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Master of Fine Arts
2014

Neural Imaginings: experiential and enactive approaches
to contemporary psychologies, philosophies, and visual
art as imagined navigations of the Mind.

by
Loretta Picone

December 2014
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Abstract

*Neural Imaginings* is a Masters of Fine Arts project that culminated in this research paper, which accompanied the Post-Graduate Show held in December 2014 at Sydney College of the Arts Gallery, University of Sydney, Australia. The cluster of large, ceramic sculptures presented a network – *Mind Labyrinth (visceral ingress)* – on which sat various conical objects – *Mind Flowerings*. A wall-mounted sculpture accompanied the installation, titled *Cosmic Dance of the Dendrite*. This paper asked, *Why does art move us?* This trans-disciplinary paper and my creative process-led practice examine the contemporary role of the art object, first-person experiential perspective as the reality of the Virtual, and the dialogic functioning that occurs during an art encounter. An art encounter is an engagement of audiences aimed at invoking an individual’s bodily sense experience and concomitant emotions and thoughts.

Artists may harness these somato-sensory communications to activate a viewer’s awareness of their own self-agency and dialogic encounter with sculpture, that are self-evident in a viewer’s visual, tactile, somatic and/or kinaesthetic responses. The art work employed aesthetic means to activate sensorial engagement from a viewer’s art encounter, to enact perceptual responses as part of a self-authenticating, meaning-making process. *Neural Imaginings* is both a presentation of, and a metaphor for, individual agency – in sculpting oneself into existence, within one’s own mental space.
This paper draws on the work of contemporary theorists from art, science and philosophy, striking at the core processes of consciousness. A trans-disciplinary approach pivoted around a neuro-physiological paradigm, including the following theorists: American philosopher Alva Noë; American neuroscientist Antonio Damasio; New Zealand art theorist Gregory Minissale; and professors on Gilles Deleuze theory, Brian Massumi and Peter Gaffney. Symbiotically, the paper’s explanation and art themes oscillated between intrapersonal and disciplinary narratives in art and science, in the pursuit of current approaches of trans-disciplinary confluence about the functions of the mind.

This paper references artworks by contemporary artists from Australia, including Julie Rrap, Stelarc, Bill Henson, Helen Pynor and Jill Orr. Contemporary international artists included: from Taiwan, Hsu Yunghsu; New York, Marc Leuthold, and Mexico, Gabriel Oroszco.
Introduction

*Neural Imaginings* is a project that arose from my fascination with sculpture and for how abstract forms can give rise to thoughts. As a visual artist whose former discipline was psychology, I have an enduring interest in sculpture, process-led practice, and how allied disciplines pertain to art. I am curious about what art reveals of the functioning of the mind. The development of this project oscillated between my process-led practice and my reading of theorists in philosophy, psychology and science. It involved a trans-disciplinary approach that was recently challenged by philosopher Alva Noë.¹ This paper pursues a contemporary reply to his question, *Why does art move us?*

This paper is based on the creative work - an exhibition of my work titled,*Neural Imaginings* - that bears the traces of bodily acts of self-ingressions, to entice the observer to become the imaginative interlocutor in the physical exhibition space. The art works are experiential, and a metaphor for an individual sculpting his or herself into existence while negotiating a physical space as a mental space. Complementing this, my paper focuses on how art can engage audiences through bodily communications based on human neuro-biology. The exhibition can be understood in two ways: valuing an intra-personal unification of the different

ways of knowing in relation to the self; and, at a trans-disciplinary level, exploring conjunctions between relevant disciplines relating to the mind.

During the last decade, art, philosophy, psychoanalysis and various psychology narratives have been converging. Cognitive psychologist Robert Solso said: *we are in art, and art is in us.* He recognised that the function of art is a reflection of the function of the mind, that the creative process is inherent in humans, and the vital role of experience.

Coining a term, *neuroartsology*, evolutionary scholar Ellen Dissanyake has written about the human art impulse, where perceiving beauty is understood as an evolutionary benefit. I suggest we are attracted to beauty (aesthetics) when art objects have enticed our imagination to connect with our emotional life experiences, and to draw creatively on matters beyond the habits and limits of established thought.

Philosopher Roger Scruton said there is need for beauty, realised not *about* things, but *through* our particular experience of things in the world. Any synthesis of experience is inseparable from the materiality of objects, and cannot be fully explained by neurology. To explore how one comes to know anything, I

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4 I quote: *Our need for beauty... arising from our metaphysical condition, as free individuals, seeking our place in a shared and public world arising from... living with imperfections, while aspiring towards the highest unity... In my view, all definitions start from the wrong end of the subject, which is not about 'things in the world' but about a particular experience of them, and about the pursuit of meaning that springs from that experience.* In, Roger Scruton, *Beauty: a Very Short Introduction*. Oxford: Oxford University Press, 2009, 175.
studied allied disciplines and their shared narratives about experience and the functions of the mind, conjuring a trans-disciplinary dialogue of symbiotic wholeness, or conscience with art.

Since the 1990’s – dubbed the Decade of the Brain – western society has been fascinated with neurology. There is increasing interest in the relations between brain, mind and body in art, both internationally and nationally. These are exciting times as psychology and neuroscience are coalescing in relation to art, like the reformations underway in meta-psychologies like Neuro-aesthetics, Neuroartsology, and Neuro-psychoanalysis. An increasing number of exhibition projects combine art with science about the mind, like the GlobalMindProject exhibited in Melbourne in 2010.

There has been an upsurge of leading international theorists and writers whose work pertains to philosophy or psychology and art, including: Professor of Communications and specialist in the work of Gilles Deleuze, Brian Massumi;

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9 Http://www.sutherlandshire.nsw.gov.au/.../Hazelhurst/...Gallery/Neural_Knitworks_Exhibition
10 Association of Neuroaesthetics: A Platform for Art and Neuroscience. Http://aoneuroaesthetics.squarespace.com
Professor in aesthetics and philosophy, Denis Dutton\textsuperscript{16}; Cognitive Psychologist, Robert Solso\textsuperscript{17}; Professor in the arts and the philosophy of Gilles Deleuze, Peter Gaffney\textsuperscript{18}; Professor of Psychology and Neuroscience on art, Vilayanur Ramachandran\textsuperscript{19}; American Neuro-psychiatrist on pre 20\textsuperscript{th} century art and psychology, Eric Kandel\textsuperscript{20}; and the latest in 2013, Senior Lecturer in Art History and Contemporary Art, Gregory Minissale\textsuperscript{21}. Scientists are increasingly exploring experience, virtuality, object relations, enactive perception, the vital role of emotions and subjective experience in consciousness-making, averting the mind-matter conceptual gap, and accounting for how we can know the mind of others.

There remains the challenge of solving the conceptual gap in how to conceive of an immaterial mind operating in a material body. Cognitive psychologists, psychoanalysts and scientists are making inroads into appreciating the functional aspects of the mind, where some are reinterpreting Freud’s original theory of the function of the mind – \textit{The Psychic Apparatus}.\textsuperscript{22 23 24}

\textsuperscript{20} Eric Kandel, \textit{The Age of Insight: The quest to understand the unconscious in Art, Mind, and Brain, from Vienna 1900 to the present}. New York: Random House, 2012.
\textsuperscript{24} Kat McGowan, \textit{The Second Coming of Sigmund Freud}. Discovery Magazine, April 2014, 54–61.
epistemological problems like understanding the relationship between mind and matter (neurobiology), and the separation of subject-object relations (object-oriented ontology) are averted by a first-person experiential perspective. Leading cognitive scientists are addressing how humans connect to emotions via their physiology, where introspection is critical to their theory of consciousness. Scientists are realising the value of subjectivity and appreciating experiential perspectives. From various disciplines, theorists articulate the enduring mysteries of the mind: as non-conscious processes that can lead to awareness, and how to understand mind and matter - termed the hard problem of consciousness. This is a moment in history when how we conceive of the mind is drawing diverse narratives together under a common neuro-biological paradigm, in order to grapple with the richness of the depths and multiple processes of the mind.

In his 2010 book, *The Force of the Virtual*, arts philosopher Peter Gaffney expressed some of the philosophical struggles Gilles Deleuze had with science. He recognised topics of mutual interest to art such as phenomenology and corporeal bodies, and the brain’s openness and ability to self organise. Gaffney

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26 While neuroscience addresses the soft problem of consciousness, Damasio stated that there is growing consensus that subjectivity and virtuality are important aspects to reconciling the hard problem — the unconscious and conscious aspects of mind as a continuous precursory process in consciousness-making. In Antonio Damasio, *The Feeling of What Happens: body, emotion, and the making of consciousness*. London: Random House, 1999, 338-339.


endorsed Deleuze’s fellow theorist Felix Guattari’s trans-disciplinary view to look towards neuroscience as human nature’s base paradigm. He re-quoted Guattari about the value of the synapses as *fields of potential*, that *via the opening away from structures, are able to break off aspects of events or previous territories and set them free.* Simultaneously, he captured the function of the synapses as dynamic spaces for change, and drew metaphorical reference to the trans-disciplinary shifts and mingling between art, philosophy and the human sciences. Similarly, my mantra for *Neural Imaginings* posited that the poetic gap is founded in the synaptic gap.

*Neural Imaginings* is constituted of objects I made that were the culmination of my own thoughts about thinking (such as, What is it like to experience a person as a virtual being?). While reading about the mind, I became the single case study of my own experiences, presenting ideas like the *edges of planes* of thought, as elusive movements of the mind. Like artist Eva Hesse, I too invite audience to be *inventive*, encouraging viewers: *Don’t ask what the work is. Rather, see what the work does.*

A process-led artist can explore via art’s specific mode of production – personal experience and introspection that reflect the functioning of a virtual mind. The project *Neural Imaginings* demonstrates my artistic belief in the Deleuze and

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30 Eva Hesse’s verbal explanation of her work, and, presented through her aesthetic use of the ‘edge’ of things were part of her cross-disciplinary approach.. In, Catherine De Zegher, *Eva Hesse Drawings*. New York: Yale University Press, 2006, 5-6.

Guattarian triad of thought, contextualising art as an affective modality\textsuperscript{32} where experience and enactive perception are what they termed the body without organs or plane of consistency. Just as these philosophers can conceive that art does pass through its materiality, the mind can pass through neurobiology. With its own visual idiom, Neural Imaginings passes through neuroscience, relying on the self-authenticating, embodied process of experience to reveal its function.

In Neural Imaginings, I invoke the body gesturally to invite observers to experience what a work does, and to then find out where the mind goes. The rhizomic, base form – *Mind Labyrinth (visceral ingress)* – bears the hand trace of my human presence. From this base, were positioned *Mind Flowerings* – intricately open structures – as ideograms about thinking.

When encountering Neural Imaginings, viewers may seek to satisfy the urge to know what something is, or simply walk by. As Gregory Minissale advised when apprehending anything unfamiliar, one may benefit from deferring any conceptual expectation of knowing, and attempt to generatively observe what the objects may be like, and allow the mind to wander\textsuperscript{33}.


In attempting to address how art moves us, this paper situates the mind in the virtual, subjective perspective. This is explored throughout my process-led visual art practice of hand-building with clay. Grounded to a neuro-scientific paradigm, I adopted a core bodily communication approach to art practise and art appreciation, posing the body as the site where visual, tactile and kinaesthetic modalities are early sources of bodily knowing. Value is placed on experience as direct, self-evident and relatively unmediated.

The mind-body conceptual gap is resolved through experience, as the origin to how we come to know anything. Damasio’s theory of consciousness focuses on a self-organising imagination as dynamically action-based, where to imagine possibilities enacted through experience is critical in his theory, and resolves two major conceptual problems. First, it accounts for the longstanding conceptual paradoxes of consciousness (how conscious and non-conscious processes operate), and it resolves the traditional

35 I.b.i.d., 34.
36 I summarise his argument about consciousness. Consciousness requires language, and leaves no room for core consciousness, yet core consciousness is a vital precedent, as creative being connects to one’s bodily states and environment, and thought signaling (page 187). Core consciousness pertains to a sense of self that arises in the subtle, fleeting feeling of knowing, constructed anew in each pulse (page 196). It needs to interface with concomitant memory and emotional feelings, to evolve any reiteration of memory, and the formation of insight. Continually reactivating memories into extended consciousness, become objects of thought that interrelate with core consciousness. From the myriad of experiences one records, one learns when one retains and reactivates memory – created and mapped relationship between a human and objects – held sufficiently in time to generate a new sense of self–knowing, that becomes known in and reform one’s extended consciousness (I.b.i.d., 197). Damasio stated that extended consciousness enables a sense of individual perspective, ownership and agency, over a larger compass of knowledge than that surveyed in core consciousness (I.b.id., 198). It enables one to hold in one’s mind the largest possible compass of self-knowledge about the internal and external environment, in the environment of the mind (inclusive of recognition, recall, working memory, emotion, and feeling, and reasoning and decision-making over large periods of time). Also, it is a prerequisite for intelligence (the manipulation of knowledge), that, so they can then be later manipulated intelligently and influence by culture (page 201-2). I.b.i.d., 1999.
Cartesian mind-body problem that assumed a perceptual model of a passively observing subject.\footnote{Ralph D. Ellis, and Nakita Newton. \textit{How the mind uses the brain: to move the body and image the universe}. Chicago: Open Court, 2010, 137.} Philosophers of the mind, Ralph Ellis and Nakita Newton, comprehensively endorse Damasio’s theory in their book, \textit{How the Mind Uses the Brain}\footnote{I.b.i.d., 2010.}, such as when considering how anyone can receive information (learn). They stated that it is conceptually meaningless to consider that a second person can simultaneously perform a given agent’s bodily action, stating that it is only the agent of an activity \textit{[that]} can perform it. The vital role of personal experience, first-person perspective and personal agency was encapsulated in the metaphorical phrase – only a dancer can perform a particular token action of dancing.\footnote{I.b.i.d, 136.}

Damasio’s theory includes Maurice Merleau-Ponty’s phenomenology\footnote{Ted Toadvine and Leonard Lawlor, \textit{The Merleau-Ponty Reader}. Illinous: Northwestern University Press, 2007.}, and critically acknowledges the \textit{experiential perspective} as: irrevocable, providing continuity, and involves mapping foundational sensory evidence that is emotionally laden.\footnote{There are three points Damasio established which are worth detailing about consciousness-making, body map loops, and the experiential perspective. Far from a sterile interpretation of sense-data, the vitality of subjective (first-person perspective) and embodied experience is core to his comprehensive description of \textit{experience that is active during core consciousness processing}. I quote: \textit{Not all behaviours are conscious... it is not just that conscious and nonconscious processes coexist but rather that nonconscious processes that are relevant to maintain life exist without their conscious partners}. \textit{Antonio Damasio, Self Comes to Mind: Constructing the Conscious Brain. London: Random House, 2012, 252.} It is body map looping that can produce felt body states: sensed \textit{interoceptively} (internal body changes), \textit{proprioceptively}, or \textit{exteroceptively} (body response in movement). In \textit{Antonio Damasio, Self Comes to Mind: Constructing the Conscious Brain}. London: Random House, 2012, 76. I quote that the \textit{Experiential perspective is a source of metaphor... [i]t not only helps situate real objects but also helps situate ideas, be they concrete or abstract...Ownership and agency are, likewise, entirely related to the body at a particular instant and in a particular space... The things that you own are close to your body... Agency, of course, requires a body acting in time and space and is meaningless without it\textsuperscript{41}... even when we ‘merely’ think about an object, we tend to construct memories not just of a shape or color but also of the perceptual engagement the object}. The self-evident vitality of experience comes from an
individual’s first-person (subjective) perspective and sense of personal agency. Bodily knowing is a naturally occurring, foundational as a precursor to all consciousness and knowledge-building, and experience bridges the mind to the body, in connection within the world. Damasio’s theory of consciousness explains that from the bottom up, feelings cause emotions (a complex of stereotyped patterns of response below conscious awareness)\(^4\) contextualizing these into the early stages of core self and extended consciousness-making, which Damasio considers are indispensable to the art of life\(^5\) and to the development into stages where insight and meaning-making can be realised.

This process is akin to metaphorical musings of Neural Imaginings. Mind Labyrinth (visceral ingress) arises as a potential encapsulation of meaning about how we operate within the world and the potentiality of self awareness, as Mind Flowerings. Damasio qualified the term mind to encompass both conscious and non-conscious operations, referring to a process, not a thing,\(^4\) emphasizing the emergent act of knowing\(^5\). Neural Imaginings is about the beginnings - the triggers or precursors of consciousness, where bodily knowing is part of self-knowing.

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required and of the accompanying emotional reactions, regardless of how slight... You simply cannot escape the affectation of your organism, motor and emotional most of all, that is part of having a mind... As for the sense of ownership of images and the sense of agency over those images, they, too, are a direct consequence of the machinations which create perspective... Inherent in those machinations as foundational sensory evidence... Consciousness occurs when we know, and we can only know when we map the relationship of object and organism [through experience that is mapped via the homeostatic body signals] ... The fact that you had interacted with an object in order to create images of it makes the thought of acting on the object easier to conceive. In, Antonio Damasio, The Feeling of what happens: body, emotion, and the making of consciousness. London: Random House. 1999, 145 -148.

\(^4\) I.b.i.d., 55.
\(^5\) I.b.i.d., 31.
\(^4\) I.b.i.d., 337.
It seems that the recent global interest in ceramics was sparked by the curator of *La Biennale di Venezia*, Massimiliano Gioni’s aversion to commercialisation.

Gioni’s sentiments echo a Deleuzian and Guattarian ambition, preferring experiential encounter where art objects are to *breathe in their exceptions* rather than exist as a part of the system, and *seek a web of associations*.46

Claiming that the 21st century is *Deleuzian* (and Guattarian), Stephen Zepke and Simon O’Sullivan noted that Guattari had condemned the commodification of art as the *promotional operations* of the art world in the continual creation of fads through publicity.47 Beyond commercialisation, art can be about, but not part, of science.

I concur with Guattari that art may *pass through* material – science – on its way to its own mode of production and expression48 to explore matters of the mind. The artwork *Neural Imaginings* is such a *pass-through*, aiming to not be part of one system of thought.

In scientific enquiry linking psychology and physics in the 1960’s, Wolfgang Pauli and Carl Jungian sought to reconcile matters of the mind through collaboration between psychoanalysis and particle physics. This included a

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synchronicity principle – considering matter and mind as both subjective and objective, complementary in their echoic structure, and reflective of each other.\textsuperscript{49} Posing a bridge between matter and a psychic state, they suggested that an abstract pattern lies within atomic matter, presenting a relationship of complementarity between the relative state of unconsciousness or consciousness. As a wave and a particle are asymmetrically juxtaposed in physics, the movements of the unconscious into consciousness are like waves of psyche manifesting at nodal points as particles of consciousness.\textsuperscript{50}

Damasio’s account of the experiential perspective, values an individual responsiveness to experience, where the mapping of foundational sensory evidence of pre-conscious processes (with concomitant emotional associations) can bring attention to one’s individual ownership to the experience as self-evident. Such bodily knowing is foundational as a precursor to all consciousness, connecting one within the world, locating the body as the source of vital subdatum.

Damasio qualified the term mind to encompass both conscious and non-conscious operations, referring to a process, not a thing.\textsuperscript{51} While neuroscience addresses the soft problem of consciousness, philosophy, neuroscience, or a


\textsuperscript{50} l.b.i.d., xxxix.
concept like *intuition* need to resolve the *hard problem*: of explaining mind in relation to materialism and *qualia*. He accounts for subject-object relations, where feelings related to objects or events are an obligate part of the subjective experience. Damasio stated that there is growing consensus that subjectivity and virtuality reconcile this *hard problem*.

Damasio’s theory is commensurate with ancient Indian philosophy in valuing the experience of an individual as the *instrument in the act of knowing*, as the *knowing subject*, rooted to senses, where cognition can arise from within oneself. Damasio speculated that the *birth of consciousness*, or the beginning of a sense of *self in the act of knowing*, relates to *core consciousness* as a critical primordial, foetal, or emergent precursor to any consciousness making. Feelings cause emotions (a complex of stereotyped patterns of response below the level of conscious awareness) which Damasio considers are indispensible to the art of life. Consciousness begins as a *feeling of what happens* when we sense something, emerging from the feeling of knowing that accompanies the making of any kind of image. *Neural Imaginings* is about the beginnings, the triggers or precursors of consciousness, *of a bodily knowing* related to self-knowing, and the bridge that is developing between neuroscience and other disciplines in the domain of experience.

57 I.b.i.d., 31.
Contextualising the mind as bonded to the body through a *resonant body loop*,

Damasio hypothesised that we create a nonverbal account to narrate a story through mental images, engaging immersively, without being a spectator in that experience.\(^{58}\) The *wordless story-telling* occurs at a preconscious stage, before the conceptual overlay of *language*, thus signs or symbols are not a feature of *bodily knowing*. Nor do they feature in *Neural Imaginings*. This paper and body of work focus on the foundational aesthetics of *bodily knowing* through lived-experience, as explored and expressed in process-led clay practice.

Damasio makes two distinct points about consciousness that I consider are relevant to any experience, including encountering art. He states that emotions (as non-conscious) cannot be known to the subject having them, and that we become conscious as we catch ourselves in the act of knowing.\(^{59}\) Damasio’s second point relates to how a *Eureka* moment of realisation may occur during an art encounter. He said that consciousness requires self-knowing as the *core conscious* foundation for any experience.

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\(^{58}\) Damasio contextualised how we come to know of something: *The trick consists of constructing an account of what happens within the organism when the organism interacts with an object, be it actually perceived or recalled, be it within body boundaries (e.g. pain) or outside of them (e.g. the landscape)...We become conscious, then, when our organism internally construct and internally exhibit a specific kind of wordless knowledge – that our organism has been changed by the object...emerges as a feeling of knowing... core consciousness occurs when the brain’s representational devices generate an imaged, nonverbal account of how the organism’s own state is affected by the organism’s processing of an object.* In, Antonio Damasio, *The Feeling of What Happens: body, emotion, and the making of consciousness*. London: Random House, 1999, 168-171.

\(^{59}\) L.b.i.d., 282.
Damasio refers to how object and self are brought together, likened to a movie-in-the-brain, or as weaving wordless stories that register through a bodily knowing. These stories form neural maps that precede language. Continuously transient mapping communicates what is happening to oneself (e.g. see, hear, feel), how one is operating in the world, immersed in one’s environment, reactivating memory, generating a pulse within one’s transient, core consciousness. This is the beginning process of a wordless knowledge-making, that is the earliest form of emergent thought that is the beginning of all consciousness and knowledge-making, that foundation of the making of a sense-image. Consciousness requires language, and leaves no room for core consciousness, yet core consciousness is a vital precedent, as creative being connects to one’s bodily states and environment, and thought signaling. Core consciousness, pertains to a sense of self that arises in the subtle, fleeting feeling of knowing, constructed anew in each pulse. It needs to interface with concomitant memory and emotional feelings, to evolve any reiteration of memory, and the formation of insight. Continually reactivating memories into extended consciousness, become objects of thought that interrelate with core consciousness. From the myriad experiences recorded, we develop our

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61 I.b.i.d., 189.
62 I.b.i.d., 174
64 I.b.i.d., 187.
65 I.b.i.d., 196.
extended consciousness. Damasio stated that it is extended consciousness that enables a sense of individual perspective, ownership and agency over a larger compass of knowledge than that surveyed in core consciousness. Extended consciousness enables us to hold in our mind the largest possible compass of self-knowledge about the internal and external environment (inclusive of recognition, recall, working memory, emotion, and feeling, and reasoning and decision-making over large periods of time). It is a prerequisite for intelligence (the manipulation of knowledge), science and culture (see footnote for further details).

Viewers have described Neural Imaginings as strangely beautiful, and I found joyful beauty in making it. Mind Cloud (beyond the pleasure principle) (fig. 16) took more than a week of slowly meditating and communing with clay. Without sketches or maquettes – I enjoyed a state of purposeless adventure in clay – joyful, exploratory, without naming or knowing what it was. Later I realized the importance of reverie, and purposeless search. Mind Illuminant (forces) (fig. 5) emulates a personal encounter, where I had poignantly sensed the tenderly and immersively embracing forces that reached towards me. I slowly came to

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67 I.b.i.d., 197.
68 I.b.i.d., 198.
69 I.b.i.d., 201-2.
70 Neuro-scientific studies (e.g. Transient Global Amnesia) show that temporary losses in core consciousness impair extended consciousness: resulting in memory loss, non-incorporation of a new auto-biographical memory, and person affected has no inkling whatsoever as to what the future may hold. I.b.i.d., 202. Despite consciousness, deprived of access to core consciousness there is no sense of personal historical provenance and personal future: there is a failure to recognise an object or a person; the here and now is simply incomprehensible; and the person is disoriented, inclined to ask, Where am I?, or What am I suppose to be doing? I.b.i.d., 203.
appreciate that it reflected the immediate and palpable experience of virtual imaging.

To complement Damasio’s orientation to core consciousness and extended consciousness, and to reflect the auto-poetic process that gesture in visual art aesthetics can provide, I will coin the term core self-cueing. This is what artists are attempting to recursively activate in audience responses by creating gestural work that can trigger the imagination.

The first chapter presents how art may be human nature’s virtual reality, arising from the continuous dialogic and dynamic process of bodily engagement with the virtual forces of things in the world. Chapter Two outlines Core Self-cueing approaches that rely on what humans generally know about how things and events occur in the world. Chapter Three explores the edges of knowing and being, to convey what the mind does. Chapter Four pertains to a Biology of Knowledge, accommodating the body’s various ways of knowing, as contributing to emergent thought. Chapter Five refers to the somato-sensorial approach of the body trace as a mark of a human presence to entice observers to engage intimately with a visual artwork. Chapter Six presents the body trace as an interlocution into space, and promotes enactive approaches to perception that invite active engagement by the observer. Chapter Seven envisions the potential of trans-disciplinary dialogue between art, science and philosophy as symbiotic discipline.
In this project I encourage the engagement of tactile, visceral and kinaesthetic modalities in visual art. I have attempted to simultaneously enable the creativity of process-led practice and art’s encounter, while uniting an understanding of art making and appreciation into one tissue of theory, based on the human sciences. The focus is to enact perceptual processes – ideally, at all levels and across modalities – and how this may assist artists to potentially enrich engagement for art audiences. It may be that by joining art with science and philosophy, one can understand how the creative imagination can capture a sense of the movements of the mind, to reveal and express the functioning of the mind, without being limited by a single mode of knowledge and its production.
Chapter One  Searching for the Mind in the Virtual Instead of the Brain

This chapter pertains to how one creates virtual images of entities in the world and of oneself. When I think of the mind, I do not want to look at the physical substance or third person perspective (such as technological scanning) that emulates the images of the brain, like Neural Art. Nor do I wish to perceive objects as fixed, but as open-ended opportunities from which to derive some meaning. I explored the functioning of the mind, and how art can activate our engagement with objects in the world towards some kind of meaning-making.

Adopting a mind map was the underlying curatorial perspective for the Brain collection exhibited at Documenta 13 (fig.1). Christov-Bakargiev’s appreciation of the eclectic function of the mind in relation to art – that we operate with a variety of conceptual mind maps – led her to be beholden to no single frame.

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In relating to art objects, I sought to capture something of the mystery of the mind’s functioning, to appreciate art from the context of the workings of the mind, and contemplate how may make art move us.

Visiting MONA in Tasmania, I wondered how Gregory Barsimian’s Artifact (fig.2) was a way of looking at an object, while engaging with it subjectively. Peering into a colossal head, one may desire to know something from the experience, tripped by the denial to one’s vision sense. Strobe-like pulses of light and naïve clockwork mechanical functions amplify visual fragmentation. Locating the

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viewer as external to Artifact, it is the external perspective that is the (successful) failure to reveal how the mind works.

Figure 2 Artifact, 2010, Gregory Barsimian. Metal Sculpture with video projection and mechanised parts. 2.5 x 4.5 x 1.75 m. Photographer unspecified.

To look at Artifact was to recognise in oneself an inability to fully understand how the hand can hold an egg which then becomes a colour or a bird. Barsimian revealed the sleight of hand as a failure of the eye to be able to evidence the mystery of the mind. The partial view of strobe, visual effects and the mechanisation of components, only brings one’s attention the false illusion possibly being that any third person

perspective of the brain mechanics - say neuroscience - will reveal the function of the mind.

Robert Solso made the statement *we are in art, and art is in us*\textsuperscript{75}, and a similar sentiment was made by Vilaynur Ramanachandran when he posed that *Art may be [human] nature's own virtual reality*\textsuperscript{76}. These statements connect art as inherent to human nature – as an expression of it- as Barsimian had demonstrated of the unsee-ability of mental processes. I oriented the project, *Neural Imaginings* to the natural sciences, and my art practice as experiments or expressions of how the mind creates a virtual reality. Employing my art practice as a studious expression and exploration of what the mind can do, it can be a vehicle for focussing on the juncture between disciplines interested in the creative mind and to the origins of thought.

In his book, *The Brain and the Inner World: an introduction to the neuroscience of subjective experience*, contemporary neuro-psychoanalyst Mark Solms commented that if we were to *be able to say that I saw that* [an artwork] *and it made me feel like this* [an emotion], is to have tapped one’s own corporeal memory.\textsuperscript{77} This is an example of how other disciplines are aware that art can be most evocative and engaging when human corporeal responses are imaginatively tapped.


As an expression of the function of the body, to engage observers in direct experience, art can tap a source of knowledge about the body, in mapping the body’s own physiology - not in a literal or objective way, but with a corporeal imagination. Despite a heavily mediated and concept-laden world, humans can access an internal sense of self-agency to wholistically experience themselves, synthesising to conceive in an imaginative response. The motions of the body connect to somatic and psychological memory experiences, and to emotions, integrative functioning of the mind. Artists, philosophers and scientists are converging towards a common language of art aesthetics, to reflect what humans do naturally. Each discipline includes a definition of a virtual body, recognising that we create virtual realities about the outer world through the internal milieu of the body, binding the body to the brain and to the mind, and seeking a resolution to the limited conceptions that produce the illusion of a mind-matter gap78.

In an attempt to situate the mind, I began by experimenting via process-led art-making, sparked by a personal disjuncture – a curiosity to realign my own body and the intellect together in this project. I wanted to bring seemingly polar ideas together, interfacing mind with matter. As a starting point, I asked: how may the brain and vagina – as tissues of the body – be able to reflect where or how I can situate the mind?

Concepts like ‘brain’ and ‘body’ are not experienced as separate, they are unified as the mind. While the mind cannot exist without the body (including the brain), it cannot be externally imaged, and is only subjectively imagined, or monitored by its effects. Yet I wanted to manifest the mind through its relations with the body. To place the two organs of the body as polar opposites within a sphere is to try to face the Cartesian-splitting problems (of mind/body, or brain/mind), and attempt to bridge any separability via the cleaving to the commonality of the fold. The experience of cleaving parts through the folds of *Brain Body (erotic idea)* (fig.3) led me to later find resonance in Deleuze’s notion of the *Baroque*
Fold\textsuperscript{79}, as a philosophical means of rethinking the limits of pre-set perspectives, and bridging conceptual incommensurability (which I discuss later).

I later tried to discover what would happen if I treated my mind as unit components that accrued over layers, and explore what kind of forms may be generated in my studio-based, hand-building experimentation, making \textit{Brain Data (computation)} (fig.4). It was a naïve question, an early experiment.

My attempt was to imagine sensorial input as discrete units of layered data, in figure 4, Brain Data, (computation). Aesthetically, it appears bland and formless, like the lack of conceptual beauty in one’s inability to generate a metaphor.

\textsuperscript{79} Deleuze, Gilles \textit{The Fold: Leibniz and the Baroque}. Minneapolis: University of Minnesota Press, 1993, 35.
This ‘unit’ method was abandoned.

I began to develop an aesthetic idiom that could convey a sense of mind. Later, on reading independent theorist Brian Massumi, I found a similarity in how the mind could be presented spatially. He conceived of our experience of virtual imagery as a force of mind:
The phenomenal as a surface like mix of emergent elements fusionally afold, the virtual is a recessive or depth like superposition of effective levels askew. The “space likedness” of the incipient phenomenal surface is an abstract echo of that virtual depth. The efficacy of the superposition – its ability to have actual effects while remaining virtual – is what is called force\textsuperscript{80}.

As I read this, I was struck by how Massumi’s spatialised articulation of virtual content seemed suited to the way in which I was experimenting. Gesture was the means to express a force, and multiple planes could be a way to reflect the levels of the mind.

How to create an abstract image of the mind? I reflected on Deleuze’s notion of a Rhizome-Sexuality Plateau\textsuperscript{81}, as a region of intensities or forces that relates to becoming.\textsuperscript{82} Via an intimate mode of being, the affective mode art offers a generative potential. In the domain of ideas\textsuperscript{83}, to rupture the systemic ‘pretext’ of territories (established thoughts or theories), I emphasise the importance of lived experience and process-led practice, as personal experiments or reflections on the mind’s operations, carried out within it’s own milieu. Where art operates in the affective mode, gesture and form sensorially performed in abstract art can

\textsuperscript{83} l.b.i.d., 17.
be a process expressed, that passes through science, to potentially contribute to an expanded field. Deleuze had philosophically conceived of an experimental practice of dealing with abstract bodies, which is relatively unencumbered by established habits in his radical notion of a priori intensities that present in the world distributed as a spatiun, as a body without organs. (See footnote for more detail).

In *Neural Imaginings*, the function of the mind was contextualised in differentials or plateaus as planes of consistency. Based on the premise that the mind can be to some degree appreciated as detectable movements that are enacted through the body, it presented matters of: virtuality, lateral thinking, the search for meaning, the mind within matter/body, and the desire to form a unifying force with which to integrate understanding.

In Deleuze and Guattari’s *transcendental empiricism* the focus on experience and the reality of the Virtual was operational rather than allegorical. I concur with

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85 I.b.i.d., 175.

86 Deleuze proffered two principles, where the central-organising principle was termed the Plane of Immanence –immanent (even by it’s absence), and eminent (by how it establishes the proportional relations of the structure). I.b.i.d., 310. In the case of *Neural Imaginings*, the objects of conceptual beauty express objects that seem partially- apparent, transitional, morphogenic abstractions of intensities. In *Neural Imaginings*, they are mainly reminiscent of acquatic or floral imagery but as partial objects, or, fragments of mangrove or labyrinth-like sub-structures as fields of intensities. In fusional multiplicity (opposed to binarisation), the couplets are composed in a spiralling movement with nature– presented as fluxes of the dynamic and fragmentary aspects of the mind, reflecting my desire for, and/or, the self-organisation into unification of art, philosophy and neuroscience into the wondrous function of a black hole of subjectivity. Indeterminate notions like the thresholds of thought, grasping a sense of some displacement or movement; emergence or becomings are essential in relation to the nearly imperceptible. I.b.i.d., 2012, 327-328. Deleuze’s second principle is the Plateaus, which are the parts or components of thought. I.b.i.d., 328.

Slavoj Zizek’s valuing of art and philosophy bearing the potential for conceptual innovation of thought, in appreciating the virtual function of the mind. He adapted Deleuze and Guattari’s *Bodies without Organs*, significantly refocusing on human engagement in the production of reality, by re-coining *Bodies without Organs* to *Organs without Bodies*. Zizek stated that when an artist (or philosopher) *renders an affect in a new way, liberated from the closed circle of a subjectivity situated in a given positive reality, he shatters our immersion in the habitual life-world as well as our safe position as the observer of reality. We lose our position of abstract observers; we are forced to admit the new concepts or works of art are the outcome of our engaged production.*

In *Neural Imaginings*, the unconscious aspects of the mind is expressed through the sensorial body, presented as opening and shifting from the visceral/muscular/skeletal/intestinal/proprioceptive base. The lower section of the conical form *Mind Flowering* titled *Mind (water logic)* (fig.12) echoes that of the substructure it coincides with, reaching a new threshold from its precursory aggregates, configured into emergent, indeterminate, aqueous, spiralling relations. Similarly, the structure in *Mind Spiral (conscience)* (fig. 26) is indicative of folds and enfoldings, arising from –but not limited to –the core physical structure of the cerebellum.

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Each Mind Flowering is coupled with the base form, placed on top as if emerging from it, transposed and transmuted into another form and surface treatment and mental operation. From my bodily presence, responding in the world, I become, as I emerge while belonging within it. I sculpt a sense of my own identity. I become my own virtual entity, self-sculpted, in relationship within the world.

The aesthetics of Neural Imaginings are constituted in the visual idiom of folds, ruptures, trace-impressions of the body, part-objects, and partially-apparent planes. The idiom echoes the Deleuzian and Guattarian notion of the virtual, communicated through one’s subjective experience of the bands of intensities, potentials, thresholds and gradients. In Deleuze and Sex an abstract image of a Body without Organs, the virtual image as part-objects form a string of associations and chains of intensities arises from the sensuous images of conjunctive syntheses. The melding of the senses – like haptic perception is an example of an inter-sensory fusion of sight and touch – to evoke a flux of force as gestural intensities, brings a vitality to activate sensorial engagement. The content of the virtual imagery of Neural Imaginings -as a Body without Organs - reveals both my innate dispositional desire towards the process of individual actualisation, and, for the realisation of a trans-disciplinary unification. It’s re-territorialising potential may satisfy my world-view aspiration- that art/philosophy/science emerge in symbiotic and polyphonic accord. The poetic gap is founded in the synaptic gap, and the opportunity for trans-disciplinary

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90 I.b.i.d., 60.
91 I.b.i.d., 59.
accord is a space of potentiality. Visual art operates as the mind does. Through lived experiences of the world, the resulting virtual qualities became the basis of my object-making, as part of my visual idiom. As Massumi described, the world emerges to one’s awareness via responses to the quality of forces, and of inter-sense fusion and virtual mixing that one directly experiences while creating a virtual image.92

How does one reflect a rare experience of someone as open and receptive, apparent not by their physical features, but by the force or quality of the subjective encounter? *Mind Illuminant (forces)* (fig. 5) is an example of how I began to create virtual images to construct realities of lived experience about myself in relation to the world of objects as forces.

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This was my attempt to sculpt how I experienced the presentation of such poignantly beautiful qualities of folds, as abstract forces that are the result of my relationship, inextricably bound within the world. As if to poetically underscore my expression of this experience, during the kiln firing of *Mind Illuminant (forces)*, the sprinkles of mica on the porcelain were altered by the atmospheric iron to produce orange tones. Serendipitously, this seemed to behave with the natural infectiousness of forces from the world to meld within one’s own psyche.
How may a sculptor create a virtual image of the mind, arising from his or her neurological substrate? This is exemplified in an object – *Brain* (fig. 6) – of the *Tangle Series*. The baroque aesthetics of New York artist Marc Leuthold’s fine porcelain *Brain* presented a mass of curlicues, where the surface is apparent only by the naturally cracking edges, and the veil of fine glaze that unites them, within an envelope that approximates the shape of a cerebellum.

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*Figure 6  *Brain (Tangles Series), (no date), Marc Leuthold[^93]
Glazed Porcelain, (no dimensions available)

Leuthold’s *Brain* goes beyond the visible organ, alluding to a concern regarding the materiality of the brain and its relationship to the mind. He captured a baroque sensibility as a quality of the mind, implying a mysteriously interconnected dynamism of intricate excess. Like the edges of *Mind Illuminant (forces)* (fig. 5), they seem like the indeterminate zone of potential accessibility whose visible edges are belied by the much greater mass-motion of the mind. Baroque sculpture can be rewarding as the sensitive intricacy of its dense mass can excite an optical array and multiple perspectives.94

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*Figure 7  Mind (unrequited desire),* 2013, Loretta Picone
Grogged Raku Paper clay, Oxide stain 45 x 45 x 30 cm. Photography by Loretta Picone

94 Frida Backman, *Deleuze and Sex*. Edinburgh: Edinburg University Press, 2011,
As sentient beings, we are wired to seek out stimuli in the world, and draw the world in to nourish and grow a sense of self and belonging. *Mind (unrequited desire)* presents the deeply cracked and parched quality of its recessed surface, reminiscent of a billabong during a drought, as an earthly desiring as elemental as the need for rain.

The conical shape that formed the envelope of each of these *Mind Flowerings* was conceived initially as a vessel or entity, opening to the world. It opened so widely as to invert at its most open edge. The metaphor of the vessel has a strong basis in ceramics for its relationship to the body, as detailed in an excellent essay by Philip Rawson.\(^95\) In *Neural Imaginings*, to open a vessel to the point of fraying the edges is to pull the fabric (of oneself) so far that it ceases to maintain the continuity (of a fixed identity). The firm edges of certainty begin to rupture, create folds and layers. I want to move beyond the boundary line edges of my known self, to spread and stretch and curl, until my edges enter a new formation, and create new planes of possibilities in which to contemplate or navigate, in a state of wonder.

Each *Mind Flowering* is a partial or transitional object. Prior to realisation, ideas have to come from somewhere, and a partial realisation is one where the end game of conceptual closure and identification of the object is resisted or incomplete. The hiatuses in their surface, the cracks and ruptures were like the

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synaptic gap – the site for something new to happen. My visual idiom of cracks, ruptures, smooth planes and folds seemed a good choice for the project.

Spontaneous and unique in its feminine jouissance, the erotic and desiring self is animate and open to the world, ready to suck the world in to it, and founded in my own physiology. The forms are like a Georgia O’Keefe painting, whose depicted petals are like a sexualised object of desire.

Figure 8  Mind (sexualised object), 2104, Loretta Picone
Porcelain. 45 x 35 x 30 cm. Photography by Loretta Picone
Mind (sexualised object) explicitly references feminine genitalia. It is palpably alluring, as the form simultaneously implied an opening out and a drawing inward. This is an evolutionary-biological reference to the physically sexual function of a beautifully dynamic opening.

While making, my question became: If this is the brain, where is the mind? Brain Mind (toucher, touched) (fig. 9) bore the evidence of a Cartesian presumption, reflected in the central inclusion of the cerebellum to depict the brain, objectified as an object for one’s attention.
I denote the human presence by my own mark-making, encircling and inextricably linking these to the brain situated as a physical core. Mark-making becomes part of my visual idiom to both explore and express the mind. By making present within the world the evidence of my own production, revealing the trace of self in space is implied gesturally. The organ as an object – the cerebellum – ceases to be the focus, as I shift emphasis from the visible image of neurological objectivity, to thinking itself becoming the object for contemplation,
as the movement of the mind. Thinking about thinking now becomes the object under contemplation.

In making *Brain Mind (toucher touched)* an interesting shift had manifested as I began to resolve a relationship of body and mind with brain. Depicting the brain assumes the separation between the brain and body, and the mind is visibly absent. It is the action of the body that revealed the movement of the mind, as the hand trace that produced the labyrinth-like formations. The body trace enveloped the cerebellum, which is partially presented, and porous at its surface. The trace could be interpreted as skeletal, visceral, or specifically as a hand imprint, and thus it can be perceived from various senses, by their conflation. Irrespective of the specific interpretation, it pertains to the body. I realised that without cultural or conceptual over-codification, I had a means to denote the mind by referencing a human presence. To create the image of the body as a movement, is to depict the body trace as a movement of the mind, operating in space.

The mind can be imaginatively perceived as moving, where the trace markings may be kinaesthetically understood as a peristaltic or proprioceptive movement, and, as either exteroceptive, or interoceptive. In *Brain Mind (toucher touched)* these markings denoting the human presence as one of co-habitation, sited in and around and with the brain, as actions of the mind. To depict a space as a mental space became an ingression of a bodily action into that space.
This hand gesture became an important part of the visual idiom and a conceptually congruous anchor within the aesthetics of *Neural Imaginings*. The subjective image is the force of the body movements via the trace of the body. This was vital in focussing the project on expressing the mind, and the maquette (fig. 10) became pivotal to developing the large base components for *Mind Labyrinth (visceral ingress)*.

![Figure 10. Maquette model for the base structure, *Mind labyrinth (visceral ingress)*, 2014 Loretta Picone, Raku paper clay. 25 x 25 x 30 cm. Photography by Loretta Picone](image)

There is a dilemma about the human propensity for concept formation, for while delineation and higher functioning processing is necessary for the communication and for the development of ideas, excessive reification stifles
creative learning and skews one’s capacity to focus directly and relate to the immediacy of experience. How may we reach into mindfulness without grasping and clutching onto the habit of codified thought?

Figure 11  **Mind (grasp),** a component of the base, **Mind Labyrinth (visceral ingress),** 2014, Loretta Picone. Raku paper clay. 95 x 55 x 50 cm. Photography by Loretta Picone

**Mind (grasp)** (fig. 11) is one section of the large base network, **Mind Labyrinth (visceral ingress),** whose form bore the composition of a reaching and open hand. It relates to the mind’s propensity to reach out and grasp reality. The spherical

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object in figure 3 – *Brain Body (erotic idea)* – focusses attention on how we grip onto concept formations.

To experience the qualitative difference in sensation between an *embrace* or to *clinch* is derived from one’s response to the object’s materiality.\(^97\) Artist sculpt with sensations, appreciating the energies of resemblances of *intensities and forces* of things, say of a gesture in clay. They described that artists create *blocs of percepts and affects* in their work, as spatiotemporal compositions of created sensations that pass through the material, transitioning through, as *doors of perception*.\(^98\)

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\(^98\) I.b.i.d., 166-168.
Chapter Two  Core Self-cueing Approach and New Alliances

This chapter deals with an audience’s potential capacity to relate to art through one’s understanding of natural and ubiquitous core-cueing approach. This direct aesthetic communication is sharable through our commonly-lived experience. The types of imaging in a core self-cueing approach include Damasio detailing the varieties of mapping experienced. Being guided by a process-led practice becomes critical in this exploration and its expression.

We share an understanding about known or familiar objects found in the world and commonly appreciate their associated behaviour. I drew from core self-cues, and alluded to ubiquitous imagery, like the tree limb, an entangling vine, the myriad parts of a coral head, an opening flower or fern-frond, the folds of Spanish dresses, or the flow of water. Some rely on anthropomorphism, such as the suggestion of limbs or crooks in trees suggestive of the body. Organic forms of behaviour – say, our commonly shared understanding of water – can be useful in communicating an appreciation of its quality of being.

The appearance of water as accumulating droplets in *Mind (water logic)* (fig. 12) was presented topologically like falling rain, but does not display a dissolving form at its water-line, nor from beneath, and therefore would fail to conform to how one would expect water to behave, indicative of something else that is water-like.

Humans are disposed to want to know *what it is* so that we can respond with a tried and known routine pattern. Yet the greatest attribute of the mind is that it is generative, channelling and streaming as the mind wells into how new ideas,
events or objects are experienced. Theorist Edward DeBono encouraged that we resist habit and stay attuned to new ideas, to engage in lateral thinking. The configuration of *Mind water (logic)* is swirling and expansive, as one may imagine the free movement of lateral thinking.

In *Mind water (logic)* (fig. 12), I relied on viewers noticing an incongruity in the behaviour of accumulating water droplets. The underside form echoed the surface composition of the sub-structure from which it was derived – the labyrinth of the mind. I encourage individual associations to stimulate the dynamism of mental operations. *Mind (water logic)* (fig. 12) [Is it Mind water (logic) or Mind (water logic)? echoes De Bono's *water logic* about a way of thinking. It is the opposite of his comparison of *rock logic* (as closure or judgement) that pertains to fixed identities and truths. Although the language of the narratives is different, De Bono's *water logic* bears similar theoretical features to Deleuze's *rhizomatic thinking* (which I will refer to later). De Bono asserted that the function of mental operations pertains to movement and changeability, as a part of *water logic*.

When we perceive something – an event or an idea – the stimulation from reality has to be internalised. The mystery is in how the mental inversion takes place, where stimuli from the outside world are processed to arrive at the internalised as a virtual image. How and where does one situate this as occurring within our brain, mind or body? In *Worldly Sensation (water logic)* (fig. 13) I made a

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double-walled vessel as my attempt to locate the demarcation between inner and outer worlds.

While the mind is actively adaptive and self-organising, when in a highly receptive state, one can feel alive in response to the surrounding one is palpably, nonconsciously present in. Transitional or precursory feelings are like a flowscape – the trickling of thoughts before an idea is realised into consciousness, and before a concept is formed. *Worldy Sensation (water logic)* is an expression of the creative percolations of the brain functioning that are the unseen constituents of core knowledge acquisition.
I concur with Damasio that there is a wordless storytelling in how humans naturally produce primordial knowledge that is unmediated,\textsuperscript{101} including bodily imaging via mapping\textsuperscript{102}. Core-cueing responses may not be apparent consciously, yet contribute to the ever-evolving sense of self-identity or knowledge-making. Artists tune into the aboutness of things and acutely into personal responses to weave and share these wordless stories. The beginning process of a wordless knowledge-making is the earliest form of emergent thought. In turn, this is the beginning of all consciousness and knowledge-making.\textsuperscript{103}

Figure 14  \textit{Worldly Sensation (water logic)}, 2014, Loretta Picone (double vessel, lower vessel detail). Porcelain Cobalt Oxide Glaze 45 x 35 x 30 cm Photography by Loretta Picone

\textsuperscript{102} I.b.i.d., 76.
\textsuperscript{103} I.b.i.d., 26.
Core self-cueing strategies in an art encounter avoid over-privileging highly-mediated thinking (such as cultural codification, symbols, signs and myths) that operates from the higher level processing allowing one to reduce biases of established habits in being present to an experience. Daniel Dennett’s Bridge Analogy is a notion adopted in contemporary psychology that refers to two types of thinking, where the aim is to achieve a balance between the levels of top-down (high-order) thinking with bottom-up (sensorial processing) thinking. Neural Imaginings holds this aim, where core self-cueing approaches are bottom-up processes – they rely on embodied experience rather than cognitive codification as the primary filtering operative. When Dennett’s Bridge Analogy is adapted to art, one can see that a process-led artist can adopt a bottom-up method, for an artist does not need a macro-theory in order to investigate at the micro level. It seems that this is one way of accounting for how a process-led artistic practice can serve a core self approach to art-making, along the lines of my practice as described in Chapter Two.

A process-led practice can be understood as where an artist attunes to richer bodily input to widen the net of direct experience by adopting a bottom-up approach to orient or drive their practice. Working from one’s own micro

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104 Balancing top-down (high-order) thinking with bottom-up (sensorial processing) thinking (known as Daniel Dennett’s Bridge Analogy), can maintain a greater degree of heterogeneity and balance in thinking processes. Employing a top-down method, from the notion of how art is to be understood and judged, entails engaging executive control and conceptual framework (habit and cognitive control) that direct one’s focus and may repress wider experience. In, Elizabeth Schellekans and Peter Goldie. The Aesthetic Mind: philosophy and Psychology. New York: Oxford University Press, 2011, 62.
processing towards developing a unique and self-authenticating, sophisticated practice can be a way of maintaining a greater degree of heterogeneity and balance of inputs.

How one listens to the body and filters information is intricate, multifactorial and largely unconscious. Consciousness is a mere drop compared to the surging sea of early sensorial processing that pulses within us.

Creating a pulse within the body taps its own patterns of association, animates the mind to that which the body brings forth, and leads to a chance that
something for the conscious mind may be realised. The imaginative act is inherent in the internal process of perception, creating virtual imagery and extrapolating meaning-making. Damasio throughout his book, *The Self Comes to Mind*, detailed how the core self of a sentient being, when engaging directly in experiencing their environment, is in a continual process of relating experientially in the world to form schemas or images. Effectively creating virtual realities, bodily patterns contribute to learning about the world and shaping one’s own sense of self, some of which culminates into conscious awareness.\(^{105}\)

Damasio’s *somatic marker theory* and *body-loop mechanism* referred to how humans specifically connect with things in the world through their own bodily experience, laying down for each individual a framework that allows for the movements of or awareness of processes through the body to become associated with feelings, memories and thoughts.\(^{106}\) The patterns we detect and relay through bodily experience are a framework in which to understand how humans create a virtual experience of the external world, and generate internal virtual realities. Damasio described this as the naturalness of *wordless storytelling*.\(^{107}\) By accumulating experiences extrapolated from the real world, Damasio means that we share some familiarity with the behaviour or the patterns the world (generally) provides to an individual. It is this capacity to share aspects of the

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\(^{106}\) I.b.i.d., 101-107.

real world – even approximately – that enables humans to be able to infer something from something else, and for humans to potentially share experiences – whether art or general life experiences.

Through his somatic marker theory, the body-loop mechanism, and wordless storytelling, Damasio provided a framework for how we may be able to understand the minds of others, including the potential for us to meaningfully share ideas during an art encounter. He referenced a means by which an organism can draw on a primordial knowledge that enables the weaving of storytelling. 108

Damasio makes two distinct points about consciousness: that emotions (as non-conscious) cannot be known to the subject having them, and that we become conscious as one catches oneself in the act of knowing, as a transient sensing of self in that evanescent moment.109 The transient, implicit and natural functioning of the preconscious is addressed in this paper in notions of technologies of the self, bodily knowing, and enacting perception that precede and are precursors to explicit thought, and are part of this continuously transient flow of experience. Damasio’s second point relates to how an aha! moment of realisation may occur during an art encounter requires the core conscious foundation for any experience to interlock with conscious images with the highest conceptual level that acquired individual memory, science and culture

109 l.b.i.d., 282.
can bestow to achieve insight, what he termed *extended consciousness*. Damasio refers to how object and the self are brought together, likened to a *movie-in-the-brain*,\(^{110}\) or as *weaving wordless stories* that register through a *bodily knowing*, forming via sensory tracks interconnected neural maps that precede language,\(^ {111}\) reactivating memory, generating a pulse within ones transient, *core consciousness*.\(^ {112}\)

Importantly, his framework explained the mechanisms through which bodily associations are linked with emotions and thoughts relevant to the individual.\(^ {113}\) It is through people’s own agency, in relating directly to experience, that they can encounter the world of objects, where the world of sensorial experience can make them move. It is by the same neurobiological mechanisms that art objects, too, can make us move.

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\(^{111}\) I.b.i.d., 189.

\(^{112}\) I.b.i.d., 174.

Chapter Three  

Edges of Knowing and Becoming

I wanted to make a work that affirmed a sense of myself as present and animate, and what first emerged was the manifestation of this sensibility in porcelain clay. *Mind Flowerings* emerged out of initially working with the abstract concept of a vessel\(^\text{114}\), opening with folding and enfolding planes that are stretched past the limits of the clay material. Like a meditative practice that refocuses from ‘top-down’ thinking to ‘bottom-up’ thinking, I open up to the swell of pre-thoughts. Having already wrestled with ideas, I accept entry into a mental zone where my cognitive chatter diffuses, and I can attend to the present moment of directly engaging with the clay between my hands. This acceptance is not a negative sense of emptiness, but opens up a receptivity to emergent thought-process borne of a kind of listening or attunement, rather than anything of wilful intent. (I find that wilful intent always leads to ‘dead’ aesthetics.) I only make the most rudimentary sketches, for it is my three-dimensional hand-building practice that is my exploration.

Often I will have an unresolved and broad question in mind as I work, such as *how do I open a vessel (myself) to the world?* or, *how can I show the mind functioning without figuratively depicting the body?* When in a receptive state, allowing space for other associations to surface towards consciousness, possibilities seem emergent, multifactorial and equitable. I am process-led, for

where theory cannot provide an answer, I let my making guide me towards a response.

I focus on the material, exploring a surface/texture/form which broadly appeals. Then I begin to develop this, making choices and deliberating at times, but largely allowing the process of making to emerge. The surface treatments that develop are like my earlier description of Massumi’s account of the mind as spatialised and with depth-like forces\(^\text{115}\). The tunnels formed relate to the partial accessibility in contemplating the mystery of life, and reflect my fascination for an open mind, operating with receptivity within the world. While I was making the following work, I simply focused on the joy I felt when engaging with objects of interest, and the sensuousness of the clay.

Mind Cloud (\textit{beyond the pleasure principle}) (fig. 16) was the result of a boundless energy or \textit{jouissance} that is open, alive and harmoniously accepting and revelling in its variance.

Mind Cloud (beyond the pleasure principle) (fig. 16) is not an identifiable or familiar object, like the fixed identity in a self-portrait (as Damasio termed, the autobiographical self). This work depicted what he described as the emergent act of knowing. Unself-conscious, open and highly receptive to its environment, there is temporarily no awareness of any demarcation between oneself and the environment, just like being present in the flow of sensorial experiencing. Typical of my art-making throughout my Neural Imaginings practice, the works themselves are the experimental sketches, with no

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preconceived plan prior to their making, other than a basic question of feeling, or movement I saw in nature which held some evocative potential.

My most joyously contemplative piece is *Mind Cloud (beyond the pleasure principle)* (Fig. 16) for, as my eyes move over the textured surfaces, my touch sense is also triggered. I imagine riding with the detail – along, through and around this object’s surface planes and crevices.

I titled this work when I realised it had resonance with a contemporary re-interpretation of Freud’s original idea that included the *death instinct*, towards contemporary reinterpretation of the *pleasure principle* as a *binding of energy* to the melancholic (desire for an) object, that is an affirmation of one’s existence.\(^{117}\)

Our attunement with the world is not random. Beyond the quirk of our general inclination to find meaning in random stimuli (*pariedolia*), we search out objects that exist in the world, and from the forces and intensities we perceive, we seek to derive some meaning. This is the *pleasure principle*.

Deleuze and Guattari worked out how to bridge two distinct realms, via their concept of the *Baroque Fold*.\(^{118}\) Conceptually, the baroque line is an evasion of any discreteness between subject and object.\(^{119}\) I came to the *fold* during my experimental hand-building practice, and Deleuze did through philosophy. Each form or surface plane in *Mind Cloud (beyond the pleasure principle)* is a


delineated region of some human construct, and this region in reality is complete fabric - the continuum of a virtual reality. The philosophy of the fold speaks of a concealing and un-concealing, and the un-seeability of most of our emotional and mental life that accumulates and aggregates from our non-conscious processes.

Surface textures engage eye and touch senses in a haptic experience, exciting multiple neurological pathways and associations in creating trajectories of intersensory experience. There is a relationship between an embodied form and ideational formation, where the action of folding and enfolding is a way of bringing together by revealing and concealing of incommensurate parts\textsuperscript{120}.

*Mind (beyond the pleasure principle)* is an example of several *Mind Flowerings* that present as folding, erupting, exuding, tunnelling spreading, closing, expanding planes, disclosing the edges of a surface plane the outer reaches, and coalescing effects –as an interfacing with *otherness*. How else can one imagine how to expand a paradigm to approach another, but through increasing the closeness of their proximity within common realms? One can only stretch in continuity, until the reach is so close from its centre, that its edge abuts otherness. The internal logic is that the continuity already preexists, but the appearance of things – the conceptualization of an idea or field of knowledge-find their common edges as they return towards each other. Surfaces are pulled to the edges of their capacity, like the edges of knowing against the edifying boundary of identity - whether personal or trans-disciplinary.

Chapter Four

The Biology of Knowing

This chapter presents the primordial or internal body knowledge that one can tune into as a precursor to consciousness. Artists may be inclined to tune into these internal experiences to add to the richness of appreciating or conveying bodily expressions in art, and activating a viewer's sense of personal agency.

Neuroscience recognises the limits of the conscious mind - we are conscious of a small subset of what we already know. Damasio posited the biology of knowing in bridging the gap between consciousness and its precursor. He also gave primacy to the emotions as vital to the formation of a sense of knowing oneself. Damasio developed his theory of consciousness that centrally located the polyphony and cycles of emotions and feelings within the fabric of the mind, as a vital part of consciousness-making. He claimed that feelings are poised at the very threshold that separates being from knowing and thus have a privileged connection to consciousness. Damasio referred to how images are mental patterns – they are not just visual, and include auditory, olfactory, gustatory and somatosensory. He referred to Albert Einstein who was said to have gained insight into complex problems by attending to muscular imagery to depict processes of abstraction.

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122 I.b.i.d., 43.
123 I.b.i.d., 318.
Australian artist Helen Pynor\textsuperscript{125} gave due regard to the importance of the gut nexus, valuing Damasio’s hypothesis of the homeostatic role of somatic markers\textsuperscript{126}. Damasio referred to a \textit{Biology of Knowing}, which is assisted by the emotional content of our body/gut\textsuperscript{127}. Clearly, Damasio placed emotional content as central to knowledge-making, stating that \textit{emotions seem to be a support system without which the edifice of reason cannot operate properly}.\textsuperscript{128}

Pynor also gives primacy to this bodily fact. Damasio considered that the function of the mind is to manage if and how images turn out to be logically

\begin{itemize}
\item \textsuperscript{124} Http://www.helenpynor.com/pass-into-nothingness.htm
\item \textsuperscript{125} Helen Pynor, \textit{Transgressive Biology and Material Feminism: Bioconversations in Art, Evolution and Emergence}. Thesis for the Doctor of Philosophy, The University of Sydney, 2010, 132.
\item \textsuperscript{128} Ibid., 42.
\end{itemize}
interrelated. There is a sense of unifying congruity of when something feels right, or fits.

Considering the art and science interface, Pynor recognised the value of body knowledge in her art practice and focused on this topic in her Doctorate in Philosophy\(^\text{129}\). Her later sculptural work, *Pass into Nothingness* (fig.17), presented an emotional, fragile, sentient and emergent entity integrated within the unity of one’s own viscera, as a larval or primordial self.

Pynor sets bodily presence in sensuous stone. The emotional subject is embedded within our own bodily responses, and becomes the object of its own physiology. Biologically speaking, Damasio proffered that the part of the mind we call *self* is grounded in a collection of non-conscious neural patterns standing for the part of the organism we call the body proper.\(^\text{130}\) It is an interoceptive functioning of one’s internal milieu and visceral division that is understood to be a precursor to the self.\(^\text{131}\) Damasio’s dictum – *I feel therefore I am* – appeals to the artistic sensibility and restores Rene Descartes’ abysmal error of separation.\(^\text{132}\) I also pursue, as Pynor had stated, a sense of the origins of art and of science, positioned in the subjective experience of the internal milieu of the body.\(^\text{133}\)

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\(^\text{131}\) Ibid., 150 -152.

\(^\text{132}\) Ibid., 48-49.

My synopsis is that I envisage any allied theoretical perspective to experience would need to be compatible with, and primarily address the following matters: the impact of worldly things, phenomenology, subjective experience and dialogic aspects in art. Some examples are: Martin Heidegger’s notion of the *thingliness*\(^{134}\) of things to exist independently as forces, such as Damasio regarding the *qualia* of things\(^{135}\); Edmund Hussur's precondition of art as a *natural attitude* of lived experience, which includes phenomenology\(^{136}\)\(^{137}\), Michel Foucault’s *self-governing technology of the self*\(^{138}\) regarding the self-authenticating process of continually enacting one’s own sense of personal agency; the general concept of subjective experience as a qualitative benefit; and the transactive nature of an observer or *beholder* relating to art (defined as the *beholder’s share* and referenced by a few theorists including Kandel\(^{139}\)).

Kandel commented that artists do not need a macro-theory in order to start artistic practice investigations at the micro level.\(^{140}\) I concur with Kandel that artists do not need science or philosophy to make good art, but it does stimulate


\(^{135}\) The *thingliness* is vital but does it make the only precondition of art? How do I or others share in the thingliness of art or other worldly objects? He expressly cautioned that this vision may be a deceptive one, but suggested it transitionally, to enable society to create a *clearing*, to enable a *posthistorie* phase, and the success of a new art form is to be free of the time of the museum and of historical application, independent of cultural codification. In, Boris Groys, *Introduction to Antiphilosophy*. London: Verso, 2012, 67-8, xiv.


examination and accounts for how art can be potentially sharable. Artists employing a compatible approach would be strongly inclined towards introspection. They would be able to deeply challenge societal and personal assumptions, and follow a practice-led process as a mode of study and enquiry.

Damasio’s theory is inclusive of phenomenology, and pertains to imagining scenarios as *as if* experiences. His paradigm defined human nature to be that of a *self-organising organism* in the process of creating a *proto-self* and continually adapting a virtual sense of internal and external reality. While being continually exposed to novelty generated externally by the immediate environment in which one operates, these imaginative acts are critical, not only for knowing oneself in relation to the world, but as well as for sharing that knowledge between humans.

Damasio links his account of processing the body’s internal milieu (via *body-loop mechanism*, included in a larger *somatic marker hypothesis* vitally important for the formation of virtual schemas and mappings) to an individual’s emotionally-laden acts that are the result of their direct experience, while activating a sense of self-agency. Damasio also recognised that primordial narrative structures are involved and can lead to consciousness, as precursory initiations into the possibility of conscious knowing. It seems that Damasio’s theory of consciousness is a suitable paradigm to underscore explanations of how art moves us, as an operation of an embodied mind.

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Chapter Five  *Core Self-cueing via the Body Trace – a Mark of a Human Presence*

This chapter refers to how art can generate *core self-cueing* communications of behaviour implied in gestural content. It focuses on the primacy of touch, and the significance of the body trace in art.

Master Taiwanese ceramic sculptor Hsu Yunghsu is an example of a highly

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successful artist whose work is compatible with a core cueing approach. This is exemplified by his 2008 solo exhibition title, *Theatre of Clay* (fig.18).\(^{143}\) His works reflect the human condition of strength and fragility, and our relationship in space.\(^{144}\) Hsu Yunghsu stated that his art practice included *a sense of the body not only as it responds to the cognitive experience of reactions towards outside elements, but it also involves the body’s self-generated, inner cognitive circuit as the body processes these cognitive actions.*\(^{145}\) In line with Kandel’s comment on artistic independence, Yungsu’s statement indicated that his focus during art-making is on the higher perceptual processing – cognitive experience – rather than a reliance on top-down, meta-theory to successfully make art. In this regard, Hsu Yunghsu explained that his practice did satisfy what Michel Foucault defined as a self-governing ‘technology of self’.\(^{146}\)\(^{147}\) Hsu Yunghsu’s art practice included his own examinations and explorations of the body, contributing to the core value of his aesthetics through varying life experiences and introspection.\(^{148}\) He stated:

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\(^{143}\) Examples of work from the exhibition was also included in the last half of his solo exhibition book (which did not have plate no page numbers). Most objects are untitled, or described by their material as stoneware, and do not list dimensions. From similar examples where dimensions are provided, they are approximately 165 x 95 x 61 cm. In, Hsu Yunghsu, *Becoming Refrain*. Taipei: Tina Keng Gallery, May 2012, 027.

\(^{144}\) Comments posted on blog, as result of casual conversation with the artist, by a London designer and ceramic specialist. Solo exhibition from Kaohsiung Museum of Fine Arts, Taiwan. Image from Http://www.jowoffinder.wordpress.com/pages/3/. Posted April 29, 2013.


\(^{146}\) Definition of the technologies of self: ‘Technologies of the self are the specific practices by which subjects constitute themselves as subjects within and through systems of power, and which often seem to be either ‘natural’ or imposed from above.’ Eva Sorensen, and Peter Triantafiliou, *The Politics of Self-Governance*. Ashgate Publishing, 2009, 29-31.


\(^{148}\) Ibid., 028.
My artwork focuses on finding something, but is not actually to find something, I want to be seeking, so that my work is to discover, to find, but not to purpose on something..."\textsuperscript{149}

I concur with Yunghsu’s sentiments about how his process-led art practice is pertinent, as he focuses on searching through his medium of clay hand-building, without wilful intention towards confirming some preconceived idea. It seems that an artist’s aim for introspection and subjectivity is aligned to self-mastery or self-knowledge as Foucault had intended: for the relationship of the self with the self and the formation of oneself as a subject\textsuperscript{150}.

Each mark seems a careful, meditative act, individually accruing strength with a palpable softness in the form’s undulations, sensitive to the shallow margin between metaphysical lightness and the enduring presence of sculpture. Mark-making is clear in Hsu Yunghsu’s works, evoking a sense of intimacy and caring commitment. Each clearly articulated mark is one of many thousands made over time, evidenced in the naked clay enlivened with the subtle shimmer of reflective sand, and whose larger than Vitruvian scale bears a poignancy that marks a personally lived experience.

Hsu Yunghsu’s works are about becoming, and his practice often presents an abstract form of a human presence which is visually absent, but alluded to within the outline of a Vitruvian scale or envelope. His images present as virtual entities, the forces of a human presence that surround an absent body. Forms are naked (unglazed) clay, and often floor-based. They reference the psychic human force within a worldly reality. The thinness of the clay envelopes, and their wavy curvatures and spaces within spaces, juxtapose weightlessness with an earthbound gravity. His aesthetics remind me of psychoanalyst Wilfred Bion’s reference to when something new is emerging, as the starting point of thought. Lacking self-spectatorship, the state of thought-feelings without a thinker, is needed for creative thinking. It is the junction between psychic reality and the sensorial aesthetic forms in which it can be expressed.

Hsu Yunghsu referred to how he resists the visual focus in his large naked clay sculptures:

*We have been taught the visual, but I want to remove the visual from my work, to be just the body... clay can show time, body action, strength... The trueness of clay speaks for itself.*

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He wants us to feel the movements of his works as a virtual body, rather than to look at them as mere objects. French contemporary installation artist Annette Messenger, during her artist talk at the MCA earlier this year, recognised the importance of movement to suggest the vitality of life. She also recognised the sculptural use of body parts, stating that to be in the body is to be human. Hsu Yungshu had revealed his metaphysical regard for humanity via this bodily expression of a virtual state of being.

In Neural Imaginings I, too, want a human presence to be sensed. To be in the body is human, but to gesture the mind via the body can be more encompassing of what it is to be human. I want to animate movement implied through the gestural imprint, where the sense of movement captured in the imprint reveals the presence of the body moving in or forming space, in its own self-production. From my experimentation that produced Mind (toucher touched), the importance of tactility and kinaesthetic movement was increasingly realised. I developed this into my own larger components for installation, titled Mind Labyrinth (visceral ingress) (detail later in the paper). The viewer is both visually engaged and becomes the toucher during a haptic experience. The viewer’s response becomes the new object to be touched, as an experience captured in the gesture of the art object.

How can referencing the body represent the mind? Mark Solms based much of his neuro-psychoanalytic approach to consciousness on Damasio’s theory. Solm

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asked about the relationship of the mind to the body and brain, a question phrased as the *binding problem*. Solms stated that we bind our external perception, grounded in our internal perception, that is, our perception of our bodily selves\(^{155}\). Similar to Damasio's explanation of a self-authenticating process, we need to recognise ourselves perceiving in order to gain awareness or consciousness. He made some important distinctions that resolve this *binding problem*. The body is not the mind, and the mind itself is unconscious as part of the invisible world of subjectivity, but we can perceive the mind consciously by looking inwards (through introspection and self-awareness).\(^{156}\) It is our perception of these bodily processes, bound up in a sense of self that emerges out of experience, that is critical to the mind\(^{157}\). Vital to consciousness-making is the first-person observational perspective that is grounded in a visceral body, from which our inner awareness of living in a physical body arises\(^{158}\).

When one reflects on how one’s perception is enacted in response to objects/events/external world, one may gain awareness and a sense of one’s mental reality. It is not the aim to lose consciousness or awareness, nor to avoid ego or intellectual functions, but to seek to ground or authenticate ourselves via personal and unmediated, lived experience.


\(^{156}\) *I.b.i.d.*, 74-78.

\(^{157}\) *I.b.i.d.*, 77.

\(^{158}\) *I.b.i.d.*, 77.
The imagery of *Neural Imaginings* was guided by my extended periods of introspection, as first-person observations of my own virtual and subjective embodied responses to lived experience. *Mind Illuminant (forces)* was a subjectively experienced response to a direct event. *Mind Cloud (beyond the pleasure principle)* was a delightful escape into a mode of making that expressed my curious desire to get lost in the mystery of a search, without purposeful/wilful intent, or concept-closure. A process-led artist can express mindful introspections of personally lived, embodied experiences. I ground myself in clay.

Humans are inclined to respond strongly to the trace of the hand, and humans since prehistoric and ancient times have embedded their hands in clay to depict their imagined actions, say, in war or hunting. I am tracing in clay with impressions of fingers and hands, and piercing holes, negotiating the surfaces and trying to embed myself within the external world.¹⁵⁹ Like ancient potters or cave dwellers who made work that gesturally reflected their environment and left an enduring mark – say, of their thumb – I fit my hand imprint in the clay.¹⁶⁰ I avoid any presentation of fingerprinting as an identifiably personal sign or signature, but an impersonal human bodily trace as a gesture for action.

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Generally, sculpture is tactile in nature, with optical sensibilities.\textsuperscript{161} Leading researchers on emotion and motion, David Freedberg and Vittorio Gallese, state that visual art can activate the embodied mechanisms that encompass the simulation of actions, emotions and corporeal sensation and that these mechanisms are universal. Their studies emphasised the eliciting of empathic responses to the somatic feeling evoked by an image as an embodied simulation with implied gesture, such as when the flesh is shown to yield to the pressure of touch, or the maker’s instruments, or via mark-making, or the gesture implied by a trace.\textsuperscript{162} Freedberg and Gallese concluded that: \textit{Observers can feel a form of somatic response to vigorous handling of the artistic medium and to visual evidence of the movement of the hand more generally.}\textsuperscript{163} To bring both a sense of intimacy and personal agency into one’s experience of the work, I want to harness the somatic response of observers by emphasising the hand interacting directly with the material.

While historical and cultural factors can be important, it is the neural mechanisms in the proprioceptive and empathic understanding of visual works of art that is vitally at play. While I was making \textit{Mind (toucher, touched)}, I was

\begin{flushleft}
\begin{footnotesize}
\textsuperscript{162} The article included a quote by L. B. Alberti on painting and sculpture: ‘the painting will move the soul of the beholder when the people painted there each clearly shows the movement of his own soul... we weep with the weeping, laugh with the laughing, and grieve with the grieving. These movements of the soul are known from the movements of the body.’ In, David Freedberg and Vittorio Gallese, \textit{Motion, emotion and empathy in esthetic experience}. Trends in Cognitive Sciences, Vol 11, issue 5 May, 2007, 197-203, 200.
\end{footnotesize}
\end{flushleft}
recalling the impact of Mexican artist Gabriel Orozco’s 1991 photograph of *My Hands are my Heart* (fig. 19):

![Image of hand holding a heart shape](image)

**Figure 19**  *My Hands are my Heart*, 1991, Gabriel Orozco. Silver dye bleach prints. 23.2 x 31.8 cm (unspecified photograph credit)

This photograph (fig. 19) conveyed the powerful presence of the body in the trace. Gabriel Orozco immediately rouses an intense bodily response of empathic engagement, the directness of the intense quality of the hand squeeze convincingly conveying his passion as an art-maker. I strongly respond to the physicality implied in the image. This photograph’s presentation somatically speaks with an unequivocally direct and unfettered conviction. The imprint is

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evocative, and opens the way to the observer’s sense of personal agency and engagement.

Mind (*toucher touched*) (fig. 9) was an experiment about the functional relationship of the mind to the body, accessible through the intimate entwinement with the body, via the body trace. The mind cannot exist without the brain, or without the body being activated. Damasio detailed the mapping of body signals that contribute to the formation of body schema, referred to three independent subsystems that work in close cooperation: the internal milieu and viscera, the vestibular (balance) and musculoskeletal, and fine touch division.\(^{165}\) Orozco’s visceral expression seems self-evident. The clay held against his chest repeated the tactile and muscular-skeletal pattern which echoed that of his ribcage, finger-grip and, more loosely, the shape and location of his heart.

Orozco’s gestural cueing is laden with an emotional undertow. I respond to his physiological reference of the ribs as related to life-breath, which I associate with freedom. The firmness of his grip suggests a conviction or commitment to a certain action, and the heart denotes a giver of a life-blood. The multiple sensorial referents are more stimulating than a singular input to entice my emotional response in forming a narrative. It is not the somatic perceptual activation alone, but the concomitant emotional associations I bring to my experience that provides the emotional potency to this photographic image. This ambiguity and conflation only served to heighten its appeal, probably

stimulating more internal investigation and associations, which enlivens my response to his photograph. It appealed to me that the hand imprint can be ambiguously deployed in this way, tapping a viewer’s fascination in the objects can incite a search for meaning, as one tries to decide what kind of body trace it is. This increased my engagement in an art object, while drawing further on my own sense of personal agency in the process.

I sought to draw out a viewer’s personal engagement in my own work, beginning by experimenting while making *Brain Mind (toucher, touched)*.

![Image of Brain Mind (toucher, touched), 2014, Loretta Picone Porcelain. 30cm cone diameter x 45 cm. Photograph by Nicola Kirkby.](image-url)
While making *Brain Mind (toucher, touched)* (fig. 9), it seemed fitting that my mark-making imagery maintained an ambiguity in cueing any particular somatic reference. *Neural Imaginings* deploys a generic somatic marker, alludes to a multiple-sensory experience, cueing somatic responses, to entice varied interpretation. This generic range may better attune to a viewer’s particular somatic preference(s), rather than require a singular modality response and interpretation. My imagery appears as a labyrinth-like weave, or as peristaltic actions - can be interpreted as visceral, inclusive of internal or digestive-tract or proprioceptively related movements.

The mind is not visually present as an object. I gradually realised that it could only be imagined, as an implied movement within the body, triggered gesturally in the art object. For the mind does not exist without imagining bodily engagement. In art appreciation, Minissale referred to the interactive contribution of sensori-motor body language -like the power of indexical signs in objects like fingerprint marks in sparking visceral effects. The trace of the body marks the physical relationship to their referents, operating to good affect when the body is not a visible feature in the art work.\footnote{\textsuperscript{166} Gregory Minissale, *The Psychology of Contemporary Art*. Cambridge: Cambridge University Press, 2013, 219.}

The use of reaching and grasping gestures is akin to Deleuze and Guattari’s notion of the human presence made apparent though the quality of its *forces*, or
its essence or rasa, as Ramanchandran termed it,\textsuperscript{167} without the need for clear figurative reference, as what Deleuze referred to regarding the \textit{Body without Organs}\textsuperscript{168}.

Art theorist Thierry de Duve referred to an ability to share experiences, in terms of a \textit{confluence of human feeling} – as a \textit{sensus communis} – that is sharable beyond conceptual overlay, style or culture\textsuperscript{169} via our common, environmentally adapted neurobiology\textsuperscript{170}. As Orozso masterfully expressed in his simple squeezing action, the body trace is a creative and personal expression, and an impersonal sign of a human presence that is communicable through our commonly shared experience of the body.

My conception of artists taking \textit{Core Self-cueing} approaches include one’s commonly held or ubiquitous understanding of naturally-occurring behaviour in the world and phenomenological responses, as enactive approaches which value direct experience as the origin of knowledge-making. Like the body trace, this approach is inclusive of autonomic and unmediated processes. It is complementary with high order cognitive processes, but minimises cultural/societal/language/ theoretical overlays of symbols or signs as the trigger for experience. This is important when one considers how a visual art

\footnotesize{\textsuperscript{168} Frida Backman, \textit{Deleuze and Sex}. Edingurg: Edingburg University Press, 2011, 60.}
\footnotesize{\textsuperscript{169} Socially egalitarian in its aim, art theorist, Thierry de Duve considered that it was a matter of cultural (and historical) freedom and aesthetic quality – that artistic liberty and creativity is shared by all. In, Thierry de Duve, \textit{Kant after Duchamp}. London: The MIT Press, 1996, 442. To share a confluence of human feeling, as a \textit{sensus communis}. In Thierry de Duve, \textit{Kant after Duchamp}. London: The MIT Press, 1996, 443.}
\footnotesize{\textsuperscript{170} Thierry de Duve, \textit{Kant after Duchamp}. London: The MIT Press, 1996, 308.}
audience can directly engage or relate with artwork, and seems vitally useful in understanding how an observer can access a sense of personal agency during an art encounter. I seek an epistemological derivation that involves (but can not exclude) the bracketing of some culturally adopted belief in favour of direct experience. The ways that we empathise, through the functions of proprioception, mirror neurones and projection, are as active in art as in life. To experience the qualitative difference in sensation between an embrace or a grasp is derived from one’s response to the object’s materiality. Porous, self-organising and imprecise, we can naturally share somewhat in an appreciation of things (common sense) and learn through the affective communication of gesture in an art encounter, sensing the forces and intensities of the body, with and without direct reference to the figurative image.

Edmund Husserl said that experience is returned to the primacy of embodied experience as a social encounter, where the body is both the subject and the object, the toucher and the touched. This phrase, of the toucher and the touched, seemed to account for the sense of palpability and personal agency where the subject becomes the object, and was included in the title. This concept later formed the basis for the entire structure of Mind Labyrinth (visceral ingress). This became not only the subtitle to Mind flowering, Mind (toucher touched), but also the basis of my project, Neural Imaginings – to have the body trace evidenced in the object of one’s own production.

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The hand imprint is intended to be a naturally occurring, non-codified sign – what Roland Bathes called a *punctum*, a detail that attracts and holds the gaze to trigger an intensity in meaning that escapes language. In *Neural Imaginings*, each *punctum* references the body in space, present in each bodily impression, set within forms that evolve as they are made. Within the immediacy of experience, an artist does not rely on a theory of consciousness – the human presence is apparent in a body trace when an observer becomes present to the immediate spatial experience.

I note that in the performances by international artists – Stelarc (fig.21) and Jill Orr (fig.22) – in the *Global Mind Project*, both strongly featured bodily and hand gestures of reaching and touch in response to the EEG technology that was employed throughout the project. The reaching hand located in space, and the delicacy of fingers, seems quite evocative. Our fingertip touch response is associated with emotional sensitivity. The effects of Stelarc’s hand seem to both intimately search and disrupt recognition of his face, like when touching water to create ripples of after-effects. It provokes one to question the destabilised technological image and the observer position.

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The artist maintains a first-person perspective of his experience in searching for the mind or self within human matter. This is also the case in Jill Orr’s work, while she imaginatively performs expressions of an internal navigation.
Both Stelarc and Orr’s performance-based video works are interactions with virtual entities, as aspects of their own bodily presence. Stelarc reflects on the virtuality of one’s external milieu, harnessing the sense of touch as his form of expression and modality of enquiry. Orr references internal milieu, as if to give fuller bodily expression to the intestinal tract or internal vessels. It seemed that both artists’ aim was to seek personal expression of the emotional mind:body nexus, exploring expressions of reintegration of mind with body. To return to the body, to reach into it, and to gesturally respond within a somaticized video

frame, seems an attempt to seek an alternative to the reductionism of dualism or monism of medical science and, to find new relations with its imagery to search and attempt to reunite the emotional mind within it.
Chapter Six  Visceral Ingress into space and Enactive Approaches

This chapter refers to the potency of touch and implied kinaesthetic movement, as a means of seeking to activate an observer's perceptual experience.

Activating the sense of touch can be a means to connect to the first person perspective, as someone engaging in experience that taps lived experience. I employ the touch sense in my work, and focus on methods that guide the observer with a sense of their own agency, connecting the person to engage more intimately rather than only looking at an object. I place my body in the work, my forearm, hands and fingers work into the clay leaving their trace. To follow their trace is to follow the gestures of my imaginary navigational movements – of searching, spreading, spiralling, looping, breaking off in rupturing disarray, regaining their trajectory, or restarting in a new formation.

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177 Ralph D. Ellis, and Nakita Newton. *How the mind uses the brain: to move the body and image the universe*. Chicago: Open Court, 2010, 135-238.
Mind Labyrinth (visceral ingress) (fig.23) is sculpted to present the trace of a human presence, as imagined mental movements in space. The gestural focus places importance on the handhold as the trace, as kinaesthetic movement implied in the work. It seems as if my attempts to fix or embed myself into the clay is also to strive for some momentary certainty in an indeterminate field. There is a focus as the embedded fingerprint marks, juxtaposed with smooth planes and a relaxed and diffused attention to mark-making, as if I follow where my handprints lead me. I am within the experience of interoception, of sensing the operations of the body within the mind, as movements in space. It is my body that penetrates space – it is a visceral ingress. I wish to increase the organic connection with the form as a sign of personal intimacy during the making, in the hope that it may similarly resonate with an observer.
In 2014, Australian artist Julie Rrap presented a sculpture and video installation titled *Outerspace* (fig. 24) that focused the observer’s attention on negotiating a virtual space to present a virtual reality. Rrap masterfully facilitated observers in the completion of this virtual process of grounding their visceral body within an external world. The process can be experienced as a powerful confirmation if the viewer senses their own body is moving in synchronicity with hers.

![Image of Outerspace installation](image)

*Figure 24  Outerspace3, Julie Rrap, sculpture augmented (rubber) video installation, 2014.*

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A precarious emotional tone is powerfully apparent throughout the work. The quality of her navigation is engrossingly conveyed through these fragmentations of the bodily movement, and the effects of image-decomposition elicit a fractious emotional quality. One detects the temporal interruptions to image-continuity, visually threatening, carving the image up like sheering shards. The structural tension-bands penetrate the viewer's observation space and accentuate greater proximity towards the videoed figure. The sculptural use of the elastic bands effects a decomposition of the image, breaks any preconception of harmonious body sequencing, destabilises the image, and generates a broken, temporal effect. A staccato rhythm is reinforced by the sharp metallic sound, as it underscores the visual transitions of Rrap's hand-grasp and body repositions. The effect of body fragmentation seems to be in keeping with the psychological notion of the *holism as an articulation or a decomposition of a perceived object.*

In a 1999 article in the *Journal of Consciousness Studies,* titled ‘The dance form of the eyes: what cognitive science can learn from art,’ a key researcher in cognitive science, Ralph Ellis, stated that perception is active not passive. Explaining how art helps us engage in an emotional life, he recognised that art triggers perception, where the self-generated movement of the eyes, the mind and the emotions form action schemas that further our dynamic, self-organising patterns of organismic activity conducive to an emotional life. Avoiding the

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conventions of habit, allowing processing time\textsuperscript{182}, and averting the
reinforcement of preconceptions, the limbic system can be activated into a
meaningful dance over time of an emotional explicating or unfolding process. As
exemplified in \textit{Outerspace3}. (fig. 24), artists like Rrap have evocatively harnessed
the potential of the limbic system, similarly to bodily core self-cueing, with
emotional force.

The appreciation of \textit{qualia} as bodily knowledge can be guided by reflection and
allow an organism to become cognisant of its own plight or status, where
feelings cease to be \textit{mere feelings that could be felt}, and transmute into \textit{feelings
that could be known, in a particular context}.\textsuperscript{183} Damasio extended the notion of
\textit{qualia} to include the mapping of emotional/feeling reactions that are an obligate
part of any \textit{subjective experience}, accumulating at different bodily sites or in
parallel to a certain image content, for example, to form an image of an ocean.\textsuperscript{184}
The integration of inner and outer worlds is enabled by the \textit{brain-stem-body loop}
accomplishing a feeling, as a result of cascading processes of input and output
from the body.\textsuperscript{185} I experienced an intense sense of my own aliveness while I
observed Rrap's work, as my body became synchronised with hers, and my
emotions and thoughts become poignant as I became resonant to her plight.

\textsuperscript{182} Ralph Ellis, ‘The dance form of the eyes: what cognitive science can learn from art’. \textit{Journal of
\textsuperscript{183} Antonio Damasio, \textit{Self Comes to Mind: Constructing the Conscious Brain}. London: Random House,
2012, 176.
\textsuperscript{184} I.b.i.d., 255.
\textsuperscript{185} I.b.i.d., 261.
The larger, base structure of *Mind labyrinth (visceral ingress)* (fig. 23) is a bodily communication, inviting a viewer to participate by acting out the movements, indicative of the human presence acting as a self-governing agent, navigating through a mental space. While not specifically rhizomal in appearance, the function of this network has a nodding acquaintance with Deleuze’s and Guattari’s *rhizome*\(^\text{186}\) structure, and to the mysterious interconnectedness of the mind as Freud had postulated of the *Psychic Apparatus*. Each ambiguous sub-structure approximates or is a conflation of vine tendrils, tree limbs or roots, and abstractly allude to partially visible network of the mind. It is fragmentary in nature, functioning as a *holism*. These forms start, connect and stop, like an implied etcetera translated into a visual idiom, materialised in the forms. The forms’ sections imply a continuation, of something not fully visible. As in *Brain Mind (toucher, touched)* (fig. 9) the hand imprint is an ambiguous body marker, variant in size, force, and intensity. What is important is to imagine how the body moving: searching, navigating, constructing oneself in space.

The graphite and ink marks that bring colour tone to the base work were dripped and impressed by hand to achieve a range of subtle ink tones of grey-blue, purple-light blue, varied within darker tones. There is a partial association to cosmic colours to reflect a worldly mystery and connectedness. Also, these dappled and muted tones belong to my internal visual palette, like trying to recognise colour and shape or an aftereffect with my eyes closed. The surface is

\(^{186}\) *Rhizomatic thinking* is a way of thinking that can generating new ideas, and conjured up grass-like horizontal (non hierarchical, more lateral) and closely interconnected network spreading out to new and interconnecting formations. In Gilles Deleuze, *The Fold: Leibniz and the Baroque*. Minneapolis: University of Minnesota Press, 1993, 234.
subtly animated, with light-reflective flecks or pooling on the sub-structures surfaces, the result of adhered graphite powder. The graphite provides a soft luminance with glints of refracting light, de-stabilising the object’s visual surface while animating the surface, and, alluding to the constituent of a living entity. Carbon represents an essential human substance, as carbon life-forms. It is also the core ingredient in pencils, thus alludes to the uniquely human activity of writing, and in the context of *Neural Imaginings*, as acts of a self-inscription.

One may argue that these actions are metaphorical or are functionally operant in the work. I try to grasp a sense of what constitutes myself in space, and as I am reaching out into space, I am also sculpting myself in space.
Chapter Seven  Conscience

Noë’s original question, *How does art move us?*, was a challenge to tackle the interdisciplinary dialogic juncture to account for *how art works*¹⁸⁷. This chapter proposes that commonalities exist between various allied theorists, encouraging interdisciplinary dialogue to develop a third position in relation to art and science.

In his book, *Action in Perception*, Noë argued for an enactive approach that enabled the brain, body and world to work together, as an embodied activity, not only the brain.¹⁸⁸ Like Damasio, bodily perception involves activation of a resonant as-if (not sure of meaning of early part of sentence) *body loop*, where *primordial feelings provide a direct experience of one’s own living body, wordless and unadorned, and connected to nothing but sheer existence*.¹⁸⁹ These nonverbal imagetic responses or *primordial knowledge... unsolicited [are actualising] so that a process of knowing could be founded*.¹⁹⁰ Damasio’s emphasis on this dynamic mode of function being core to our human nature is compatible with Noë’s *Enactive theory*. As I have indicated throughout this paper, there seem to be parallels between the positions of Damasio, Solms, Minissale, Ellis, Kandel and

Noë on the vital importance of experience, where individuals are engaged in enactive approaches that animate perceptual processes of engagement.

I concur with Noë’s argument for the importance of a genuinely neurobiological approach, where whole body and brain patterns are involved as a neuroscience of embodied activity (not just neural activity), which Damasio’s theory provides. This enactive approach is also compatible with David Bohm’s notion of the primary significance of movement which pertains to the inward experience at a psychological level that is built up (mainly tacitly) through a lifetime of experience (and to the cooperation of art and science to account to this end)\textsuperscript{191}.

Noë’s Action in Perception Approach is compatible with Damasio’s theory, yet he makes no mention of Damasio’s internationally well-known theory. Damasio argued that we build a conscious mind by tapping these primordial feelings, yet these are only a part or our mind-making process [see footnote for detail\textsuperscript{192, 193}]. He stated that the core self is about action – specifically about a relationship between the organism and the object... unfolding in a sequence of images, until they aggregate into a fixed sense of an autobiographical self.\textsuperscript{194}

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{191}] David Bohm, \textit{On Creativity}. London: Routledge Classics, 1996, 120.
\item[\textsuperscript{193}] Direct experience of one’s own living body, wordless, where primordial feelings that are intimately associated with emotions because they map the body patterns that are the basis of bodily knowledge and can build conscious minds. This differs from the notion of intuition, for Damasio parsimoniously links body with unconscious and conscious processes, of primordial feelings and prethoughts to consciousness. In, Antonio Damasio, \textit{Self Comes to Mind: Constructing the Conscious Brain}. London: Random House, 2012, 22.
\item[\textsuperscript{194}] While Damasio’s conception of the mind is of a conscious mind, he vitally included the means by which this is only a subset of mental activity and mapping that are precursory to self-knowledge, in his conceiving of protocognitions, protoself and within processes of becoming conscious. I.\textit{b.i.d.}, 253.
\end{itemize}
\end{footnotesize}
As I explained in Chapter Five, Solm emphasised the importance of the subjective/first person perspective, where bodily acts of perceiving are critical precursors to consciousness-raising\textsuperscript{195}. In a similar vein, psychoanalyst Eric Kandel referred to observers of art becoming beholders, who contribute their beholder’s share\textsuperscript{196} in creatively generating virtual realities and emotions, and enacting perception to directly engage with art.

Interestingly, in Kandel’s articulation, the beholder’s share relates to how emotion and empathy are naturally and automatically generated as a result of bottom-up method, as per Dennett’s bridge analogy\textsuperscript{197}. For something to be felt, it has to be experienced through one’s own sense of personal agency. There is a close connection between emotional states and physical states. To enact perception is not only to activate somatic responses, but also to tap into the emotional concomitants during the bodily encounter.

Several theorists recognise some aspect of the fragmentary nature of thought and of being. They agree that humans construct virtual realities; emphasise thought and perceptions in a guiding action; give primacy to an individual experience in engaging directly with the world; appreciate that we continually learn about ourselves and generate evocative thought; and seek cross-disciplinary dialogue. Yet which disciplines are in direct dialogue?

\textsuperscript{195} Mark Solms and Oliver Turnbull, \textit{The brain and the inner world: an introduction to the neuroscience of subjective experience}. New York: Other Press, 2002, 77.

\textsuperscript{196} Eric Kandel, \textit{The Age of Insight: The quest to understand the unconscious in Art, Mind, and Brain, from Vienna 1900 to the present}. New York: Random House, 2012, 420-436.

I concur with Bohm’s worldview of the *undivided wholeness* of the universe and of thought\(^{198}\), in which the boundaries between thought or disciplines can be accommodated, which he described as a *vortex of fluidity*\(^{199}\). Despite some significant concerns (about the limits of science), and viewing science as too simplistic at this stage to address the issues that art addresses, Gaffney is also calling for the *nomadization* of science’s discourse with other theories as a *modern day naturalism*\(^{200}\). Deleuze and Guattari also favoured ontological exegesis and the generative potentiality of *rhizomatic thinking* to animate social dialogue, constantly creating new connections and relations that form new wholes or that presuppose them\(^{201}\). There is a sense of forbearance within the confluence of thought. With so many overlapping thinkers, the art-science common ground seems ready to be traversed.

Eva Sorenson’s commentary on Michel Foucault and the *Technologies of the Self* did relate to the specific practices by which subjects constitute themselves as subjects within systems of power, including the *psychic systems* we establish\(^{202}\). How may she accept a neurobiological theory as a *psychic system*, given that Damasio’s theory defined the individual as *self-organising* or self-governing, and

\(^{199}\) I.b.i.d., 95.
expressly gives primacy to one’s direct experience and individual processing of the experience, as a matter of personal agency?

Enactive approaches such as by Noë, Damasio, Bohm, Kandel and Ellis offer an interesting potential for the convergence of art with science. Could a paradigm based on our human physiology be compatible with the processes of art-making? As I sculpted, I pondered the workings of the mind and the potential for cross-disciplinary engagement. The works in this chapter bear intrapersonal and cross-disciplinary associations in their forms and surfaces. *Neural Imaginings* visual idiom pertains to the edifying effect of my own self-conception, as I seek the integration of self that maturity and experience can bring. Equally, the works could pertain to the edifying effects of allied or closely related disciplines on topics of the mind or of art, as per the disjuncture and the potential that are equally present in that discussion (outlined at the start of this chapter).
Whether of an intrapersonal or a cross-disciplinary intent, *Mind (conceptual edification)* (fig.25) reveals both the edges and underlying unity of a human scenario. As expressed in the form, in apprehending anything unfamiliar, one may bracket conceptual expectations of knowing, observe things directly in wondering what the objects may be like, allow the mind to wander as entities are navigated, and seek to enable an act of acceptance, and remain in a transitory state of not knowing. This state of forbearance can facilitate new transitions.
I found resonance with the forces and movements of *Mind (conceptual edification)* (fig.25) when I read a quote recently by philosopher Felix Guattari about the function of the synapses. In attempting to liberate disciplinary models from their self-reflexive constraints, he used the metaphor of the potential of a synapse:

*The synapses integrate, to a deterritorialised level, the existential breaks resulting from the refrains... the synaptic gap... marks... an explicit break... rich in content that is mutilated, made ‘arbitrary’, rendered a-signifying, that is to say cut off from its syntagmatic bases, and from its paradigmatic bonds.*

It seemed that we are thinking in similar ways, using different idioms, while appreciating the generative function of the synapse. In Gaffney’s book, Felix Guattari’s partner in philosophy, Deleuze, referred allegorically to *The Baroque House* as a way of appreciating the confluence that can occur between contemporary art and science, where newly emerging effects are represented by the creation of a third material – the ethereal smoke effects that result from the mingling dialogues.

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205 In *Beyond Sexuality* Deleuze recognised the need for intimate relations related to sexual human nature, such as seeking a confluence with a neuroscientific paradigm. Deleuze mentioned the risks of seeking *Whole*, of *egotistical* *mania* inflation as an effect of the invention of relations, and, also of *prisons* in stifling rhizomatic thinking. He encouraged forebearance: of *bearing within it a strain of vulnerability and [fear of] failure alongside a capacity to create new and unforeseen modalities of desire*. In Frida Backman, *Deleuze and Sex*. Edinburgh: Edinburg University Press, 2011, 237.
As the human sciences, humanities and art recombine, a neo-renaissance of thought is reconvening\textsuperscript{206} as an interdisciplinary conscience\textsuperscript{207}. Centrally embedded within *Mind Spiral (conscience)* is a cerebellum, which is surrounded by weaving and enfolding realms. Fragile, animate and open, *Mind Spiral (conscience)* (fig.26) is an invitation to gently venture, where neurobiology is the base from which new folds can merge and emerge.

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There is a sense of anticipatory aliveness in *Mind spiral (conscience)* (fig. 26) of folds unfolding, ruptures that recede or burst forth as new harmonies arise.

Damasio referred to *conscience* as the highest form of consciousness\(^{208}\) – say, that which enables humans to reach mental peaks, create artifacts and to consider the mind of the collective. This *Mind Flowering* pertains to a joyful wonder in recognising the feeling of the conscience as an intrapersonal experience, within oneself. Equally, it resonated in me with Guattari’s optimistic call for *transversality* between psychological knowledges that can arise from cross-disciplinary dialogue connected by subjectivity\(^ {209}\). His view of the synapses as fields of potential is a call to interdisciplinary interaction, the opening away from set structures to enable the potential for dialogue.\(^ {210}\) I am drawn to bringing narratives of the mind into close proximity, and for the narratives to evolve together, rather than remain separate and discordant. The problem of maintaining an artifice of *Two Cultures*\(^ {211}\) can be resolved by creating opportunities for allied disciplines to work together on common interests.

*Conscience* require the desire to re-imagine the conceptual gaps between disciplines involves a surrendering to the cascade of change – both intrapersonal and transdisciplinary. I found a resonant feeling in the abstraction of Bill

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Henson’s imagery inspired by the southern Italian landscape that revealed his release of an inner force, captured in his *Untitled #17* photograph (fig. 27):

![Figure 27](image)

**Figure 27**  *Untitled # 17*, 2008-2009, Bill Henson

Archival inkjet pigment print. 127 × 180cm.

The identifiable quality in *Untitled # 17* (fig. 27) is of the beauty in allowing a natural force of desire, or the relinquishing of a disciplinary *ego* in favour of conscience, to take its course. German poet and philosopher Johann Wolfgang van Goethe in the 17th century said that *Man knows himself only to the extent that he knows the world: he becomes aware of himself only within the world, and aware*

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of the world only within himself. I recognise an inherently human and irrepressible desire – and its powerful energy for transformation – reflected in the force of Henson’s pattern in Untitled #17. The power of Conscience is like a wordless knowledge that unfolds in time from the feeling. I recognise that desire to feel this pattern of Conscience in me.

Figure 28  Mind Cascade (core consciousness), 2014, Loretta Picone
Porcelain with Hare’s Fur Glaze. 20cm diameter cone x 25 cm. Photography by Loretta Picone.

For the *Mind Flowering, Mind cascade (core consciousness)* (fig. 28) I chose Hares-Fur Glaze on the basis of its serendipitous production of intricate gushes of vivid streams of bluish cascades against earthly tones.\(^{215}\) John Britt’s variegated glaze produces fine streamings that are the uncontrollable result that can only come about through the interaction during a firing between two glazes: the earthly tones interacting with the blue (almost translucent) tones to form a third, desired effect. *Becoming, Conscience.*

Bohm had referred to a kind of *art of perceiving movement*.\(^{216}\) This is the state in which matters can be negotiated, setting aside established demarcations and identities, to find a third space or perspective. Bohm recognised that the essence of human life is art, and sought a *good fit*\(^{217}\) and ended his book in encouraging a new frame of mind – a third space – in which there can be a *common consciousness or new kind of intelligence* between art and science\(^{218}\).

Throughout his book, *The Force of the Virtual*, Gaffney reflected on Deleuze’s writings and advancing his new metaphysics that goes through the plane of reference – science – at the same time as opening the production of ideas beyond its aims and means, reinforcing that the answer lies in a notion of lived experience as an embodiment of the virtual, the *model real*.\(^{219}\) Ramanchandran cautioned against false information that can damage the progress of science, and


\(^{217}\) *I.b.i.d.*, 106.

\(^{218}\) *I.b.i.d.*, 145.

commended science to study artists and to find ways to continually open its paths\textsuperscript{220}. Professor Allan Snyder from the Centre for the Mind in Sydney acknowledged the value of \textit{mind-sets} in daily life, while emphasising the importance of reducing inhibition effects on mental processing and the ossifying limitations of prior knowledge to boost creativity.\textsuperscript{221} Where artists share the domains of creativity and of the functioning of the mind, might scientists find artists useful mentors? Ramachandran encouraged scientists to look for pathways that transcend the conceptual blocks of their own paradigm, and tap the richness of how humans acquire epistemologies. Common themes such as creativity, subjectivity, direct experience and the mind are strong domains in which art flourishes. I resist the ideological wedge that maintains a hierarchy of disciplinary edifices between science, philosophy and art, especially on matters of subjectivity, imagination, virtuality and the abstract functioning of the human mind.

Many theorists are now seeking some kind of conscience between art and science, including Noë, Damasio, Ramanchandran, Bohm, Minissale and Gaffney. I propose a new image to reflect this conscience, based on an ancient Indian \textit{Nataraja} sculpture that contemporary physicists have recently embraced – \textit{The Cosmic Dance of Shiva}. The poignancy of this ancient sculpture remains strong today, including in the secular world. It was coveted by science in 2004, when


the Geneva Centre for Research in Particle Physics emulated the original bronze artwork in a magnified, two-metre sculpture of the deity in its forecourt.\textsuperscript{222}

Art critic Ananda Coomaraswamy considered the ancient sculpture to be the eloquent synthesis of thought relevant to all humans, and a synthesis of poetry and science. The myth depicted is of \textit{Shiva} encircled by matter and nature, in rhythmic play that animates inert matter into the movement of the cosmos in a never-ending circle of destruction and new life. The symbolism of the dancing god is to free oneself from the ignorance of illusion, as the dancer finds the centre of the universe within his own heart.\textsuperscript{223} Ramachandran explained that today, \textit{Shiva}'s foot bearing down on the embodiment of ignorance, has been reinterpreted as the need to be liberated from the illusion of a supreme truth, or any reductionist approach to science.\textsuperscript{224} The \textit{Nataraja} is an enduring and profound model and metaphor for the enacting process of \textit{becoming} and of \textit{belonging} with the world.

\textsuperscript{222} CERN forecourt Geneva. \url{http://www.secretsinplainights.com/technology/}

\textsuperscript{223} This essay from Ananda Kentish Coomaraswamy (1877 – 1947) has been published in a collection of essays on Indian Art and Culture "THE DANCE OF SHIVA" 1924 in New York (Sunwise Turn). \url{http://www.integral-yoga.de/Natyta-Yoga/coomaraswamy.html}

In tribute, I appropriate this ancient sculpture, replacing the image of a god with that of my visually idiomatic dendrite form to create the *Cosmic Dance of the Dendrite*. I propose the dendrite as a symbol in contemporary society, that captures the dynamic potential of humans. Ellis and Newton had scientifically referred to the receptively self-organising, imaginative and dynamic dancer\textsuperscript{226}, negotiating the external world of forces that generate the frenzy of internal surges of sensory responses. It is the synaptic gap that is the site of generative potential, located in intimate contact and continuously responsive within the

\textsuperscript{225} Http://www.secretsinplaininsight.com/technology/

\textsuperscript{226} Ralph D. Ellis, and Nakita Newton. *How the mind uses the brain: to move the body and image the universe*. Chicago: Open Court, 2010, 137.
functioning of one's body. Each leap requires a creative act of generative and
dynamic nature. The myth's poetics are founded in this site of generative
potential.

In *Cosmic Dance of the Dendrites*, I averted the Nataraja's references to a god,
relying on an essential behavioural communication detectable from its universal
aesthetic qualities.
Figure 30  *Cosmic Dance of the Dendrites*, 2014, Loretta Picone
Raku paper clay with Indian inks and graphite surface treatments. 750cm diameter circle, 6 cm depth. Photograph by Greg Piper.
The poetic gap is founded in the synaptic gap – that space within our own human nature that requires a corporeal imagination. It is one’s imagination that links the sensorial varieties and turbulence of existence to create, sustain and destroy the image of the universe or external world. We generate a virtual reality and a virtual self embedded in the virtual world.
Conclusion

The installed work, *Neural Imaginings*, is an opportunity for observers to satisfy this urge to know what something is, but it simultaneously averts conceptual closure. It invites the viewer to experience how the abstract forms may be an opportunity to engage in visual art with an attitude of forbearance, wonder and tapping their own somatic-emotion-cognitive response. Perhaps these same qualities could help navigate trans-disciplinary contact in relation to this paper’s invitation for dialogue.

This paper is a contribution to how art-making and appreciation can be complementarily co-joined within an underlying tissue of theory based on the human functioning of the mind and on experience. Noë’s original question which became a focal point of this paper, and which remains a challenge for each of what Deleuze and Guattari termed the three sisters of thought (art, science and philosophy), is *why can art objects move us?* Through the use of the body trace as an enactive approach, artists can actively engage an observer in a personally involving manner, connecting emotionally and wholistically within the art encounter.

*Neural Imaginings* exemplified this in the context of my own art practice, and this paper is based on a trans-disciplinary practice. How we can sense our

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perceptual processing faculties being enacted in the world is a natural part of our own knowledge-making and self-creation, embedded and responding within a pre-existent world, and through one’s individual acts of the imagination.

This project, *Neural Imaginings*, endorses the neuro-physiological paradigm of Antonio Damasio as a relevant and comprehensive theoretical underpinning to a trans-disciplinary enactive approach. Emphasis was placed on the importance of experience and on first-person perspective to activate a sense of personal agency for art audience engagement.

This research paper and exhibition of works reinforces how visual art – in particular ceramic sculpture – can express the functions of the mind, and contribute to an appreciation of how the mind works, by *how art can move us.*

The value of accessing first person perspective and in operating through a sense of personal agency is an important aspect of the functioning of the mind, and of maintaining personal freedom in self-directing thought-making processes. The *biology of knowing* – as a primordial or *core self* means of *bodily knowing* – is the precursor to all consciousness and knowledge making. The mind is appreciated as a function of the body in consciousness making, where visual art operates as the mind does.

As the ancient *Nataraja* and contemporary theorists Ellis and Newton had detailed in their respective idioms, only the *dancer* can perform the *dance of becoming* and *belonging* within the world. The vitality of experience relies on a
first-person or subjective perspective, and includes the interaction of unconsciously somatic processes. This may be tapped through eliciting a personal sense of individual agency. By adopting an experiential perspective, several long-standing conceptual paradoxes or gaps are averted. These include the gap or separation of subject-object relations, the Cartesian mind-body problem, how to resolve mind with matter and mind with neurology, and unconsciousness to consciousness as the hard problem of consciousness.

This paper encourages trans-disciplinary dialogue to facilitate a neo-renaissance of trans-disciplinary exchange. Ultimately, it supports Deleuze, Guattari and Gaffney's heralding of a new metaphysics that goes through the plane of reference – science – at the same time as opening the production of ideas beyond science's specific aims and means. Science, philosophy and art may be cojoined and share common understanding.

Neural Imaginings reinforces that the quest to appreciate the mind lies in a notion of lived experience as an embodiment of the virtual, the model real. However, each discipline can only - and must only - operate from its own mode of production. Art may flourish in its own right, and it may potentially contribute to appreciating the conceptual or theoretical mysteries of the mind's functioning. Art's mode of production is a valid means of appreciating the functions of the mind, because art encounters rely on experiential processes. While art does not need science nor any meta-theory, it can distinctively complement other modes of thought-making.
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Catalogue of Work Presented for Examination

Presented for examination is a cluster of fine, hollow ceramic objects, presented as a floor-based installation, including a ceramic base structure, and conical or spherical forms. The base structure is titled, *Mind Labyrinth (visceral ingress)* and was made of components; and the circular or (mainly) conical objects that are placed on, or are co-located around the base are the *Mind Flowerings*, where each are named in the paper and the catalogue by their own subtitle.

Paper, CD, and all image copyright belongs to Loretta Picone. Photography by Loretta Picone and Nicola Kirkby (as specified below). Image adjustment is by Nicola Kirkby.

Each of the following figures are images of the components the final installation. The final installation images are in the enclosed CD disc. (CD MFA 2014, *Neural Imaginings* Installation image documentation of December 2014, Post Graduate Show, group installation, SCA Galleries, SCA, University of Sydney, Rozelle, Australia.

[I note that for photographic purposes, a maquette of the base form was used to support the *Mind Flowerings*, and it is not fully representative of the final base form, nor of the actual installation.]
The images in the catalogue follow the order of presentation in this paper that accompanied the exhibition. For the purposes of photography, the Mind Flowerings were photographed on a maquette/model section, which is approximately indicative of how the objects would sit within the large structure.


NOT included in exhibition:

Loretta Picone ‘Mind Flowering’: ‘Mind (sexualised Object)’
Hand-built, high fire Porcelain paper clay object.
   Installation date: 2014.
   Variable diameter 40–50 x 35 cm. Photograph by Loretta Picone.

Loretta Picone ‘Mind Flowering’: ‘Body pulse (tears of consciousness)’
Hand-built, high fire Porcelain paper clay object, Hare’s Fur glaze. Installation date: 2014. Variable diameter 30 x 40 cm. Photograph by Loretta Picone.

Loretta Picone ‘Mind Flowering’: “Mind cascade (core consciousness)”
Hand-built, high fire Porcelain paper clay object, Hare’s fur glaze. Installation date: 2014. Variable diameter 35 x 30 cm. Photograph by Loretta Picone.

Loretta Picone ‘Mind Flowering’: ‘Worldly sensation (water logic)’