well, as I feel that improvisation shows the movement of mind/consciousness in a way that supports the project.

The first section of *cast* embodies the ectoderm, which Bainbridge Cohen associates

with the ‘pathways of flow between the ground of being and the form of manifestation or expression’ (Bainbridge Cohen 2007, n.p.), providing the potential for communication, creative activity, and perception. The cells of this layer give rise to those aspects of us that meet the exterior world and enable communication between interior and exterior experience, what Elizabeth Grosz calls the ‘becoming-brain’—‘a mode of connection, working through various circuits that indirectly join the inside to the outside in every living thing’ – the aspect of us that is not only porous with and enmeshed in a milieu, but continually shape-shifting in response to the meeting of internal and external experiences (Grosz 2012, p.3). Our capacity for beneficial activity lies in this compassionate connection with our environment, based in awareness of the dynamics of communication and relationship.

To explore this material in rehearsal, I directed the dancers in following flows of sensation and motor impulse, tracing how external information enters in and circulates with cortical intelligence and imagination. They explored initiating physical contact through the back of the body as well as enveloping the surrounding kinesphere and each other in partnering, entering the negative spaces between things. I noted these images that arose in witnessing them dancing with this direction:

*Curiosity, exploration, meeting places and people, shaking hands.  
Leading and being led.  
Threading through a crowd.  
The spaces between things, like the wind.  
Seeing.  
Listening.*

The opening section of *cast* takes place on a busy pedestrian bridge over the Yarra River in downtown Melbourne. The urban setting naturally draws one’s attention outward, to the environment, and to one’s progress through the space, to *doing*; as the dancers moved out of the studio onto the site, their kinespheres expanded, and I invited them to incorporate the seemingly unending movement of people, plus wind, water, birds, boats, buskers, and voices echoing across the space.

A bridge is a literal path—often the only path—like a nerve, directing movement into a forward momentum. The flow of pedestrians became a central choreographic focus of this section, a crucial ‘cast of extras’ on location, whose visible movement is the result of flows of desire, habit, intention, and possibility—all expressions of mind.

The city carries a sagittal, forward momentum, an often-narrow horizon, tunnel vision; 'side-streets, the only openings, are merely inconvenient "red lights" for most commuters' (Stevenson 1997, p.57). This particular pedestrian bridge, because of its design and vista (including a quirky floating café mid-river) invites some shift into horizontal space yet primarily channels the sagittal. The space I chose for the first section of the film is a wide area of the bridge, just out of the flow of traffic, a space I came to relate to as a kind of eddy (see Figure 6), a space that allowed the dancers room to move while still being connected to the flow across. They required this space in order to open perceptually to how the exterior flows circulated with their interior experience. The site allowed for multiple camera angles that incorporated the space of the sky and river, as well as views that set up a resonance and contrast between the dancers' movement and that of the pedestrians on the bridge.



Figure 6 - Still from *cast*, ectoderm section on the Southbank pedestrian bridge

In editing this section, I found the eddy created a space akin to sitting meditation, in which one notices the ongoing flow of thoughts without hooking into the storyline that they contain. By remaining in this side space the dancers were able to embody the movement flows in a spacious manner, unhooked from having to get anywhere themselves yet still propelled by the same forces. The changing camera angles reflect our ever-changing points of perception, and highlight the continuity between the spaces we move through and the movements within us. As the body is shaped by

circulatory flows, life events, thoughts and emotions, so too ‘places are not a stable ground that are simply subject to flows of ideas, people, information and money; the experience of place is *produced* by such flows’ (Dovey 2005, p.3, italics mine). The ectoderm, and its relationship to the amniotic sac, embodies these pathways of flow, connecting our inner lives and the outer worlds that we move through. Or, as Joss Whedon said in his 2013 commencement speech at Wesleyan University, ‘You do not pass through this life, it passes through you. You experience it, you interpret it, you act, and then it is different. That happens constantly. You are changing the world’ (Rubenstein 2013, n.p.). In guiding somatic explorations of the ectoderm, and in directing and editing this section, my primary attention was placed on opening the senses to pathways of flow, tracing how movement becomes form, allowing movement to circulate through and lead form, and how form is animated by flows.

The dancers part abruptly, each entering into opposite pedestrian flows across the bridge and along opposite sides of the river. Fiona’s walk takes her immediately into the throng of runners, cyclists, families, and tourists. Jason’s walk is longer and more solitary, crossing over a further pedestrian bridge to reach the south bank. The dancers re-join in a grassy, tree-shaded area in an embrace, having used the time walking to gradually shift their attention to their internal organs and the softer, quieter, front of the body. This contact begins the next section, embodying the endoderm, with a slower, sustained tone, and more internal focus. Intimate camera angles show points of contact and sharing of weight (see Figure 7), rather than the surrounding environment, reflecting the qualitative shift of focus expressed by the dancers.

Bainbridge Cohen (2007, n.p.) associates the endoderm with the ‘ground of being,’ invoking Trungpa Rinpoche’s ‘sense of being’ noted earlier. It embodies qualities of meditative stillness and internal calm, a relaxed, aware presence that is settled yet ready to respond when the need arises. Embodying the endoderm, in my experience, engenders an openness to the basic ground of the situation. In BMC this is based on yielding—a fundamental presence underlying the foundational movements of push, reach, and pull (Aposhyan 1999). The yield is the baseline attention to what is, meeting the situation without attachment or aversion. Grounded in what Bainbridge Cohen calls cellular consciousness, this is the mind of not coming or going, but being simply present (Bainbridge Cohen 2008, p.15). Similar to practices of mindfulness



meditation taught within many schools of Buddhism, this often requires slowing down, noticing internal sensations, and taking a break from 'doing.' I feel the endoderm connects us to the ongoing presence of the Ground, the experience of non-doing that supports all appearance and expression. David Germano notes that from a Dzogchen perspective:

The term 'Ground' is consistently evoked as the pure seamless energy potential present as the dynamic openness whereby anything and everything may come-to-presence, itself no-thing yet preceding every-thing as their source and ongoing reality; it is the One and Only which plays for reasons hard to express (Germano 1992, p.60).



Figure 7 - Still from *cast*, endoderm section

Exploring the endoderm during rehearsal entailed the dancers initiating movement through sensing the tone and presence of their organs, responding to the slower rhythms of digestion, and the wisdom of the enteric nervous system (the 'gut brain').<sup>75</sup> I invited them to move from deep internal sensation, and from the subtle intimacy of being in contact without having to achieve anything.

<sup>75</sup> The enteric nervous system, sometimes referred to as the 'second brain,' or 'gut brain,' is a self-regulating system, containing more neurons than the spinal cord or peripheral nervous system. See Gershon 1999. BMC regards the heart as a third self-organizing neurological centre, creating an interactive system of three brains (Taylor 2012). I find it interesting that each of these three brains arises from a different germ layer, and I work with each brain as an intelligent hub that organizes the tone of the various systems that emerge from each layer. The three-brain organization parallels some Eastern anatomical schemas such as the 'three fields of cinnabar' (in the head, heart and navel centres) found in Taoist texts (Kohn 1993, p.209). Linda Hartley notes that these three centres all begin embryologically 'outside' the body and are internalised, in a process she calls the 'embodiment of spirit,' (Hartley 2014), during gastrulation.

From my observations in rehearsal I wrote:

*Inside of a snake.*

*Heat condensed but spacious, inner space, digestion, processing.*

*Soft belly, gut instinct, no eyes no ears.*

*No place to go.*

*No before or after.*

*Going in to go out, going out to go in, and not going anywhere, and already everywhere.*

This section of the film sees the duet more secluded in the shadows and contained by trees, supporting the dancers' ability to slow down and focus more internally on subtle weight shifts. In viewing, they seem to move outside of time, as a pause in the rush, a decoupling from enterprise; the sound also stills to birds and distant voices. In a sense, nothing happens; the movement is very simple. In many ways this was the hardest section of movement for the dancers to enter into in the public site. The pace of external movement in the urban setting, with its demands for attention, made it challenging for them drop into internal awareness and yield to slower and more subtle shifts of weight, a practice that they reported was easier in the quiet of the studio.

This duet completes with the dancers transitioning together into walking, gradually re-emerging into an increasing volume of riverfront urban activity. In viewing this section I am reminded first of my experience of transitioning into sitting meditation practice. I recognize the challenge of slowing down and decoupling from doing things. Then, in viewing the end of this section, I recognize the post-meditation experience of re-emerging into daily life activity with freshened sense perceptions. I am reminded of how yielding (to gravity, to ground, to restfulness) supports the efficiency and efficacy of my sensory and motor activity.

Before the third germ layer appears, the ectoderm and endoderm already embody an archetypal relationship between exterior and interior, surface and depth, male and female, being and doing. The organizational gestalt of the embryo at this stage of existence (as two layers with their two contiguous spaces) is, to me, suggestive of the united deity and consort relationship in Vajrayana Buddhism's *yab-yum* iconography of 'father-mother' in inseparable union (see Figure 8). I feel that the front/interior of the body, as experienced via the endoderm, embodies the deeply internal wisdom of the ground, which corresponds to the female aspect (*yum*) of the *yab-yum* deity. Simultaneously, the back/exterior of the body, as experienced through the ectoderm,

embodies the more outwardly aware perceptual and creative activity of compassionate skilful means, the male aspect (*yab*) of the deity. Symbolically, the yab-yum as a whole represents the inseparability of wisdom, or *prajna*, as female aspect, and skilful means, or *upaya*, as male aspect. This union 'reflects the practitioner's own mind, the perfect joining in intimate embrace of the penetrating insight into emptiness and the compassionate engagement of skilful action' (Simmer-Brown 2001, p.157). Judith Simmer-Brown notes that

When the yab-yum iconography is analysed only politically, as an expression of male and female power, most of its significance is lost. The central point of the practice is to give up the usual habit of subjectifying or objectifying gender or any other concepts of self and other, and to realise the interdependent play of phenomena as expressions of the natural state (Simmer-Brown 2001 p.160).

Embryologically speaking, our flesh and bone presence only arises as a result of the indivisible union of these two primary aspects, symbolized here by the deity and consort, and embodied in the two germ layers of ectoderm and endoderm.<sup>76</sup> Corporeality arises in the union of mother and father. Fruition arises in the unity of ground and path.

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<sup>76</sup> Tibetan embryology traces the development of these systems back to conception, designating that the 'father's semen generates bone tissue, the spinal cord, and the brain,' while the 'mother's blood generates muscle tissue, blood, and the solid and hollow viscera' (Williamson & Young 2009, p.29). This loosely corresponds my suggestion of the ectoderm (spinal cord and brain) as male energy and endoderm (viscera) as female energy.



Figure 8 - 'Heruka Vajrasattva' drawing by Carmen Mensink<sup>77</sup>

Linda Hartley also notes an archetypal father-mother relationship embodied by these two germ layers, but in a slightly different reading:

Now we have a front and a back, supported by two large fluid-filled cushions, and integrated by a subtle flow of fluids between them that causes a rhythmic movement of opening and closing, extension and flexion. This supports the fundamental life rhythm of opening out towards the world, and returning into oneself. The two sacs are like the pre-cursors, or the archetypes, of the nurturing Mother and protective Father. They are formed from and are part of the embryo, not external to it; the archetypal Mother and Father are part of us from the very beginning (Hartley 2014, p.20).

The 'flow of fluids' between front and back that Hartley mentions refers to the flow through the neuroenteric canal, a space that opens up in the third week of embryological development between the 'front' and 'back' of the body. Bainbridge

<sup>77</sup> Used by permission of the artist. Vajrasattva is the Buddha of Purification, one of many deities often depicted in unity with a consort. Mensink notes, 'Heruka Vajrasattva is considered to be a manifestation of the unity of fully developed male and female energy, the complete purity of the state of enlightenment.' See <[www.tibetanhangkapainting.com](http://www.tibetanhangkapainting.com)>. For more on the *yab-yum* iconography in relation to the female, or *dakini* principle in Buddhism, see Simmer-Brown 2001.



Cohen believes this flow establishes what she calls the autonomic nervous system (ANS) rhythm, which imprints into every cell of the body. The ANS rhythm mediates a flowing continuum between the parasympathetic and sympathetic aspects of the ANS, inner and outer awareness, rest and activity. Thus arising along with the endoderm and ectoderm is a passageway of flow between them, connecting our female and male, or consort and deity, aspects, and inner and outer awareness, in a 'tidal' rhythm of movement (Bainbridge Cohen 2008, pp.165-166). The relationship between endoderm and ectoderm generates the third layer, the mesoderm, which arises in the meeting space between them. According to Bainbridge Cohen, however, the relationship continues to resonate throughout all of our cells as a fundamental rhythm even after the next stages of development occur.

The mesoderm begins at what will be the perineum, growing upward like the stalk of a plant, in the space between the two 'parent' layers, along an emerging central line called the primitive streak. As the mesoderm layer emerges between front and back, it also inscribes the embryo's midline, initiating our subsequent enfolding into three-dimensionality (interior/exterior). I find it significant that Tibetan embryology also names this central midline space as primary to development. Machik Labdrön instructed that 'the body develops first from the navel. The navel channel is the first support from which the body gradually develops' (Labdrön and Harding 2003, p.189). Biodynamic craniosacral therapy, founded by Franklyn Sills, also suggests embryonic development organizes around an energetic 'quantum' midline, which precedes the co-emergence of a 'primal midline' (around which cells and the body tissues organize), and a 'fluid midline,' (around which the fluids organize). Sills (2011, p.299) claims that 'all fluid and tissue organization always refer back to these midlines as the main organizing axes for structure and function.' The emergence of midline that we saw in the initial creative act of cell division appears again as foundational to corporeal organization. Sills (2011, pp.294-297) provides comparative accounts of midline from Chinese, Indian and Tibetan anatomical systems in describing his own theories, all of which detail a central channel of vital life force (which Sills calls the 'Breath of Life') around which the embryo forms. While traditional Western embryology makes no mention of an energetic channel, it does name the emerging midline, as the primitive streak and notochord, as an important organizing structure that appears with the emergence of the mesoderm.

From this initial central growth the mesoderm spreads laterally and establishes what will become the more dense and substantial aspects of the body—the meat of our physical presence, our beating heart, and our skeletal strength. Bainbridge Cohen (2007, n.p.) relates the mesoderm to the ‘form or manifestation of expression.’ Our embodied substance, like any fruition, results from the ongoing dance between the ground (of being) and the path (of beneficial activity and wisdom perception).

Moving from the musculoskeletal system is familiar territory for dancers. The revelation, for me, in moving from the mesoderm as the basis of the musculoskeletal, lay in the experience of it as a product of the relationship between the other two layers. In my own somatic explorations, the support I gained from the interactive relationship of these other two aspects—yielding into the ground and attuning to the flow of path—gave me a vivid sense of effortless strength, a wider range of expression, and playfulness. My notes after one such exploration:

*‘Sure, I can hold up the world’ said Atlas.  
The child equally supported by mother and father.  
Power; muscle, biceps flexing.  
Resonance with ground brings nourishment for physicality.  
Resonance with space for effortless expression.  
It’s a team effort.  
And we are so much more than what our bodies can do (D. Hay), but they can do so much more than we think they can.’<sup>78</sup>*

The mesoderm section of *cast* occurs on a concrete terrace, with the dancers traversing from one end to the other in a playful push and pull duet across the space (see Figure 9). I was drawn to the space for its literally concrete presence and clear, hard, structural form. In our several on-site rehearsals the space was sparsely inhabited; perhaps one or two people passed through. On the morning of filming, however, not only had builders appeared with their scaffolding and power tools, fitting out a new restaurant and filling the scene with the sounds of industry and materiality, but, as we shot the first take, a large group of people emerged from the far side of the terrace, crossing in opposition to the dancers, creating a palpable, formal tension with the duet.

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<sup>78</sup> The week I wrote this I had attended a Q&A session with choreographer Deborah Hay. She spoke of her desire to transcend a focus on what the body can *do* in dancing, and how she identifies with more than that measurement of achievement. My experience here was that in dancing from the mesoderm as an expression of endoderm/ground and ectoderm/path, the range of what my physical body could do became much wider.



Figure 9 - Still from *cast*, mesoderm section

This was the only section where I felt the dancers were truly, tangibly acknowledged by other people in the space, as a part of the space, and I realized that the evolution of the piece matched the evolution of the dancers' presence: by first connecting into pathways of flow in the space (the path), then yielding to internal presence (the ground), they could come into full physicality and strength, and thereby into fuller visibility (fruition). This section marked the development of the dancers claiming space. Though physically tiring, it was in some ways the simplest, and the most playful section of dancing, reminding me of the easy physicality of a child's ballgame, the kind of dancing that gets you 'out of your head,' or the simplicity of John Cage's directive to 'just make something.'

The final section of *cast* explores the enfolding, interdependent relationship of the three layers, reflecting the complexity of our adult physiology and embodied experience, as well as the inseparable dynamics of ground, path, and fruition. Trungpa (2008, p.128) describes this interdependence as the 'king principle,' the wholeness and completeness of a situation, recognizing the unity of these three aspects. The dance here occurs in and around a large metal sculpture of wavelike forms, *Forward Surge* by Inge King, at the Melbourne Arts Centre. The piece features curved surfaces

that seem to shift depending on one's vantage point, and that reflected the dancers' images in the sunlight. The hard steel of the sculpture, a seemingly permanent something, became a surface of fleeting reflection, of images temporarily cast by movement, light, and colour (see Figure 10). Graeme Sturgeon's descriptions of the sculpture resonate beautifully with our description of the spatial structure of the embryo:

In the past, sculpture was conceived as volume surrounded by space, but the introduction into the sculptor's vocabulary of welded steel, with its qualities of great strength and great volume, has encouraged the creation of sculpture that articulates space without displacing it. In *Forward Surge* King has so arranged the work that the space not only penetrates the sculpture, it becomes indivisibly part of it. The great curved planes, cut abruptly by the sweeping lines of the edges, define and animate the space, which in turn permits each segment of the work to develop its full amplitude (Sturgeon 2014, p.533).

The sculpture's fluid framing of space provided a perfect site for this final, integrative section of the dance/film. It so clearly embodies form and emptiness, fruition and ground, through its simultaneous weightiness and lightness, with its hard reflective surfaces that are also somehow soft. Sturgeon notes that this work denies us any 'formal predictability,' that it 'eludes our intellectual grasp, constantly renewing our interest as we move about it' (Sturgeon 2014, p.533). It is an artwork that is solid and complete and yet always coming-to-presence, always becoming.



Figure 10 - Still from *cast*, final section

The character of this section of *cast*, more than the others, did not take shape until

post-production. The dancers' instructions here were more open, as I invited them to explore the dynamics of the three previous sections on a relative continuum, to enjoy the play of the three layers enfolding. In the editing process, I chose to highlight ephemerality and flux; I chose snippets of movement relationship arising, then gone; a breath, a suspension, a reflection, a footstep, the ringing of a bell. In the final images I wanted the fruition of the piece to bring the viewer back to the ongoingness of path, and ultimately, to the open potential of ground.

### **The *trikaya***

Entering into the dynamics of these three distinct aspects of embodied experience through dance presents an exciting opportunity to re-think the way we define and experience 'body.' When I kinaesthetically wake to the experiential qualities of ground, path, and fruition as they arise in the three germ layers, I sense a glimpse of the *trikaya*, the three bodies of the Buddha, as the essential nature of my ordinary embodiment. Trikaya doctrine is highly complex territory, and my understanding is limited, but I feel it is important to introduce here for further consideration. The notion of the three bodies is generally used to describe an enlightened being's ability to manifest physical appearance in multiple places and times at once, while having a true, immeasurable body that is one with the Ground of emptiness. The three bodies are the *Dharmakaya*—the formless body, related to the ground of being; the *Sambhogakaya*—related to path and the ability to communicate (both verbally and nonverbally)—a body of bliss that is not physically or spatially located; and the *Nirmanakaya*—the 'physical aspect of an enlightened being,' as well as the potential of our own bodies once purified through correct practice (Kyabgon 2001, pp.119-133). These three *kayas*, or aspects of enlightened bodies are also the essential nature of our own relative, conditionally appearing, human bodies. As Traleg Kyabgon (1989, n.p.) instructs, 'both the Sambhogakaya and Dharmakaya aspects are already embodied within each sentient being, and fruition is a matter of coming to that realization.'

Reginald Ray claims a similar experiential discovery via the experience of Somatic Meditation, a method he founded:

In this unfolding, stunning discovery, we find that, ultimately, our very own body is nothing other than the *trikaya*, or three bodies of enlightenment, the three bodies of the Buddha. Our body, in everything that it is, is an expression of the sacredness of the universe, perfect and free.



What is quite amazing is that this understanding is not theoretical, nor does it come through our thinking mind; it is a matter of our own direct, fully embodied, personal experience. Here, there gradually dawns in us the experience that the fundamental nature of our body is empty, open awareness (Dharmakaya); that this awareness is brimming with implicit energy, the life force (Sambhogakaya), that is constantly being born from the basic space; and that what is coming to birth is our own life—every situation, emotion, encounter, and detail (nirmanakaya) (Ray, n.d., par. 5).

From the perspective of the Dzogchen tradition, the Tibetan sage Longchenpa taught that these three bodies are the ‘triune dynamics of the Universe itself ... present within the core of all living beings at their heart as the ultimate pure source-potential of their psycho-physical vitality’ (Germano 1992, pp.835-836). The path of Dzogchen is one of rediscovering this forgotten truth. In some way the Dzogchen practitioner’s path is one of returning to the metaphorically embryological moment, as an opportunity to rethink the narrative of who and what we are.

## Conclusion

Embodiment of the three germ layers through a BMC approach can serve as reflective practice, as a somatic pathway of exploration of the *trikaya* or of the physical experience of ground, path and fruition. Ray suggests, for Buddhist practitioners, something that many somatics and dance practitioners already understand—the body is not only the ground of experience but also the guardian protector of our experience. He writes:

When we feel uncertain or lost in our practice, we are able to check what is going on with us against our somatic experience. We ask our body for guidance. When I teach that, in the end, we all have to be our own meditation instructor, this is how we do it; we check whatever we are doing against our interior, somatic knowing, to see if it feels right and to try to sense what is next (Ray n.d., par.4).

Though Ray’s approach may be fairly unique within his Tibetan Buddhist teaching lineage, what he is describing is the basic premise of the somatic traditions I am working within, and the basis of my approach to somatic philosophy.

Engaging with these three aspects of our corporeal experience, whether within a Buddhist framework or otherwise, promotes a dynamic view of embodied life as connected to an ongoing, limitless ground of potential through our deepest interiority—through the tone of the endoderm, the gut brain, and our yielding connection to the ground of Being. Our connection to this basic ground supports our creative engagement with the world through our sense organs, somatic nervous

system and brain, our opening-up to (and as) the movement flows of the exterior world and interior world that co-arise in sensation and action. This is a view of embodiment as poietic, as always becoming. Corporeal form, physical presence, centered in and supported by the heart brain, emerges out of an inseparable relationship between the ground of possibility and our pathways of choice. We embody the aspects of making, something, and nothing in our embryological foundations as well as in our everyday functioning.

Although beyond the scope of this research project to analyse in depth, I mention that my experience of meeting this particular aspect of Buddhist thought through embodied practice has deeply affected my personal experience of engaging in Buddhist practice traditions as a Western woman. In particular, the discovery of the symbolic *yab-yum* relationship as existing within my actual physical body, rather than identifying as one or the other of the image's characters, was revelatory. I feel this research resonates with several important feminist readings of the Buddhist tradition. Eva Neumaier-Dargay (1995, p.146) claims that in the central Buddhist understanding of life as suffering, that suffering 'is most vividly experienced within those phases of life that are the traditional domain of women: birth, sickness, ageing, and death. Connected with the suffering of birth is the image of woman in a more general sense.' As an example, the teachings of Gampopa, the founder of the Kagyu school of Tibetan Buddhism, portray the experience of gestation and birth as being so painful (for the embryo), and the environment of the womb as so revolting that nobody would ever willingly choose rebirth (Garrett 2007). For instance, in the first week following conception, the embryo experiences 'the inconceivable suffering of being cooked and fried in a hot kettle' (Gampopa 1998, p.104); when the mother eats too much food the embryo feels as though it is being 'crushed between two rocks;' when she eats too little food it feels like it is 'dangling in the sky' (Gampopa 1998, p.105), and so on. As Garrett (2007; 2009) points out, the subject of this teaching is not the embryo itself, but rather the student who is being frightened into diligence and right conduct:

No matter how greedy a person is, if you asked him to stay covered in an unclean pit for three days in exchange for three ounces of gold, he would not agree. Yet, the suffering in the womb is worse than that! (Gampopa 1998, p.106)

And yet in tantric Buddhist texts the womb is, symbolically at any rate, 'the matrix

from which all Buddhas originate' (Neumaier-Dargyay 1995, p.161), as well as 'the place where the difference and otherness of (masculine) compassion and of (feminine) liberating insight is articulated and symbolically expressed through the metaphor of sexual union' (Neumaier-Dargyay 1995, p.168, fn.13). As seen in my discussion of *yab-yum* iconography and the endoderm/ectoderm relationship, conception in the womb parallels the union of male and female energies and the recognition of their inseparability.

In another feminist reading of Buddhism, Rita Gross (1993) discusses the Sanskrit term *tathagatagarbha*, usually translated as 'Buddha-nature' and understood to be the enlightened mind inherent in each of us. *Garbha*, Gross notes, literally translates as 'womb' or 'embryo.' 'Therefore, this term posits an embryo of Buddhahood or a womb containing Buddhahood' (Gross 1993, p.186). Symbolically, this is in accord with the tantric and Dzogchen practice traditions, which use language from gestation and birth in describing the spiritual path and engage practices modeled on conception, gestation, and birth (Garrett 2007, p.413; Guenther 1987). This is a but a brief indication of ways that I feel the embodied embryology research can begin to intersect with the practice of Buddhism as it moves out of the shadows of a sometimes patriarchal past, and into a more embodied adaptation.

The movement research behind creating *cast* gave me the opportunity to engage with the felt experience of these ideas in a highly kinaesthetic and perceptual way that, for me, only dancing can do. Most of the insights I have had on this research journey have arisen from dancing with and as the material at hand, or from observing the dancing that arises from my invitation to explore. Likewise, the creative practice of making the film—choosing locations, editing, having a material dialogue with the moving image—suggested new relationships and working theories. The creative practice itself—the path of bringing something to fruition—embodied the embryological narrative, as the narrative came alive in what I was making. In the next chapter I discuss the creative process of making the dance/film in the wider context of fruition in art and practice-based research.



## Chapter 6. Fruition and the ‘something embodied’

...when attention is interwoven with action, and action is completed with awareness, the mundane movements of daily life may be apprehended as the embodiment of an elementary beauty. This is the gift of the pedestrian (Dempster 2008, p.27).

But let us turn to inspiration about something. ...Suddenly life’s path is fitted to the ends of our feet. We realize that we are going to do some certain thing’ (Martin in Martin & Glimcher 2012, inset after p.16, p.9).

### Introduction: Miksang photography and pathways to fruition

Throughout the course of the research project, I have considered various ways that performance might emerge out of the somatic practice. Early on, I identified a gap in my research methods—a blind spot of sorts, although I was aware of it from the outset— between the investigative practice of somatic research and the creative practice of making an artwork that stands, in significant ways, as separate from that exploratory experience. I did not know, when I began this research, exactly how I would proceed from immersive somatic research, which, though influenced by personal aesthetics, does not have aesthetics as its principle concern, to crafting a piece for the stage or film screen. I did know from the start that I was not interested in solely bringing an internal, kinaesthetic experience onto the stage for others to watch, and yet somatic engagement is my point of entry into movement, as compared to, say, externally imposed choreography.

I recognized in hindsight that it was the practice of Miksang photography that bridged the divide between experiential practice and creating performance for an outside observer. Reading and considering Erika Fischer-Lichte’s (2012) formulation of radical presence showed me that this is the case. Although she describes an experience of *liveness*, as I discussed at the end of Chapter 2, her description exactly captures my experience of taking and viewing Miksang photographs:

PRESENCE does not make anything extraordinary appear. Instead, it marks the emergence of something very ordinary and turns it into an event: the nature of human beings as embodied minds. Thus, ordinary existence is experienced as extraordinary—as transformed and even transfigured (Fischer-Lichte 2012, p.85).

Miksang senior instructors John McQuade and Miriam Hall describe the ‘joy’ of making ‘a deep and ordinary connection,’ which they similarly equate with the extraordinary. They write, ‘when we feel connected and wholesome, we feel alive.

Connection can feel good and intimate and also on the edge, exhilarating—ordinary and extraordinary at the same time’ (McQuade & Hall 2015, loc.375).<sup>79</sup> The perception of the extraordinary in the ordinary, I feel, orients our attention to the embodied mind, the moving consciousness, at play in what we perceive. In Miksang practice this perception arises through the practice of synchronization, defined in Miksang as ‘the state where eye, mind, and world are in the same place at the same time (McQuade & Hall 2015, loc.507).’ This ‘state’ of synchronizing—eye, mind, body, world, focus, attention—is an ongoing practice, and might more accurately be said to be the process of dancing in and out of synch, rather than a state. In my experience, the practice of Miksang reveals extraordinary presence in the most ordinary situations (see Figures 11 & 12), what Elizabeth Dempster (2008, p.27) calls the ‘elementary beauty’ that is ‘the gift of the pedestrian.’

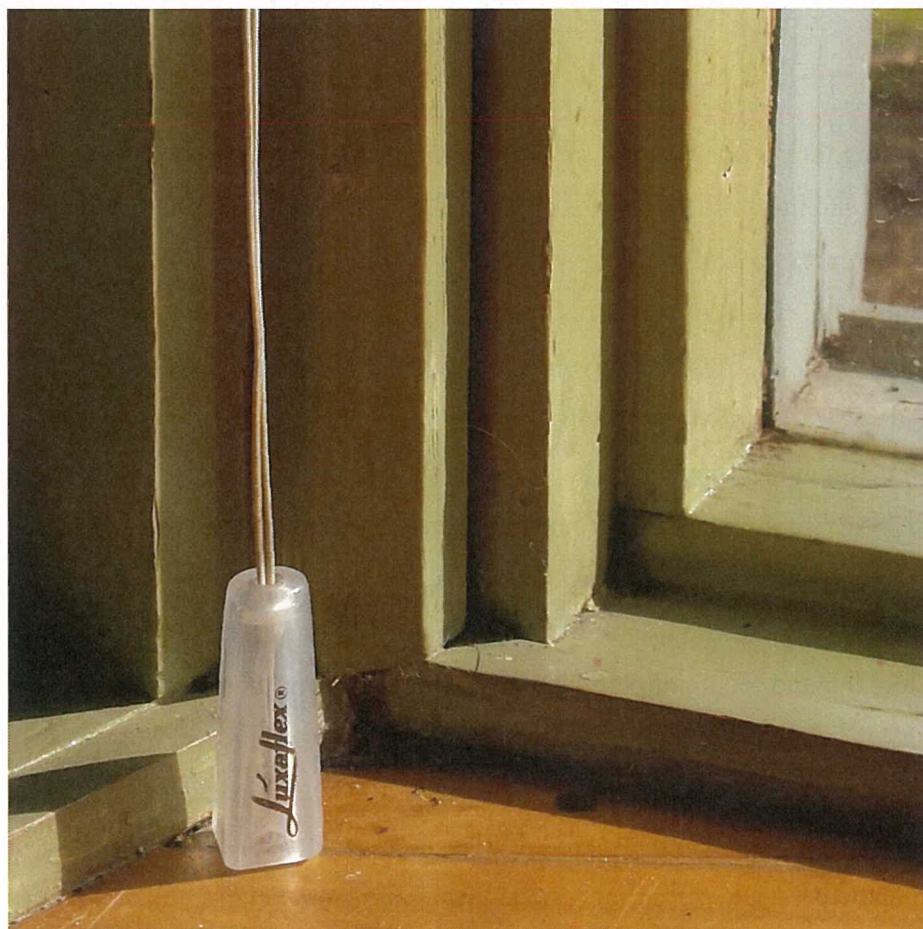


Figure 11 - Blind pull

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<sup>79</sup> Location numbers refer to the Kindle edition.



Figure 12 - Beauty

A connecting thread between my somatic research and my arts practice—connecting the somatic and the aesthetic realms of experience—is the ‘flash of perception’ that occurs in moments of knowingness that arise through such practices of synchronization. ‘Flash of perception’ is a term from Shambhala Art, describing an experience in which, ‘rather than you noticing it, a something comes to you’ (McQuade & Hall 2015, loc.577). The perceived image embodies something—it *bears* something, recalling the physicality of the ‘bearing of thought,’ as suggested by Levin (1985). Embodiment in the moment of perception is the movement of consciousness towards being known, being made available for direct knowing. As Trungpa Rinpoche (whose teachings are the foundation of Miksang practice) wrote, this is ‘looking and seeing directly beyond language...you can see on the spot with wakefulness’ (Trungpa 2008, pp.53-54). Although embodied presence as Fischer-Lichte intends it is describing a quality perceived in a human being, Miksang photography (and the Shambhala Buddhist tradition generally) claims that everything has ‘authentic presence’ (from the Tibetan *wangthang*, or ‘field of power’) that radiates outward into space:

Things have their own presence, their own space. Seen as phenomenal forms, through pure perception, they radiate a sensibility and space beyond the factual boundary of their forms (McQuade & Hall 2015, loc.1941).

Although Miksang works with capturing static images, I found the practice could be supportive of choreographic and film work as well, and, particularly because of its appreciation of the quotidian, corresponded well with my choreographic preferences. Through this embodied perceptual practice I was able to draw the more inwardly focused somatic work into more external expression, and, through the medium of film shot in a public place, to anchor the experience in the everyday. The experience of the embodied mind emerging, coming to presence, ‘moving towards you,’ and the synchronization of mind and body, connect artistic practice to somatic ways of knowing. As I have already stated, I believe we make the perceived world through our embeddedness in it and our embodied perception of it. The activities of making and perceiving are inseparable. As Evan Thompson claims, we ‘enact a self in the process of awareness’ (Thompson 2014, p.xxxi). This is a characteristic of embodied existence. We are embedded in the world. Crispin Sartwell connects this to art practice:

Art is human experience at its greatest intensity and its greatest depth. Art is how and what we are in reality; it is what we make of ourselves and our world, or perhaps what our works allows us to make of it. Art, finally, is a way of opening us to a way of accepting, a way, even, of ecstatically affirming the world in which we abide and the people we are (Sartwell 1995, p.xii).

Sartwell further describes the process of making art as:

devotion to means, to process, in short, to life. For though some of us live for ends, all of us live *in* means: all of us are ‘in process.’ Art in this sense re-embeds us in the very experiences we are having, and consecrates the moment in which we are having them (Sartwell 1995, p.14).

Art, in its making and its appreciation, gifts us opportunities for perception, compassion, resonance and ways of knowing that are unique and valuable. Like the gesture of cell division, the creation of artwork provides an opportunity for relationship, for reflection. ‘[T]he special province of the arts is to show people themselves in a mirror that reflects their ordinary self image in the light of that deeper and broader understanding’ (Rosch 2001, p.237). In my own experience over the course of this research, the artistic entities—the photographs, poems, and films—not only embodied the inquiry but gave me a material surface of reflection on which and with which to do my thinking. The material surface of the film further allows for reflection by the viewer; by situating the dance in an ordinary public environment, the dance is seen to take place within ordinary life.

Dance researcher Sue Stinson notes that ‘a theoretical framework is about relationships — the relationship between ideas and concepts, between the parts of a whole’ (Stinson 1995, p.49). Bringing research ideas and concepts into material embodiment animates these conceptual relationships in exciting ways, by opening up a wide palette of visual imagery and symbolic language, movement expression, compositional relationships, tone, rhythm, tension, volume, and texture. It allows for compassion and connection; it is hard to be moved by a theory, no matter how beautiful its logic may be, but a poem, a dance or a painting operates at a more primal level of comprehension that draws us into its world. Artwork can embody mind and presence in a way that words struggle to match. Eleanor Rosch writes:

The problem is that, by its very nature, whenever you turn to face into or to actively pursue this ground of the mind, what you see is something else. But the arts can do a great job of getting through to us because they can slip it to us sideways so to speak (Rosch 2001, p.247).

In this chapter, I describe some of the ways that the process of creating *cast*, and the growing internal logic of the thing itself in its taking form, did in fact ‘slip it to me sideways.’ There were many instances of the work going in a certain direction due to its own momentum, or my intuitive/aesthetic choices, or chance. At these times my conceptual, theoretical understanding was led along in its wake. The artwork taught me. Its materiality showed me the movement of my thinking, not only about how it was to be made, but also about the dynamics of creative activity in the broader sense.

### **Creating *cast***

A creative event does not grasp, it does not take possession, it is an excursion. More often than not, it requires that one leave the realms of the known, and takes oneself there where one does not expect, is not expected to be (Trinh Minh-Ha 1991, p. 26).

Here is something we’ve all done: we were conceived (research notes 22 August 2012).

Embryology=gestation=gesture

The gestation contains everything, BEARS the background, emptiness, in physical manifestation (research notes 9 September 2012).

My ideas about how the performance aspect of this research would manifest ranged widely over the course of the project, responding to images that arose during movement sessions in the studio, stream-of-consciousness writing, and reflective



writing in my research journals. In the beginning I left this aspect intentionally undefined, leaving it open as a question, trusting that I would know what the performance would be once I reached the phase of research that revealed this to me. I did not want to begin with a fixed idea of what I would make, because there was a lot of research between here and there (there and here); if I were crossing a river, what would I make on the other side?

The research is in the piece, and the piece is composed by its own conditions. These conditions include first and foremost the dancers, Fiona and Jason, and their movement histories and preferences, which in turn condition the development of the movement material in their bodies and in relation to each other, and to me. Other conditioning factors include our working relationship, the practice environments including the studio, the park, and the city locations, and my personal aesthetics, my 'eye.' Also factored in is the eye of the three other people holding the cameras on the morning of the shoot—Cobie Orger, Elanor Webber, and Roy Chu— and their interpretation of my desires. Still other conditions created the film: The grey skies that suddenly produced brilliant sunlight just as we were getting in close for the fourth section; the individual people who passed in and out of camera range, who became part of the dance and part of the film (my cast of extras); the woman looking for her hotel room; the man smoking on the terrace of Hamer Hall. The dance/film *cast* is a something that is reliant on all of these conditions and more. I could not have predicted any of it and it could not have created it on a stage; it exists through being received by the camera.

It's worth noting the ideas and visions I had along the way, however:

1. A group dance piece on moving platforms—I had a vision of duets between platforms, on wheels, negotiating their relationship and partnering while on unstable surfaces that continually changed spatial relationship.
2. A gallery installation including the group dance on platforms as well as film, photographs, and discussion.
3. A triptych of film screens playing with dancers' movement passing from one space to another.
4. An unannounced public performance piece (I remembered a piece I saw on the streets of San Francisco in the 1990s. The performers, all dressed in blue,

handed out red carnations). A vision of these performers releasing origami birds out of their clothes that would somehow float up to the sky—small helium balloons inside? Subtle, strong images of freedom and connection to space; meta-physical.

5. Performers on rafts floating down the Maribyrnong River, the piece moving past the audience on the river's edge.
6. A film of dancers on rafts (inspired by Trisha Brown's Raft piece).
7. A pop-up dance event in the city (or a series of these), unannounced.

Reflecting through this list I detect themes of instability, flux, the movement of the 'stage' through the space itself, a desire to break apart the frame, the need for freshness, surprise, drifting, and the pedestrian. These themes share a common concern with disrupting the perception of the audience, as well as embodying the view of impermanence, the dance of form and emptiness that the research explores. They hope to draw attention to 'presencing' rather than the 'present-at-hand' of the dance, by shifting perspectives on familiar spaces, pulling the rug out a bit.

My specific questions about the shape of the artwork reflected my questions about the relationship of emptiness, embodiment, creative activity, and embryology. In the centre of this relationship is the larger question of making/becoming—the implied dualism of subject and object that resides in the language of 'making.' Is creative activity active or passive? What gets made and who makes it? Does it emerge outwards from the inside of an individual person, or go in from the outside, as Cage suggested? In a Buddhist-influenced threefold perspective that regards the empty space of potential, *sunyata*, as aware and intelligent, the question of agency shifts. If everything is interdependent, I cannot claim to have made this something—the dance/film *cast*, for instance—independently, out of nothing. I have noted some of the other contributing factors. And yet I claim to have made it; my aesthetic choices are evident within it, and it is mine to distribute, change, or delete. The artwork moves both in *and* out in complementarity, it *circulates* through me, through the viewer, through the environment. In the process it becomes its own thing, its own material 'spacetime-mattering,' to borrow a term from Karen Barad (2014). In my experience, borne by this research, the artwork, like the gestating embryo and the becoming-body, functions as both subject and object, both noun and verb. It both acts and is acted

upon. It is made and it is the making, as well as the making *of*.

I chose the title *cast* for my first dance/film as a way to articulate this ambiguity and highlight the interconnectedness of the maker, the made, the perceiver, and the environment. As Rosch claims:

perceiving and knowing are not something confined to a personified consciousness confined behind the eyes peering out at a separated world, but are something happening from all of it together: environment, mind, and organism. The supposed knower (or knowing self) is just a part or aspect of the presentation of this knowing field (Rosch 2001, p.251).

I had become taken with the word ‘cast’ as a term that embodies the ambiguous aspects of creative and perceptual activity in phenomenal appearance, as considered from the perspective of form and emptiness. For me the word calls up images of light and shadow, of phenomena which are present but also intangible, fleetingly in reliance on the coming together of current conditions. Buddhist teachings often rely on metaphors involving casting, such as the reflection of the moon on the surface of a lake—simultaneously a real appearance and an ungraspable illusion. Shambhala training features the image of the ‘great Eastern sun,’ the sun that is always rising, effortlessly casting light on everything equally, without bias (Trungpa 1984). Within the Dzogchen tradition of Tibetan Buddhism, phenomena coming to presence is said to be the Ground’s ‘lighting up’ (Germano 1992). In a Tibetan Bon account of embryology, there is a relatively late stage described as a butter lamp lit within a house, symbolising the awake mind of the foetus within the developing body (Vorndran 2002)—in this image the light of the lamp of awareness casts the materiality of the body. In *vajrayana* iconography the Buddha emanates as a light-body, the *samboghakaya*, in a realm between physical embodiment and pure space, and tantric practitioners engage in creative visualizations casting themselves in the image of particular deities.

The word ‘cast’<sup>80</sup> is both verb and noun, often indicating a link between the two: a director casts a performance, the performers are the cast; a sculpture is cast in a mould, the mould is also called a cast. In this word I find the ‘middle voice’ of speech that Susan Leigh Foster (2003, p.7) recalls in relation to dance improvisation: ‘With

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<sup>80</sup> My definition is based on the New Oxford American Dictionary, edited by Angus Stevenson and Christine A. Lindberg. Oxford University Press, 2010, retrieved 20 February 2011 from <<http://0-www.oxfordreference.com.library.vu.edu.au/views/ENTRY.html?subview=Main&entry=t183.e1231181>>.



this particular kind of verb—and verbs are the closest of all linguistic elements to dancing—events occur neither in the active or passive voice.’ Foster finds this middle voice in the meeting of two people in improvisational relationship, where it is not often clear if one or the other is leading or following. The middle voice is not a verb form found in the English language (Foster 2003). In my search for images and words to describe creative dynamics within this particular paradigm, *cast* has proven mercurial and adaptable enough to allow this kind of rich ambiguity as to the source of a given action or appearance. It evokes Derek Whitehead’s translation of the early Greek term *poiesis* as ‘bringing something from concealment into the full light and radiation of a created work’ (Whitehead 2003, n.p.).

Many of the given meanings of *cast* evoke a meeting place of intent and materiality, as in casting sails to the wind, casting a sidelong glance, or casting doubt through speech. Casting is the activity of focusing one’s intention into the world: casting (a net) for materials, subsistence, the means to create; casting a spell to create change. I am struck by the word’s many glosses that signify the ambiguous roles of the doer, the doing, the done-to, and the done, as well as the matter and materials of making. Casting activities can involve the play of fluidity and solidity, like pouring molten metal into a mould, or wrapping wet plaster around a broken arm; the beginning embodiment of a creative idea, as in casting the actors in a play, or casting on stitches when beginning to knit. It can also involve things that remain more ethereal—a feeling, a gaze, a person’s appearance or tone, a search or hunt, even designating the shape of empty space, as in the cast used to create a three dimensional sculpture. It is the tossed-away detritus of life processes (worm castings, hawk regurgitations, cast-off clothing and possessions given off when no longer needed; the act of shedding). Then there is the casting of fortunes using straws or dice, frequently used in the chance operations central to the artistic process of artists who embrace impermanence and emptiness, such as Cage, Cunningham, and Bradshaw.

The word suggests the intermediary relationship, the middle voice, between subject, action and object, between space and form, self and environment. The intermediary space reminds me of the kind of language I see as prevalent in practice-led arts research articles, words like ‘collision,’ ‘interruption,’ ‘intervention’—all highly kinetic terms that embody a sense of the *materiality* and the *movement* of ideas.

Practices, questions, people and events interact to create meaning, in a way that refuses to be pinned down.

Finally, this middle space of the interactive event—the ‘work’ of an art work—is of course a recurring theme in the reflective writings of many artists, exemplified by Marcel Duchamp’s ‘art coefficient,’ the gap between the artist’s intention and what an artwork actually is and does. The artist casts her ideas into the world, casts his own image, casts a net or a fishing line. What is cast into form is co-created with everything else.

I chose the material of the three germ layers to begin this piece because that is what excited me, and I felt it was calling out for further investigation. As I described in Chapter 5, I had discovered a rich connection between the three-layered stage of embryology with the triune description of existence represented by the three kayas, or bodies, and the three aspects of ground, path and fruition. I was also interested in narrative metaphors of mother, father and child, which ultimately echo my experience of creating a performance piece in tandem with the environment, technology, resources and other people involved. The three germ layers are caught up in a field of ‘casting’ the interior situation of an individual person in relation to its exterior world, while the subjectivity of the interior also casts the exterior world.

My intuitive sense was to begin with creating a duet between a male and female dancer, which I imagined would be one section of a larger piece or one of several duets occurring in various locations around the city. I knew I did not want to perform the work myself, preferring to craft something from the vantage point of audience, to compose from the director’s chair. The rehearsal process with Fiona and Jason was adapted from the somatic methodologies I discussed in Chapter 2, and the dancers’ somatic experience was still an important component, but our time together was highly focused on the end goal of creating a performance piece, and our collective discussion was on the development of this other entity, this other *thing* called the piece. The dancers’ inner somatic wisdom began to meet the shaping of my outside eye, which was in turn responding to my own inner somatic experience of the material. The cycling amongst inner and outer experience took the multiple forms of proprioceptive awareness, verbal and kinaesthetic communication, the taking on of

movement qualities and intentions, aesthetic choices and logistical considerations. I led the dancers in specific somatizations of the three germ layers (ectoderm, endoderm, and mesoderm) with their associated dynamic qualities, and the movement emerged in response. We explored and analysed qualities of experience, places of initiation, and ways of coming into contact. Through the rehearsal process, all three of us deepened our relationship to these aspects of our own experience, as well as our understanding of how these three foundational layers underlie our present experiences of being in the world. At various points in rehearsing the piece, we tried setting some specific choreography, but I found that this didn't produce as satisfying an experience as following movement impulses through improvisation, and we quickly let the set choreography go.

Preparatory notes reveal some of my desires for the piece:

Watching video from last rehearsal:  
-how to make it more HUMAN, real, pedestrian, heartfelt meaty  
-the *thinking about moving* is not what I want to watch here, or to show  
-try exploring the balance/perch/suspension moments, hooking from there  
-earth and sky  
-try outside today, shoes, grass, concrete  
(notes before rehearsal 2 July 2013)

My notes during rehearsal were often spare, or in shorthand, as I focused on the doing, rather than the recording, of the process:

continued from last week  
warm-up with three layers in solo exploration  
into duet with three layers  
hooking is just one option,  
in a wider sense we're folding  
(folding the three layers into each other  
like folding in egg whites, like crocheting)  
into each other, folding internal/external space,  
the space around,  
the three layers creating the body's complexity  
just hooking, esp with legs, is getting each other tripped up and  
stops the movement rather than a flow through

next week bring in animations of  
the three layers into gastrulation  
somatization of three layers and three brain centres  
take more time for this to bring into the duet  
(rehearsal notes 9 July 2013)

The kinetic images seen here, of folding, hooking and layering of spaces, illustrate my felt sense of the interactivity of the three germ layers after gastrulation, after they

have enfolded into complex strata. More and more I brought the dancers into contact, drawing on our mutual familiarity with the duet techniques of Contact Improvisation. The dancing Fiona and Jason are doing in the film, and what we used in rehearsals, is definitely not the practice of Contact Improvisation (CI), but certainly borrows from this tradition. Steve Paxton, the founder of CI, described it as a system 'based in the senses of touch and balance' (Paxton 1975, p.40), in discovering pathways of movement in relation to another's weight and momentum. The practice of the form 'has to do with intent, which should be minimal, and the sensing of intent, which should be maximal' (Paxton 1975, p.41). The shared point of contact becomes a 'third party' in the co-creation of the unfolding dance (Williams 1996, p.25). For us, moving in contact provided an 'other' to engage with, a source of tactile corporeal feedback as to the shifting qualities of movement associated with the three germ layers. The development of the movement material involved each dancer becoming more aware of these qualities in his or her own movement, but this learning occurred in a dance of give and take, push and pull, sharing weight with another person, *through* the shared points of contact. The dancers each learned from sensing how the other resisted or invited touch, navigated weight shifts, gave kinaesthetic suggestions, and responded to the play of force and motion (see Figure 13).



Figure 13 - The dancers rehearsing in the studio

During our first few weeks of rehearsals, my image was to have the dance occur as a 'pop-up,' an unannounced piece in a public space, somewhere in the Melbourne CBD. I wrote this note in my research journal after a flash of inspiration. I had fallen asleep on the couch with my young son, while reading David Michael Levin's book, *The Body's Recollection of Being* (1985), and awoke with this idea:

A series of performances, unannounced, on the street—following lines of something set like a sidewalk or a path, a building, railway track, river. The pieces will have men and women, simple gestures really, I see them heartfelt but not sentimental, present, real—in the world there but not set in it, a reminder of something else outside the square, the fixity. Bringing back our gestures, recollecting being, in public, for the public. Each will be loosely influenced by one of the five elements and the dancers will wear that colour. The colour sets them apart, will make it easier for the viewer's eye to tie the performers' movements together as a whole, in a space without a staging frame or the pre-set idea that the viewer is going to see a performance. So there won't be that kind of preparation for viewing, it will arise spontaneously in the viewer's field of view, when it does.

We could start there, with my first duet.

I saw the duet arising as a moment of physical closeness, sharing of weight, and moving off the centre of balance, in contrast to the typical urban pedestrian comportment. While I was imagining this pop-up event, however, we were still rehearsing in the studio. These early explorations were necessarily responding to the qualities of that situation, that room—the wood floor, dancing with bare feet, the angle and quality of light, memories of the space, the solitude of the space, and so forth. But a dance studio, once familiar, becomes almost invisible in the rehearsal process unless one's attention is specifically called to it. Once we felt ready—that is, when we felt enough clarity in our embodiment of these three aspects that we could carry it out into a more complex environment, we moved into a local park. At this point the shape of the piece began to fruit; the gestalt of the whole began to emerge more coherently.

It was during this first rehearsal in the park that I understood that the work would occur in distinct sections, allowing the dancers time to settle into the dynamics of each of the three layers. I also realized at this time that there would be a fourth and final section, being a mixing and overlaying of the first three, and reflecting our day-to-day experience of being in the world. In this same session in the park we accessed the three layers via a focus on embodying what I called 'the three gravities:' the body's three main centres of mass—the head, the heart/chest, and the abdomen/pelvis—that each correspond to one of the germ layers.



Figure 14 - The dancers rehearsing in Fleming Park

From my notes:

Brought in three centres of gravity, 'the three gravities' when J. said he felt his torso was frozen, unmoving.

The periphery of the head centre is the senses—vision, hearing.

Periphery of the heart centre is the arms and hands.

Periphery of the gut centre is the legs and feet.

Starting at the periphery can draw us in, or starting in can support the extension, reach, expression and exploration into space.

The three gravities—three centres of gravity

Responsiveness to each other (arms/heart/meso)

Responsiveness to your own inner impulses and presence and instinct (legs/pelvis/endo/gut brain)

And to the outer environment (head/eyes and ears/face/head brain/ecto)

It's responsiveness, not responsibility

Presence, local shifting decentralised awareness (so not always conscious higher brain).

(11 September 2013 rehearsal Fleming Park)

This idea of the responsiveness of each of the three centres of gravity each with its own peripheral extensors, and the associated three brains (head, heart, gut) arose in observing the dancers working together in the park environment. The outdoor setting brought qualities of spaciousness and unpredictability, as compared to the familiar



studio. As an observer, the spaciousness heightened my perception of the body-mind's responsiveness to and with the space it moves *in*, and more specifically, how each germ layer organizes that responsiveness differently. It was at this point that the environment (the site) came into focus for me as an equal partner in the piece; I became aware that I was casting a dance of figure and ground together (see Figure 14).

When I visited Melbourne's Central Business District (the CBD) to scope potential sites for the dance to take place, I was taken with the flows of movement—the pedestrian activity—through (and as part of) the spaces. At this time I was still imagining the performance as a live pop-up, but also wanted video documentation, so I was looking for potential out-of-the-way spots for a camera to record the whole of the scene as the dance happened. This meant I was simultaneously kinaesthetically feeling for the space from a dancer's perspective and visually sensing from both a spectator's perspective (which would necessarily be fluctuating), and that of the camera(s). I carried a small camera to document possible sites, and for the experience of seeing through the lens. As is my practice with still photography, I noticed what my eye was drawn to when framed by the lens: the geometries of the space created by buildings, windows, and bridges across a large range of scale; the contrasting movements of pedestrians, birds, trains, the river, things blown by the wind, and flashes of colour. I was especially drawn to the contrast between the colours of people's clothing and the background tones of buildings and sky. I visualized the dancers in various spaces, considering their level of visibility—would they blend in or stand out as distinct? I saw a man in a red jacket, and thought again of Trisha Brown's (1971) *Roof Piece*, which I had been reminded of at a recent dance history conference. Brown's piece featured dancers dressed entirely in red, performing a dance accumulation by relay across a series of New York City rooftops against a grey skyline (see Brown 1975; Graham 2013). The image of these dancers in red staging an intervention in the city—a sea of blacks and greys—stayed with me, and I began to see my dancers in red as well.

The idea to create a film out of *cast* instead of a pop-up event began percolating on that first scouting trip, fueled by my interest in seeing movement through the camera lens. Upon our first rehearsal in the city—during which our presence went largely

unnoticed—the decision was made. In the development of a different project, the relative invisibility of the performers would have been fine, perhaps even welcomed. For this project, however, I realized that I wanted to create *something* that would be seen, and not just fleetingly. I wanted to have a material fruition with which to relate, as an artist and as a reflective researcher, and to have an artwork through which to share my perceptions.

In October 2012 I was invited to attend the ‘Performing the Word’ writing retreat for postgraduate research students. For the first assignment I wrote a short piece,<sup>81</sup> which I titled ‘The Visitors,’ about these dancers that I imagined, their characters fully dressed in red. What emerged in this writing task helped me to articulate some of my desires for the piece:

#### The Visitors

We are wearing red, and bearing something vital: a propulsion of heart in this sea of grey and black, breathing life into the dead sea. Casting form in the form of gestures, your lost gestures, collected. Do we appear alien? Look closer; we’re not. We are doing this for you. We are you. You have begun to measure your movement by the ends, in paces, steps taken, lengths gone to, progress made—from back-there to up-ahead. But what bears the measurer? Who measures the means? What we mean to measure is the air on our skin, the heat of the sun, the thrust of earth felt in our femurs, the soles of our feet, the heart’s rhythm shared. We can’t do this and talk on the phone at the same time. We owe this to each other.

The space between us is one of mystery, a gaping gulf of unknowable, and that’s the way we like it. Easy? No, I didn’t say easy. However, seeing as how it is the place where all possibility resides, we think it best to leave that gap of space open. Walling it up in tight definition is folly, and brings measured death before dying.

So, we are wearing red to remind you of our common arterial insides, and the blood pumping there. We could be dressed in white, and that might have reminded you of the spaces inside which do not need to be filled, which are self-filling. Or maybe green? Green might have reminded you of trees or envy or your mother’s emerald rings or what you wanted to be when you grew up. Or maybe blue, like the sky or the sea, a place you might sit back and reflect a while.... well, whatever, at some point we had to choose and we chose heart, because we love you.

Do we appear alien? Look closer; we’re not. We are doing this for you.

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<sup>81</sup> This was the first assignment in the *Performing the Word* Writers Retreat, taught by Ron Adams and Natasha Ayres, a joint project of Victoria University and Edith Cowan University. The assignment, borrowed from Greg Denning’s workshop series *Performing on the Beaches of the Mind*, was to ‘Take an event out of your research that is in some way critical for your thesis/project,’ and ‘Transform it into a story in whatever tense, whatever person, whatever voice you want. Gamble a bit.’ We performed our stories on the first day of the retreat.



Although only partly dressed in red, I feel that some traces of The Visitors, and their intent of ‘we are doing this for you’ remain in the duet and that in a sense, for me, these imaginary dancers haunt the streetscape of *cast*.

The journey of choosing the space was an intuitive one. I noted some locations felt unwelcoming, such as the denser streetscapes of the CBD away from the river, yet I felt drawn to and welcomed by the river and waterfront areas, and the adjacent arts precinct. Kim Dovey, in his book *Fluid City* (2005) on the development of the Melbourne waterfront, describes the waterfront and beach areas of a city as ‘marginal’ and ‘interstitial’ spaces which manage to escape the market-driving control and ‘instrumentalism’ of the denser heart of the central business district (Dovey 2005, p.17). This affirmed, and gave voice to, my sensed experience of where the creative intervention of *cast* might be welcomed (or at least ignored, as often turned out to be the case). I chose five or six suitable spaces, from which the final four were chosen in a group visit with the dancers.

In my description of the sections of *cast* in Chapter 5, I noted some of the ways that each space resonated with the material of its particular section—in particular, how the openness and pedestrian flows of the bridge supported embodying the ectoderm and path, the canopy of trees supported the inward focus and slowness of the endoderm and ground, the cement surfaces of the terrace supported the tangible physicality of the mesoderm and fruition, and the sweeping arcs of the sculpture supported the fluctuating perspectives of enfolding the three layers. What fascinates me about this process is how the particular spaces were chosen intuitively, almost randomly, and yet they seem to embody the mind of the exact aspect of experience that each section intends to highlight. This is one way that the spaces, along with the people who inhabit them, reflect my thinking, my mind, back to me. For example, when I chose a bridge for the opening section, I hadn’t yet begun to use the metaphor of a bridge to describe the activity of path. It was only through working on editing the piece, and writing of the experience, that this became clear. This is the intuitive language of symbolism—obvious symbols such as a bridge, a bird, scaffolding, even particular shapes within the bridge, or the symbolism of a man and woman giving and taking each other’s weight—these all appear and operate at subconscious levels. As Bainbridge Cohen (2008, p.161) said, the conscious, higher brain is often ‘the last to

know.'

I will add here that these spaces are all in high demand and frequently changing. I caught them at a specific moment in time. An example: in the film there are several padlocks noticeable on the cables of the footbridge, probably less than a hundred of them, inscribed with the names of lovers symbolically locked together 'forever.' Over two years later, I read that their number had reached over twenty thousand, and further, that they have all just been removed by the city. The area around *Forward Surge*, the sculpture that frames the final section of *cast*, was free of people on the day of filming save one young family, but on the day I returned to record sound, the entire forecourt was taken over by a festival, complete with a soundstage and tables for dining. In many ways we got lucky, but it feels like more than that. In Tibetan Buddhism there is an expression, *tashi tendrel*, which means 'auspicious coincidence.' This is what I feel when I watch the film, when I see the large crowd of people emerge on the Hamer Hall terrace, and the workmen rolling the scaffolding—these appearances, auspicious and incidental, embody the qualities of mesoderm as much as the planned dancing. The man smoking on the terrace, the quality of the light through the leaves, under the trees, the sudden burst of light that reveals the dancers' reflections in the surface of the sculpture—I feel these elements are as much a part of the piece as what was generated in the dance studio, cast by auspicious coincidence on the morning of filming.

I mentioned earlier that I progressed from the idea of *cast* as a pop-up event to that of a dance/film. There are moments in the film where there are elements of both. In the first and third sections, where the camera takes in more of the pedestrian environment, we do see a few people respond to the dancers in some way, almost as audience. In these moments there is a sense of the documented pop-up that I initially envisioned. In the final working, from my vantage as a viewer of *cast*, these people are no longer perceived as separate witnesses to the dance but become part of it. I feel this adds to the ambiguity: who makes the piece, how it is cast, who are the performers, who is the audience? The work has become something larger than includes the people who saw it in the making, even if they don't know what they were seeing and helping to make.

19 OCT 2013

**ECTO** vision touch  
 starts of the bridge meaning  
 wind birds sky openness  
 bridge as a passageway, NS  
 flow of movement  
 (over the flow of the river)  
 PATH in two directions  
 dwt is in an eddy but  
 needs to be inspired by  
 the actual span (or to move  
 into / through that space)

**ENDO**  
 parasympathetic  
 internal ground, the grass  
 growing, the earth  
 and trees (equanimity)  
 the GROUND of being  
 gut instinct  
 slow  
 yielding strength

walk across the bridge several times  
 before beginning to circulate  
 + open senses to the environment

warm up fluids  
 + correction to center (starfish)



**MESO**  
 dense present tangible  
 human presence  
 FRUITION making something  
 (the something made)  
 heart  
 dancing on a built structure  
 + being part of the action  
 + part of the environment

**MIX**  
 inseparability  
 open possibility for expression  
 with the ground  
 following impulses from the  
 three brains in dwt and apart

Figure 15 - The four sections taking shape, 19 October 2013

The shaping and structuring of the material for the film served to further clarify my understandings of the aspects of ground, path and fruition as expressed through the

germ layers. Two documents help illustrate some of the creative planning that led to this clarity of process. Figure 15, a scan from my research journal, shows a beginning visual organization of the themes into four sections. This is an example of how I organized my thoughts as a choreographer, with the philosophical, somatic, visual, environmental, and compositional elements intertwined.

Notes that I wrote before speaking with Cobie, the lead camera artist, show some of the ways that the choreographic and thematic elements, as described above, influenced and resonated in the filmic language of the piece:

Ecto: shorter bits edited, more sympathetic nervous system, changes of focus, fragmented  
Long shots showing movement across the bridge  
Not super close up, keep a sense of the space, environment

Endo: stillness, breath, restful; stillness of focus like watching wildlife  
Close ups, details of touch, moments of yielding contact  
And this will be in contrast to the other pedestrian activity

Meso: one long shot showing them receding  
A 2nd shot with 2 cameras follow dancers along  
Want to emphasize the physicality, the dancers being in the space and making it their own

Mix: cameras can track around the space and change views  
So the sculpture frames the dancers in varying ways  
Ok to include other cameras in shot, and me  
Feel of folding, mixing, shifting perspective and POV that's natural, not hurried but not static  
Appearing and disappearing (Camera thoughts, notes for Cobie, 22 October 2013).

## Editing

The process of editing film embodies its own modes of dialogue with the material. In working with footage from three or four different cameras, I spliced together multiple perspectives on the same event. In doing this I create a new event out of the relationship between parts. In editing, I discovered that the film cut functions in a similar way to the enfolding of the cell membrane in cytokinesis. '[D]ifferentiating is a material act that is not about radical separation, but on the contrary, about making connections and commitments' (Barad 2010, p.266). The film folds in on itself, joining up some surfaces and swallowing up others:

When I make edits in the film it's a cell division, the parts separate, the membrane closes over to create a new surface to articulate with another. New relationships are made possible through a cut or trim of the clip (research notes 12 May 2014).

Each film cut creates a new contingency in space and time; it brings the events of perception and memory into refractive, engaging relationship.

Editing software allowed me to alter the timing of emergence, of coming to presence, the playing out of the moving image, and through this, to further refine the particular qualities I wanted to highlight in each section. Largely because of the way that we set about gathering footage—for instance, I did not script specific shots, and the storyboarding was very open to improvisation on the part of the camera artists as well as the dancers—crafting the film in the post-production phase was a process of discovery for me. As I note here, the resulting film is an opportunity to watch something emerge, but the process of making it was a similarly unfolding experience:

I am getting close to finishing *cast*. What is becoming clear to me is how the moving image—including the movement of the dancers but also of the environment, pedestrians, movement of leaves in the wind, the water, etc., as well as the movement of the camera itself, all combine into an ongoing image, the creation and dissolution of which seems to be occurring as you watch—because film is a function of time, it gives the impression of watching something emerge, watching the process of presencing, of becoming (research notes 21 May 2014).

In working with the movement and duration of film as a medium, I was deeply influenced by the writings of Bill Viola. Viola is a highly acclaimed video artist as well as a longtime Zen practitioner. His journal notes speak to connections between the moving image and the movement of mind, or consciousness, that influenced my ability to see the potential of film to craft an *unfolding* and *evolving* event. Viola wrote, for example:

It is not the monitor, or the camera, or the tape, that is the basic material of video, but time itself. Once you begin to work with time as an elemental material, then you have entered the domain of conceptual space. A thought is a function of time, not a discrete object. It is a process of unfoldment, an evolving thread of the living moment. Awareness of time brings you into a world of process, into moving images that embody the movement of human consciousness itself. If light is the basic material of the painter or photographer, then duration is the *materia prima* of the time-based arts of cinema and video. Duration is to consciousness as light is to the eye (Viola 1995, p. 173).

The unfoldment of the video's image, as with live performance, is sequential. What appears as movement in video is a moment-by-moment succession of separate still frames that are reconstituted into a whole in, and by, the mind of the viewer. Viola describes the viewing experience thus:

...during its normal presentation, viewers can only physically experience video one frame at a time. One can never witness the whole thing at once; by necessity it exists only as a function of individual memory. This paradox gives video its living dynamic nature as part of the stream

of human consciousness (Viola 1995, p.173).

As I watched back through *cast* in each progressive stage of editing, and even now, as I check for the sections that flow and ‘speak’ in the way that I want them to, to see how the work embodies the philosophy on which it is based, more and more I am able to trace this flow of thought (and somatic response, which is a different mode of thought) that progresses through my experience. I pay attention to how viewing the work *moves* me, how I receive it at a visceral level, what kind of presence and insight it elicits within me. Like working with any material, it’s an artist’s *feel*, an implicit or direct sense of what is working and what is not; Susan Melrose’s (2007) ‘expert-intuitive operation.’ With editing film this sense is a function of time, a flow along a trajectory of experience across the twelve and a half minutes of the piece.

As a maker, I appreciate the beauty of being able to make small adjustments or big radical changes, and feel how each change of edit—each new contingency created—moves me differently. Digital video files are endlessly forgiving, allowing me to play with options until it feels right, which also allows me to identify further what feels wrong, and why. During editing I became clearer about the qualities I want each section to highlight, to embody, and saw how I might have directed the dancers differently. Watching and editing teaches me what I am trying to ‘say’ as I am saying it. My mind becomes embodied in the artwork itself—it is the process of my thinking and being—yet, being the product of many hands and minds, it is also an embodiment of the greater mind that is not contained by only my consciousness or imagination.

### ***Postcards for John Cage***

I created *Postcards* during a period of intensive thesis writing and relative isolation, after moving to a new and much smaller city. In my new home I see more birds than people; they are a significant part of my day. One day I noticed five birds on the power lines outside, in a balanced formation, and as I watched, their movements became a dance quintet. This is how the film began, by recording my perception of the dance of these five birds, and then experimenting with re-staging and re-contextualizing this dance through editing (see Figure 16). The making of *Postcards* extended my Miksang practice into perceptions with duration, beginning by capturing moving images, like the five birds, that drew my attention in a flash of perception. I

filmed more birds, as well as shadows moving on the wall, waves on the nearby river, my son throwing himself repeatedly into the sand, my own shadow slowly moving across the grass in the backyard, the sky. In the editing process I began to distort, overlap and juxtapose the caught perceptions through super-imposing two or three images and adding effects. The work began with Miksang-inspired practice, but the aesthetic rendering and manipulation of the footage departs from this practice considerably. I took the invitation of Cage's 4'33" of found sounds in the silence, using this same time structure and noticing what images occurred naturally in the immediate vicinity of my house, where I was writing this thesis, and often feeling caged. As the logic of the piece emerged, I added in the scenes from the nearby beach, and older footage of myself improvising dance in a studio. The dance clips had been created specifically for my research candidature presentation, the same presentation that included the diagram at the top of Chapter 1. Including *Postcards* here brings the work full circle, to the opening moves of my research project's conception, and embodies the inseparability of the space(s), time(s) and environment(s) in which this research was conducted. The title pays homage to Cage and my art elders. My intention is that it serve as a conclusion, to be viewed after reading the written thesis.

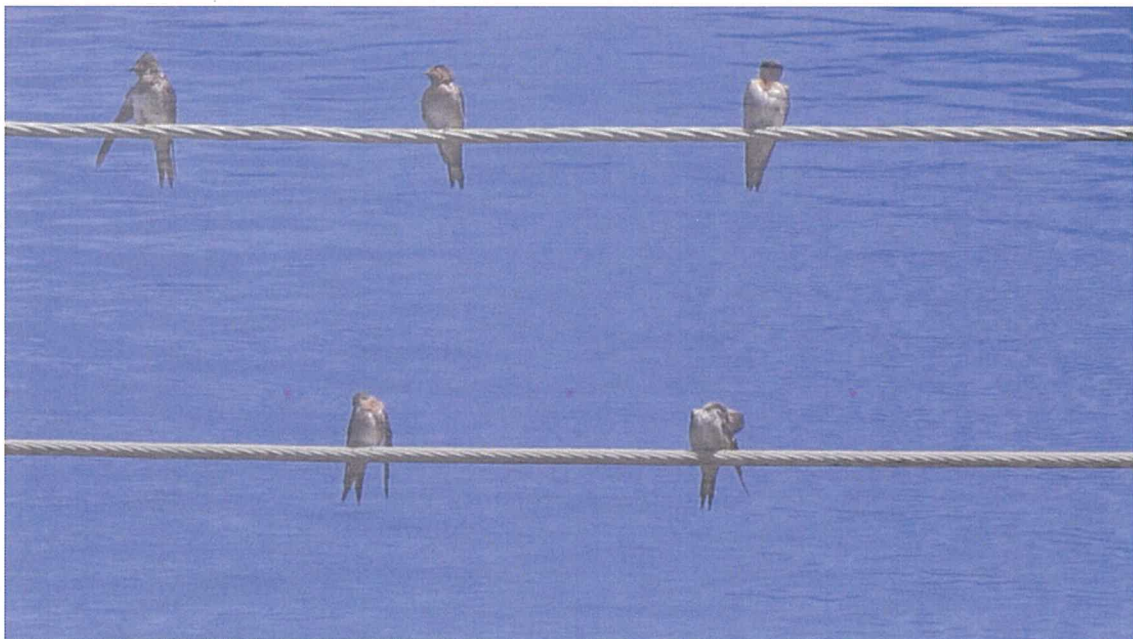


Figure 16 - Bird quintet, still from *Postcards for John Cage*

## Conclusion

Mary Jane Jacob writes of the Buddhist-inspired artists in *Grain of Emptiness*, that they:

choose art as their means. Thus the very creation of art becomes a necessity for them. It is of personal necessity, too, that they share moments of awareness with others. So while they make art for their own understanding, their work is ultimately intended to communicate their insights with others, and in this, they reaffirm one of the essential reasons why we have art (Jacob in Brauen & Jacob 2010, p.25).

While the creative practice itself ‘cultivates the mind’ (Jacob in Brauen & Jacob 2010, p.27) and encourages awareness, the material engagement with the something being made is essential to the communication of perceptions. It is through the demands of attending completely to the presence of the thing being made that the material can teach us, can reflect our minds back to us in the making.

Then the mind-in-making, being fully present in the experience of the process, gives to the work of art its presence, too. It is this quality that draws us into a work that first was a revelation for the artist as it emerged from a process of creative inquiry’ (Jacob in Brauen & Jacob 2010, p. 27).

Within the fruition of the work of art is the mind-in-making—the emergence of form out of the open field of potential that is the ground of emptiness. We can enter the threefold logic of ground, path and fruition from any of its three aspects. A work of art allows us to begin with fruition—the thing made that is distinctly, uniquely something—and invites us in to contemplate the path of its making as well as our perceptual experience of it. It has the potential to draw awareness to the full gestalt quality of figure (fruition) and ground as one presencing dynamic, in the activity of perception. Heidegger touched on this dynamic in his articulation of presencing and *poiesis*:

presencing does not mean mere presence, but emerging and opening up...what presences only presences in emerging, and precisely not in the presence that has congealed into permanence (Heidegger in Levin 1999, p.125).

Heidegger (1977, p.11) proposed *poiesis* as the bringing-forth dynamic by which things come to appear, as a revealing, in a suggestion that resonates with Buddhist philosophy.<sup>82</sup> Opening up to what presences also includes opening up to the *Ground* of its presencing.

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<sup>82</sup> For an overview of the extensive scholarship linking Heidegger and Eastern thought see Ma and van Brakel 2006. Nelson 2012 compares Heidegger’s thought with Chan Buddhism. My primary influences in this arena have been David Michael Levin (1985; 1987; 1999); and Herbert Guenther (1984; 1989). Guenther has been singularly influential in opening up connections between the two, in that he employed terminology from later Heidegger to translate Buddhist texts. Harry Hunt writes that, ‘for Guenther, Heidegger’s increasingly poetic and metaphoric attempts to “say” Being clearly intend the same meaning as the Buddhist practices’ (Hunt 1995, p.221).



John Baker recalls that Chogyam Trungpa, in 1971, while teaching an introduction to Buddhism class, drew a picture on the blackboard:

Then he stepped back and asked: 'What is this a picture of?' Of course no one wanted to say the obvious, and there was an extended silence until finally some fellow raised his hand and said, 'It's a picture of a bird.'

Rinpoche replied, 'It's a picture of the sky' (Baker 2015, n.p.).

The view of poiesis offers an antidote to habitual enframing, our tendency to focus on and value the figure (the bird) and disregard the ground (the sky): to regard more highly that which is seen as more permanent and measurable. 'Enframement, like the picture frame, defines what is to be seen as part of the picture. Anything outside the frame has no legitimate meaning' (Bolt 2011, p.75). Buddhist philosophy and Dharma Arts practice of course challenge this view, as did the avant-garde and pedestrian artists that have influenced my work and writing. Embracing emptiness and poiesis, even in the practice of making things and naming those things as my works of art, I am not searching for something solid to hold onto and claim, but rather recognize that what I make becomes something else when released into the world.

The final assignment in the poetry class mentioned in Chapter 1 was to send out a poem for publication. This act 'completes' the work. The artwork is activated by its reception, and in its transmutation by those who receive it. As Jacob notes, sharing the artwork is a necessity because that is part of its purpose, the sharing of awareness and specific perceptions. The benefit of creating films and photographs is that they can be shared repeatedly across time and space, with ease. Since I created *cast* it has been shown at two conferences (in the US and Belgium) without me being physically present, as part of an independent film event at an arts festival in Melbourne, and at a cinema group event in my new town. As Bill Viola (1995, p.173) wrote:

I have come to realize that the most important place where my work exists is not in the museum gallery, or in the screening room, or on television, and not even on the video screen itself, but in the mind of the viewer who has seen it. In fact, it is only there that it can exist.

As the films and photographs are broadcast into the world they *become made* by those who view them. According to the algebra of Duchamp's art coefficient, each person will transmute each artwork into a different experience. But this is where the work lives, in the minds of those who receive it.

## Chapter 7. Conclusions and questions

We are not static, but rather, always in the process of becoming (Robinson 2008, p.304).

Nothing is usually bigger than something (Bonnie Bainbridge Cohen).<sup>83</sup>

### The emergence of research questions

As part of my BMC practitioner training there was a weekly session called 'questions,' during which we could ask any questions we had, usually by asking them aloud to the whole group. At first there was an expectation that we would get answers. When Bainbridge Cohen taught, she would respond to some, if there was a clear point of confusion, but the real purpose of the session was the questioning, not the answering. At the end of the class, she would say to us with a smile, 'I hope I haven't answered any of your questions.'

It reminds me of this cartoon I came across last week, an older man walking with a younger boy. The older man says 'In my day we didn't have google, we had unanswered questions.' I like unanswered questions (research notes 14 August 2012).

As evidenced by this written document, the course of my research followed a trajectory that responded to a developing line of inquiry. I entered the territory of practice with a wide horizon of interests rather than a pin-pointed question. An ongoing series of specific questions guided the research—I constantly ask questions—but these questions arose as somatic, kinaesthetic, and aesthetic 'problems' as often as they arose in words. Often I would experience a glimmer of articulation into verbal logic, but it would feel, as when just waking from a dream, that if I tried too hard to put these intuitive glimmers into paragraph shape, they would dissolve between my fingers as I typed. Bainbridge Cohen teaches that often the nervous system, in its functioning as the recorder of experience, can be 'the last to know' what the body understands at a cellular or reflexive level (Bainbridge Cohen 2008, p.161).

As is well documented in practice-led research literature, there are many ways of knowing, based on many modes of inquiring. Estelle Barrett (2007) draws on the work of John Dewey, Bruno Latour, Donald Schön, and Michael Polyani, to articulate the various kinds of knowledge that practice-led research generates, and how we

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<sup>83</sup> From my personal notes, 2010.

might identify that knowledge. Schön, for example, first articulated the concepts of 'reflection-in-action' and 'reflection-on-action,' differentiating the kinds of intelligence(s) that operate in the midst of immersive artistic (or other skilled) activity from those surface activities such as 'writing up.' These reflective methods allow the practitioner-researcher to 'surface and criticize the tacit understandings that have grown up around the repetitive experiences of a specialised practice, and make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience' (Schön in Barrett 2007, p.118). Barrett also notes, following Dewey, that 'only in reflection, does the resolution of various instances of experience and adjustment become intellectual. In actual occurrence they are emotional and sensory' (Barrett 2007, p.117). The 'becoming intellectual' of the felt experience, through a complex relay of information from sensory to cognitive, is part of the communication and translation of the somatic and artistic work into a written document. Part of the challenge for me, as for other practice-led researchers who are interested in communicating through more traditional modes of writing, is finding ways to allow the 'tacit knowledge' to surface 'without flattening the liveliness of the somatic, aesthetic approach' (Mercer & Robson 2012, p.16).

Only in hindsight, and in this reflective process of recording lived experience (in reflection-on-action), along with narrating and anthologizing my research practice, can I now further articulate my research questions. These questions were generated through and with somatic and creative research practices. I notice that these questions that have emerged sound like a *starting* place for a doctoral research project, but the sequence of things, in practice, is not so straightforward. They include:

- What are the organizing dynamics that create our bodies as 'something' out of 'nothing'?
- What are the qualities of embodiment in the context of 'form is emptiness, and emptiness is none other than form'?
- How is embodiment of my body related to the embodiment of what I perceive as the world around me?

The somatic and creative methods that I used to engage these questions are ones that take the lived experience of the body as both the researcher and the researched. The main players to emerge in this study are the organizational and enactive movement

gestures of embryological patterning, as an embodiment of, and as entry to exploring, those creative dynamics. Which leads to a final question:

- How then might this embryological narrative, and the dynamics it reveals as its essence, suggest narratives of creative practice and artistic production?

For me, the stage of finding the narrative of my research arc (Murphy 2012) has come late, with the final reflective activity of writing this thesis. I do not mean to suggest that all of the writing scrambles along chasing after the ‘real’ research, which is somatic and artistic, but rather that I engage in various modes of experience, action, and reflection that operate on their own timelines. Reading and writing have been central research activities since the first day, but it is the specific challenge of academic writing, particularly in the ‘end stages’ of the research, that affords new opportunities to connect and clarify. ‘The labour of academic writing is a powerful means to cultivate such reflexivity: through crafting words over time, one can come to understand one’s practice and its contexts in new ways’ (Murphy 2014, p.178). As I labour to create this thesis I feel the distinct emergence of an *anthology* of practice, in my voice and the voices of the several hundred authors and practitioners that are gathered together and interwoven into my research process. From its early Greek roots, the word ‘anthology’ literally means to ‘gather’ (*legein*) or ‘collect’ (*logia*) a selection of flowers (*anthos*).<sup>84</sup> It feels a fitting term for the gathering together of the elements that constitute and represent my research journey. It also speaks to an image I have of a field of voices—these voices from across two and half thousand years and many continents. It recalls Martha Eddy’s (2009, p.6) description of the field of somatics as a ‘field of wildflowers with unique species randomly popping up across wide expanses.’

Leah Mercer describes the challenge she faced of managing multiple perspectives and languages in practice-led research across the fields of performance and physics. She landed on the image of Indra’s net, an infinite net of jewels that stretches across the sky. The beauty of Indra’s net is that each jewel reflects every other jewel within it, thus symbolizing the interdependence of all existence. For Mercer, this image held her experience of ‘the following of tangents and offshoots, looking for the moments and

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<sup>84</sup> Oxford Dictionaries Online, retrieved 20 May 2015, <<http://www.oxforddictionaries.com/definition/english/anthology>>.

places where they intersect,' that characterizes creative and reflective research practice (Mercer 2012, p.119). While I love this image and what it represents, as well as appreciate its Mahayana Buddhist heritage, my own experience has felt more akin to the manual, tactile labour of kneeling on the ground, pulling flowers out by the roots, examining weeds, stepping back to admire (or, at times, to feel overwhelmed by) the vast expanse of the field, then being drawn in by the details—the colour, texture, proportion, smell—of a single blade of grass. My field of inquiry is wide, and at any point in that field one could dig deep. In this field, to pull at one thread of thought can lead to a tangle without end or solution. Or, as Mark Stevenson describes it:

That perennial problem of the researcher/writer: tangles of threads everywhere. Which ones do we follow, and how much should we disentangle, unravel? A question on the level of metaphor, 'Is it the threads that enmesh us, or the loops they form?' Unravelling the tangle, lining up the threads, don't we lose, or even destroy, some of humanity's loopiness. Isn't perhaps being tied up in knots the best entry into an understanding of human life and behaviour? How can you describe a tangle if you have straightened out all the threads? Shouldn't we be tying ourselves and our readers in knots? (Stevenson 2003, par. 1)

In managing my own loopiness, and in trying to contain this project to within manageable parameters, I have had to exercise discipline not to take in, and tie in, every thread of interest. There are some that I carried with me for a long time and then dropped. In some cases it has been productive to enter into a comparative conversation between voices, in other cases a footnote indicates points of potential further study, and in other cases I've had to turn completely away from compelling lines of thought that felt simply too large to engage with at this time. There are more familiar voices that might appear conspicuously absent to some readers.<sup>85</sup> Perhaps further conversations will occur in the future.

## Conclusions

When I began this research project my aim was to contribute to interdisciplinary conversations by placing myself in the centre of an overlapping territory of practice. In particular, I proposed to extend the somatic practices of BMC and embodied ways of knowing to the disciplines of philosophy and art-making within academic discourse, and to bring Tibetan Buddhist philosophy to practices of embodiment. I

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<sup>85</sup> In particular I suspect the works of Merleau-Ponty, Deleuze, Cixous and De Certeau would likely all add interesting perspectives to my research questions. Besides the constraints of my framework, I do feel their work is already well represented and extended in the field of artistic research.

took as my inspiration those artists who practice at the intersection of Buddhist thought and, predominantly, a pedestrian aesthetic. As I shared through the contextual review, these disciplines—somatics/BMC, Tibetan Buddhism, and arts practice—are all well-established and in possession of their own practice methods, yet each remains open to the hybridizing play of individual experience. Returning to the opening schematic of Chapter 1 illustrating the territory of my research, I could animate the three overlapping circles as three vast bodies of water—each one a live and evolving ecosystem with fluctuating borders. As a researcher/practitioner, I drop pebbles from one pond into another. In the centre of the three, I play with the images that arise in the water, a moving surface of reflection and refraction, dissolution and dispersal, coherence and clarity.

Throughout this thesis I have suggested specific instances where I feel this work might contribute to ongoing scholarship and practice between disciplines. For example, I have articulated adaptable somatic reflection methods such as studio reading, transcribing talking-while-moving and timed writing, as support for engaging corporeally in philosophical questioning. My theoretical insights, such as the resonance between the three germ layers, Tibetan *yab-yum* iconography, and the logic of ground, path, and fruition, arose through an immersive somatic practice which surfaces, through these methods, with knowledge. Through this process I also discovered points of resonance between somatic practice techniques and those of Tibetan Buddhist practice, for example the three prajnas (hearing, contemplation, meditation) and the cycle of visualization, somatization and embodiment in BMC. I have suggested this as a model for understanding the progressive development of knowledge and insight within practice-led research methods.

This research has been an adventure in observing creative production, the path, that dances between form and emptiness. My conclusion is that the body, like an artwork, is poietic. I believe one of my key contributions to interdisciplinary scholarship is in the writing of what might be called a poetics of the body. This draws on the work of Laurence Louppe (2010, p.5) who notes that the term poetics indicates ‘enter(ing) the realm of forming/transforming (in Greek, *poiein*).’ For Louppe, studying dance invites tracing the process of the dance arising, through interrogating the choreographer’s unique ground and generative methods. She proposes that any question or discussion

about what the dance *is* requires deep consideration of its particular modes of thinking:

understanding dance involves knowledge not only of its products but also of its practices. The art of movement can only be understood by implicating one's knowledges in it, and usually by involving oneself in its activity, in its *poiein*/making, where creative processes are already charged with the artistic complexity that they are employed to make visible' (Louppe 2010, p.6).

She offers this as an alternative approach to one more commonly taken in dance studies, that of 'taking up a critical position outside the making of dance:'

The poetic approach implies another division of labour. The analysing subject is not assigned a fixed point: s/he is invited to move between discourse and practice, sensing and doing, perception and implementation. This is really the only way to touch an art's thought: to observe not only the finished product but the production at work in the work (Louppe 2010, p.6).

Following Louppe's argument, my research operates by observing the 'production at work in the work' of embodiment. I have 'implicated my knowledges' in the body's generative practices, by interrogating the dynamics at work in embryological 'production.' In identifying the lived body as something presencing, embryology becomes a living dynamic to be accessed experientially through somatic, and creative, practices. Embodied embryology provides a poietic view of corporeality.

This poietic view incorporates Tibetan Buddhist perspectives on the body as aggregate appearance, as the play of consciousness and the five elemental forces, and ultimately as emptiness. My group research sessions into the five elemental phases allowed me to articulate a movement language, based on the interacting dynamics of the elements, that can be applied to creative practice. Thus it makes a contribution to practice as well as theory, in providing dancers, other artists, and somatic practitioners who work outside of the Buddhist tradition access to this dynamic model.

The somatic exploration of cell division opened up a new practice dialogue between somatics, philosophies of nondualism, and new materialism, a dialogue which will continue beyond this project as I continue to research the implications of the gesture of 'becoming two.' These contributions are based in somatic methods and as such intend to make a claim for the value of embodied experience in academic research and discourse.

As reliant as my research is on the somatic experience, it would not have come to

fruition without the opportunity of making artworks. The artworks communicate through immediate presence of perceptual experience. I have drawn on Fischer-Lichte's concept of radical presence that transcends mind-body duality to articulate the ordinary beauty of the everyday, in a way that lends embodied experience to aesthetic experience. I propose that Dharma Art practices such as Miksang, that promote mind-body synchronization, can benefit from somatic practice, as a methodology for heightening embodied awareness. At the same time, the visual contemplative practice of Miksang draws the senses outward from that deep somatic immersion into fresh perception of the surrounding world. By developing filmic practices extended from Miksang and Dharma Arts, I intend to further bring awareness to embodied perception. In this way my research works to establish bridges between somatic, aesthetic and contemplative experience that can further the intentions of each.

In experiencing ourselves as fruition in the immediate, as embodied beings, the corporeal experience itself can be appreciated for its own complex exquisite beauty. As Shusterman (1999, p.299) argues, the 'proprioceptive beauty' of 'one's own body from within' is part of aesthetic experience. The body 'speaks,' as an artwork speaks, through *being*, through presence. And, like a work of art, the proprioceptive beauty of the body can invite us to contemplate its becoming, and its ground of being. Fruition, embodiment, the body, contains the entire universe of possibility. In an early teaching, the Buddha says:

I tell you, friend, that it is not possible by traveling to know or see or reach a far end of the cosmos where one does not take birth, age, die, pass away, or reappear. But at the same time, I tell you that there is no making an end of suffering and stress without reaching the end of the cosmos. Yet it is just within this fathom-long body, with its perception and intellect, that I declare that there is the cosmos, the origination of the cosmos, the cessation of the cosmos, and the path of practice leading to the cessation of the cosmos (Thanissaro Bhikkhu 1997, n.p.).

Somatic practice, and particularly explorations of embryology, have the potential to open up the experience of this 'fathom-long body' as something always coming to presence, to witness it as the mysterious play of emptiness, interdependence, embeddedness, creativity, motility, cohesion, dispersal, refraction, circulation, perception, and so on, not just as theory but as felt, embodied experience. By extending the somatic experience into artistic realms, I challenge notions of 'the body,' and suggest that the body(-mind) is always in circulation with the outer world



and everything in it. Through the fruition of the things we make, we disperse, interact with the world, and refresh ourselves continually.

I began this thesis with two quotes, from Agnes Martin and John Cage. In closing, I acknowledge the two endless directions of movement, in and out, that continue to create and circulate, bringing internal and external experience into dialogue. It is my hope that the photographs and words presented here, along with the two dance/films, the ‘somethings’ that this research has produced, can go in and remind us of the ‘nothing’ space of possibility and the creative activity that is present in every thing.

Readers are now invited to view *Postcards for John Cage*, which also serves as a conclusion.<sup>86</sup>

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<sup>86</sup> On disc or available at <<https://vimeo.com/125763415>>.