

IMPORTANT NOTE:

This is not the submitted version of Caitlin Street’s exegesis. The submitted exegesis was written for review on a tablet (iPad) to employ methods that expand the theories explored within the exegesis. The method allows reading through relationship, both of colour and proximity, rather than the traditional lineal methodology. This version is compiled here exclusively to comply with existing academic requirements, and is bereft of many images and videos, or the complexity of relational reading.

Below is the user’s booklet which is included in the exegesis box explaining usage and method.



Suggested citation method for this exegesis:
Street, Caitlin. 2013, *dreamtime uncapitalised, -joining our own dots* . para # M52.

Quick start guide

- 1; Press and hold the button on the top right (portrait) of the device for about one second to power up, and follow directions to start device.
- 2; Touch the *Street Exegesis* button.
- 3; Touch a 'dot' to read the text/view the image. Touch it again to close.

This exegesis incorporates all text within an image of 'dots', conceptually integrating the thesis' theory into the thesis as an artistic and aesthetic presentation of relationships within this research. It is presented upon an icon of contemporary technological communication.

The information contained within these dots is presented to allow for visual interpretation of the relationships between the enclosed data, rather than as a proposed technological product. The dots relate by colour and proximity, coursing and ambling as paths following-on lineally, or spreading and narrowing to suit relationships between the enclosed knowledge and its surrounding environs. The viewer may follow the colour trails that wend across the image, or choose to read by proximity.

The Chapter dots are coloured;
Introduction - White,
Literature Review - Yellow,
Methodology - Green,
Results and Discussion - Orange
Conclusion? - Off White.

There are also a number of Appendix dots;
Ochre, brown and maroon dots of conceptual expansions,
Purple dots of artworks and documentations,
Dark brown dots of journal data examples, and
Musk dots of drawing data examples.

At the left edge of the image is a group of four dots, encompassed within a larger semi-circle. These dots are the opening pages of the exegesis, and incorporate the *Title Page*, the *Abstract*, the *Academic*

Declaration, and the *Acknowledgements*. The four isolated white dots within proximity of this starting set provide conceptual grounding and terminology definitions. The three large dots across the centre of the image carry the *Index*, a *non-academic summary*, and the *Bibliography*.

Operation of the device
The 'Home' button on the front returns you to the device's start screen, and wakes the device from sleep.

Should the device entirely shut down, the programme resets and all traces of the viewing trails will re-set and appear as new. If you wish to keep track of the reading journey, ensure the devise has enough charge to remain in 'sleep mode'.

The specific requirements of this programme doesn't apply all *iPad* gesture controls operate.

The images, and some texts open in PDF format, which do employ many, including the pinch/zoom gesture to allow closer inspection (see R30). The text PDF's open to a grey screen which requires a sweeping touch to reveal the text. To close, touch the black frame around the image.

A stylus is provided to assist in accurate touching of small areas.

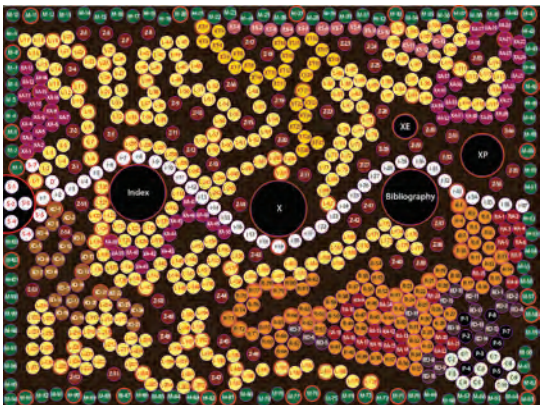
All the exegesis data is self-contained within the tablet and requires no access to a network.

Navigation
The layout mainly conforms with the English protocol of reading left to right. So trails of text, such as the white line of *Introduction* dots, can be read left to right, with related chapter's text stemming from that "trunk line". For example, the *Literature Review* (yellow) sub-chapters stem from relevant conceptual content in the white *Introduction* dots. The *Methodology* (green) chapter, however, begins at the *Title* dots and progresses clockwise, framing the study. Again, relevant text may run from this 'branch line'. One other exception to the general flow of left to right is sub-section 4 of the *Literature Review* that stems from a relevant *Methodology* dot (m-73), and begins by progressing right to left. For further discussion on the methodology and theories applied in the presentation method see dots m-65 to m-71.

A map of the 'terrain' is enclosed at the rear of this booklet, providing the dot identification numbers to both enable quick location of a specific paragraph of text, and assist viewers otherwise lost, to find their way through.

Notes;
The videos play slowly within the programme. Copies are included within the 'Video' folder on the home page.

This is the map included with the tablet, locating each paragraph within the image. Each number only appears after the dot has been activated and closed.





dreamtime uncapitalised, -joining our own dots .

Caitlin Street MVA

College of Education.
Victoria University

Submitted in partial fulfilment of the degree
Doctor of Philosophy

February, 2013.

Abstract

This doctorate explored the pedagogical (see dot D for definition) application of the methods employed in making art as a means of encouraging inter-disciplinary learning. Drawing on key processes in art-making, this project recorded the development of phenomenological thoughts and concepts that arose during the creation of a variety of cognitive spaces, chiefly the making of artworks. It employs and expresses the emergent knowledge as both artwork exhibition (exhibited at the Counihan Gallery, Brunswick 27/9/12-28/10/12), and exegesis, in a ratio of 65/35%.

Employing the A/R/T/ographic method - a dynamically process focused heuristic and phenomenological methodology - this study endeavoured to build knowledge outside of the precise and defined knowledge of the academy, seeking to “permeate boundaries and open up new understandings” (Irwin 2005), rather than generate specific answers.

The method employed creativity’s practices of convergence, metaphoric communication and intrinsic motivation, to provide psycho/neurological space for knowledge to simmer within the unpredictable and non-linear, non-conscious processes of the human mind. This form of cognition, described by Wallas (1926) as ‘incubation’, and espoused by many of the greatest scientific thinkers from Poincaré to Einstein, emerges in a temporal space away from the short-term productivity focus of contemporary society. It is applied in this research during artmaking, intended to allow the generation of ideas and questions.

The ideas generated within these spaces, once journaled, congealed into themes, which subsequently became catalysts for a broad search of literature, resulting in the production of meta-analytic essays, conference presentation, and some twenty-four exhibited artworks. Each paper/artwork emerged through, and from the provision of space, allowing room for reflection and the integration of knowledge, which in turn generated questions that inspired further research - a symbiotic relationship where the art process feeds the learning, which feed the art, which feeds the learning, ...

The thesis contends art’s contextual instability, fused with motivational and critical characteristics of creativity are key values of art in pedagogy, which combine with quantitative methodological strengths to provide an integrated learning platform.

Declaration

I, Caitlin Street, declare that this Ph.D thesis entitled “dreamtime uncapitalised, - joining our own dots .” is no more than 40, 000 words in length, including quotes and exclusive of tables, figures, appendices, references, and footnotes. This thesis contains no material that has been submitted previously, in whole or part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Caitlin Street

21 February 2013

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List of Images

Exhibited Artworks

Trocadero Gallery 2009 – *Who's dreaming?*

Works

dreaming #3 (2009)	100 x 83.5 cm	Giclée print	Dot RA1
dreaming #32 (2009)	102.3 x 85.7	Giclée print	Dot RA2
dreaming #37 (2009)	113.3 x 87	Giclée print	Dot RA3
dreaming #39 (2009)	89 x 80.4 cm	Giclée print	Dot RA4
dreaming #41 (2009)	300 x 120 cm	Giclée print	Dot RA5
dreaming #42 (2009)	180 x 168 cm	Giclée print	Dot RA6
dreaming #42 (2009) detail			Dot RA7
dreaming #43 (2009)	89 x 87 cm	Giclée print	Dot RA8

Exhibition Documentation

Who's dreaming?	Dreaming #41 Documentation view		Dot RD1
Who's dreaming?	Dreaming #42 Documentation view		Dot RD2
Who's dreaming?	Documentation view	1	Dot RD3
Who's dreaming?	Documentation view	2	Dot RD4

Billboard Gallery 2009

Works

Who's dreaming? (2009)	1920 x 3600cm, Inkjet on Vinyl		Dot RA25
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Yering Station 2010- *Aerial*

Works

Drawing on the Earth 2 (2010)	107.4 x 54.3 cm	Giclée print	Dot RA9
Drawing on the Earth 5 (2010)	95.6 x 59.7 cm	Giclée print	Dot RA10
Träume 1 (2010)	81.3 x 53.1 cm	Giclée print	Dot RA11
Träume 2 (2010)	41 x 37 cm	Giclée print	Dot RA12
Träume 3 (2010)	33.7 x 45.5 cm	Giclée print	Dot RA13
Träume 4 (2010)	77.2 x 45.5 cm	Giclée print	Dot RA14

Träume 5 (2010)	50.2 x 32.1 cm	Giclée print	Dot RA15
Träume 6 (2010)	76.3 x 47.4 cm	Giclée print	Dot RS16
Träume 7 (2010)	80.5 x 48 cm	Giclée print	Dot RA17
Träume 9 (2010)	85.7 x 47.4 cm	Giclée print	Dot RA18
Träume 11 (2010)	108 cm x 96.5 cm	Giclée print	Dot RA19

Exhibition Documentation

Aerial	Documentation view	1	Dot RD5
Aerial	Documentation view	2	Dot RD6
Aerial	Documentation view	3	Dot RD7

Counihan Gallery 2012 – *dreamtime uncapitalised, - joining our own dots* .

Video works

Spheres of Influence 1 (2012) Installation. Dimensions variable. Acrylic pool, water, light, drip controller, Infra-red sensor, stainless steel, steel, timber.				See Dot RD8/16
Spheres of Influence 4 (2012) Installation. Dimensions variable 3 channel video, sound, fabric.				See Dot RD9/16
Channel 1;	Duration; 1:31	High Definition video		Dot RA20
Channel 2;	Duration; 2:18	High Definition video		Dot RA21
Channel 3;	Duration; 10:17	High Definition video		Dot RA22
Spheres of Influence 5 (2012) Installation. Dimensions variable See Spheres 1 & 4				See Dot RD9/16
Spheres of Influence 3 (2012) Installation. Dimensions variable Acrylic lenses, single channel video, steel, silk, glue, aluminium				See Dot RD11/17
Spheres of Influence 6 (2012) Dimensions variable Single Chanel Hi Def. Video, sound. Duration 7:12				Dot RA 23

Exhibition Documentation

Stills			
Spheres 1	Documentation view a		Dot RD8
Spheres 1, 4 & 5	Documentation view b		Dot RD9
Spheres 3 & 6	Documentation view a		Dot RD10

Spheres 3	Documentation view	Dot RD11
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	Construction Documentation, Duration; 0:13	Dot RD18
Spheres 3	Documentation video. Duration ; 2:12	Dot RD17
Bruny 2010 Book 20 cm x 28 cm documentation images		Dot RA24

Morning sagasuation examples.

2	Date	18/1/11,	Medium; graphite on paper	Dot XS1
4	Date	20/1/11,	Medium; graphite on paper	Dot XS2
9	Date	21/1/11,	Medium; graphite on paper	Dot XS3
11	Date	24/1/11,	Medium; graphite on paper	Dot XS4
13	Date	27/1-11/3/11,	Medium; graphite on paper	Dot XS5
15	Date	20/4/- 9/5/11,	Medium; graphite on paper	Dot XS6
16	Date	7/5-8/5/11,	Medium; graphite on paper	Dot XS7
20	Date	20/5-7/6/11,	Medium; colour pencil on paper	Dot XS8
22	Date	21/6-5/7/11,	Medium; colour pencil on paper	Dot XS9
26	Date	4/8/11,	Medium; crayon on paper	Dot XS10
29	Date	9/8/11,	Medium; crayon on paper	Dot XS11
31	Date	17/8/11,	Medium; crayon on paper	Dot XS12
36	Date	21/8/11,	Medium; crayon on paper	Dot XS13

Definitions (Pronunciation guide- International Phonetic Alphabet - Received Pronunciation)

Atomized knowledge - the disconnection, or harvesting of knowledge from its field of understanding; isolated; Knowledge presented as valid, despite contextual loss.

Authodoxy /ɔ:θə,dɒksi/ - A neologistic convergence, despite etymological roots, of the authorised orthodoxy, which denotes the authored position, rather than an apparent 'natural state' of the concepts espoused within the dogma of the orthodox.

Autopoietic /ɔ:tə'pɔɪetɪk/ - Difficult and criticised word for a system that generates itself, such as a cell. It suggests the system has some form of reflexive knowledge or cognitive capability because it is a 'continuous and dynamic system. (See Maturana & Varella, 1980).

Autotelic /ɔ:tə'telɪk/ - Doing something for its own sake rather than to achieve a goal.

Convergent thinking -A term stemming from psychological creativity research (Guilford 1950) and applied in psychometric as a method of setting questions intended to allow only one response/conclusion.

Divergent thinking -A term stemming from psychological creativity research (Guilford 1950) and applied in psychometric as a method of setting questions intended to allow for multiple responses/conclusions. This term is often aligned with 'problem finding/generation, which can equally be presented as converging through correlation and linking.

Infact /ɪnfækt/ - a neologism referring to chains of 'unknowledge' that establishes credibility through citation, a situation rampant in media and educational 'grabs' of elements found on the internet. By applying the prefix as negative, the word both becomes the opposite of 'fact', as well as alluding to the claims of veracity declared by the perpetrator, as in the case - "Infact, John F. Kennedy was an alien!" (See dot L250).

Meta cognition /'metə kɒg'nɪʃ(ə)n/ - Ability to think about our thinking.

Noematic /nəʊ'mætɪk/ - relating to the understanding Static, Husserl defines as "that which is experienced".

Noetic /nəʊ'etɪk/ - relating to mental activity or intellect - perhaps construed as Dynamic- physically influencing outcomes. Husserl defines as 'that which is experiencing'.

Pedagogy /pɛdəgəgi/ - A term applied within this thesis as "method or practice of teaching" (Oxford Dictionaries 2013), including the teaching of one's-self. The integration of the role of Artist/ Researcher / Teacher within the a/r/tographic methodology requires an interpretation broader than the meaning aligned with pedagogue as "a teacher, especially a strict or pedantic one" (Oxford Dictionaries 2013).

Phenomenology - A research method conducted from the first-person perspective.

Sagasuate - /s gæSHu:eɪt / - A neologism for an infusive cognitive process which allows for the emergence of deeply comprehended knowledge, sometimes identified as 'insight'; to stew, steep and simmer within the non-conscious processes of the human mind - unpredictable, open to serendipity, and non-linear, sub-cognitive infusive processing of pre-existing knowledge; the brewing that leads to sagacious judgement. (See dot m-20).

It is important also to distinguish between notions of *sagasuation* and *intuition*, both of which are capable of syllogistic misinterpretation.

Sagasuation is subconscious cognitive process, occurring over extended time periods, that emerges into consciousness, and becoming subject to conscious review.

Intuiton, (definition within this thesis) resides deeper in the unconcious mind, is an almost instantaneous cognition, capable of valid insights, however, possibly nearer the level of genetic instinct. The temporal variation between *sagasuation* and *intuition*, it is argued, allow for greater risk of syllogistic assumptions within intuition.

This dot, the one enveloped within the surety of its text bears knowledge. It bears the key to seeing, the key to comprehension and clear sightedness. Look at it. Look at it hard, . . . closely, . . . intently. Watch the dot and it will reveal the knowledge of vision. Look . . . keep looking . . . This is a dot encompassing knowledge identified in 1804 (Ignaz Paul Vital Troxler) and dismissed as a party trick. This is a dot that now resides at the centre of understanding and research into neural operations (Martinez-Conde et al. 2006;2007;2009).

Look. Stare. Intently.

removes it from
words disap-
pears,
the dot.
entirely

Attention to the dots

its surrounds. These
pear. All else
leaving only
It becomes
isolated.

It is a
invita-
look,
– words
selves
tautological,
read in there
in familiar patterns
ing, their intention.



semiotic
tion to
. . see . .
that them-
appear
but are seldom
entirety, linked
that erode their mean-

It is this erosion that the dot illustrates. The familiarity of the semiotic symbols, words gathered into phrases, becoming one, lessening relationships outside of the meaning firmly attached to the phrase. No exploration required.

Cont. 2

Microsaccades

This dot reveals the need for the eyes to constantly connect relevant 'dots' to see. We do this through constant eye movement, known as 'microsaccades'. Constant, tiny eye flickers, charging numbers of retinal cells, rather than the few. In isolation all the surrounds become irrelevant, resulting in the retinal rods recognising familiarity, and not signalling the brain, not seeing. They require the stimulus of change to share what they see. The visual cortex requires interconnected signalling to see. Isolated information becomes just that, isolated. It is the constant interconnectedness generated by microsaccades that enables us to see.

For further reading, try

Greenfield, S. 2008, *ID: The Quest for Identity in the 21st Century*, Sceptre, London.

Kepes, G. 1944, *Language of Vision*, 13th edn, Paul Theobald and Co, Chicago.

Lewis-Williams, D. 2002, *The Mind in the Cave*, Thames & Hudson, London.

Martinez-Conde, S. & Macknik, S. 2007, 'Windows on the Mind', *Scientific American*, August 2007, pp. 40-8.

Martinez-Conde, S., Macknik, S., Troncoso, X.G. & Dyar, T.A. 2006, 'Microsaccades Counteract Visual Fading during Fixation', *Neuron*, vol. 49, pp. 297-05.

Martinez-Conde, S., Macknik, S., Troncoso, X.G. & Hubel, D.H. 2009, 'Microsaccades: a neurophysiological analysis', *Trends in Neuroscience*, vol. 32, no. 9, pp. 463-75.

dreamtime uncapitalised – joining out own dots .

Title expansion.

The title of this thesis is itself emblematic of the concepts being explored, carrying meaning in multitude, metaphor and meme. It is a title that evolved from a germ of comprehension, an epiphany of understanding, of connecting knowledge lying about, denuded of meaning (note; the validity of the dual meaning inherent in the word lying). It is a title alluding to my root of realisation in the relevance of indigenous knowledge and transmission.

It alludes to non-conforming ideas, self explanatory in their statement of fact – uncapitalised it is – textually. Grammatically flawed, with spaces within, outside of the authorised. Spaces between, injected, claiming legitimacy. With a dot spaced from ‘dot’ – isolated - a subversion of the spellchecker. It lies beyond the meaning of its distant semiotic neighbours, talking to itself of its isolation, contained beyond the authorised.

It refers to the desire and hope built into each of mankind’s constructions. Dreams of right, of comfort and dreams of deserving self. Dreams manifesting in dreamhomes, allotted into their space and unwittingly allotted into their time, correcting the flaws that had carelessly been inserted by ‘God’ in this ‘Garden of Eden’. Dreams unrecognised, turning into nightmares.

It is about a temporal space, that space of daydreams, daydreams beyond desires, of fantasy and flights of imagination. This space, free from productive pursuits and assessment plays in the realms of the mind, wandering, unrestrained and untethered. It is the dreaming space of Kekulé, Einstein, and Newton lazing beneath ‘his’ apple tree, changing the very foundation of the world, at least as we knew it.

It is a title that respectfully alludes to the *Dreaming*, an entire epistemology swept up into pejorative and temporal Western perceptions as “the Dreamtime”- naive and primitive. Alas, naive and primitive are Western perceptions of it, its wisdom eluding those who seek the isolated dot. For in an enormous isolating land, it does not isolate. It is narrative knowing, connecting and relating complex and integrated comprehension. Knowing that knows no temporal limitations, such knowledge is the knowledge of the land that lies within the land itself - knowledge of land, its inhabitants – cosmological, mineral, floral and faunal. Synaptic and symbiotic relationships conjoined.

Within these few symbols lies relational knowledge – connected. Isolated ‘dots’ of knowledge, established by the mechanistic and reductionistic means, defined from within an ideology of atomisation that ever reduces to “small, distinct units”. It is a habit that dismantles the unrecognised sum to celebrate its parts, isolated, disconnected, uncoupled.

Chapter 1

Introduction

Quantitative academic methodology is about ever tighter definitions of knowledge, of detail, winding down to the smallest definable aspect of the question. The practice has drilled down to the roots of cells, beyond even their structure, so that we now know how to manufacture life. It is about focusing upon the isolated entity, the point -a 'dot'.

i-2

It is this highly focused and isolating method of defining knowledge, the generation of metaphorical 'dots of knowledge', that is the cornerstone of Western epistemology. It is also the motivation for this study's consideration of both the method's broad socio/environmental implications, and a means of overcoming it. It is through the correlation of metaphoric 'dots' - applied conceptually, visually and textually – that this research seeks legitimate methods of generating relationships, operating in both a metaphorical and literal manner, between the 'dots'.

i-3

Ironic, as it is, this research focuses upon a method of unfocused interconnection of knowledge. The aim of this research is to consider how the art-making process can amplify and extend engagement with the body of knowledge as collated within a Western empirical mindset. This research builds from the Latin root of the word art (*ar*) - "to join" (Webster 1960) - generating meaning and understanding by using the critical and reflexive skills inherent in the production of artwork to inter-relate existing empirical knowledge.

i-4

This research is about learning, broad epistemological and ontological learning, with art as the catalyst. Founded within combinations of contemporary pedagogical (see dot D for definition) theories, broader psychological theories, and creativity and neuroanatomy research, the study's process was structured to create the neuro/psychological space to allow a means of re-searching the world "to enhance

understanding” (Barone & Eisner 2011). The research enquired into a method of integrating knowledge, learning, and being, by documenting the emotional, intellectual and theoretical responses evoked during the art-making process as a method of revealing and co-relating unfolding concepts, and motivating interdisciplinary research. Using a heuristic, autoethnographic, “within person model” (Binnewies & Wörnlein 2011), this phenomenological research worked to identify, evaluate, and record the “psyche and physical manifestations” (Webster 1960) of emotions, the intellectual “reasoning and understanding of perceived relationships” (Webster 1960), and the “formulation of apparent relationships . . . of certain observed phenomena” (Webster 1960) that lead to the formation of theories. Each of these factors, key elements in the making of conceptual art, contributed as catalysts to interdisciplinary research and meta-analysis.

i-5

This chapter, having briefly clarified the motivations and direction driving this research, (see appendix - X01- for further discussion of motivations stemming from atomised epistemologies and pedagogies), will outline the methodological foundation of the research, and the application of art-making used in this study. The chapter then proceeds to briefly elucidate the theoretical basis of the research, the practices employed, and the variety of instrumentation applied to record and analyse the relational knowledge that is this research. Finally the chapter will consider the results and findings attained from the project.

i-6

Art as pedagogical method

The chief method employed in this study, A/r/tography, generated from the research of Rita Irwin (2003;2004;2005; see also, Barthes 1967/1994; Irwin 2004; Irwin et al. 2006; Irwin & Springgay 2008a; 2008b) and is a method where the common denominator generating the questions is clearly acknowledged. Building upon growing practice-based research methodologies (Cahnmann-Taylor 2008; Leavy 2009; Sullivan 2010), A/r/tography was borne of a confluence between Deleuze & Guattari’s (1987) concept of rhizomatic relationships and Nicholas Bourriaud’s (2002) notions of *Relational Aesthetics* – a post-modernist concept(s) integrating artworks with their lived relational surrounds. As Bourriaud writes

“the role of artworks is no longer to form imaginary and utopian

realities, but to actually be ways of living and models of action within the existing real, whatever the scale chosen by the artist." (Bourriaud 2002a:14).

i-8

Bourriaud's theory itself, builds upon postmodern concepts of knowledge creation occurring heuristically through the interpretative perceptions of the 'reader'. These concepts, presented by Roland Barthes (Barthes 1967/1994) and Jacques Derrida (Derrida 1978), and foretold by Wimsatt & Beardsley, (1954), acknowledge the impact of reader/viewer's filtering of available knowledge through their own existing paradigms, which subsequently subverts 'authorised' meaning beneath multiple truths.

i-9

A/r/tography is a dialectic form of meta-cognition, an embodied research, which seeks to integrate the Artist/Researcher/Teacher in a method of "lived experience" (Irwin 2004). As Kepes (1994:52) reminds us, "(t)he image is a living experience that cannot exist as a frozen structure. For the image to remain a living organism, relationships within it must be constantly changing. The eye and the mind must be fed with changing visual relationships." This lived research, allows for the influence of life, something social sciences cannot ignore, as aspects of self cannot be entirely, nor effectively partitioned.

i-10

The relational focus of A/r/tography allows access to "arts power to open our imagination and endow experiences with more than one meaning" (Irwin 2005). While the demands of most methodologies are to limit the possible interpretations and meaning within research (Barrett 2007a; Biggs 2003; Biggs & Büchler 2007, 2008; Bird 2000; Eisner 1997; Nimkulrat 2011), "[w]e can't solve the problems by using the same kind of thinking that we used when we created them" (attributed to Einstein, in Maslanka & Owen 2010:2). As such, this method "is not about dichotomous thinking but rather dialogical thinking, relating, and perceiving" (Irwin 2004:30), "a process that involves an evolution of questions" (Irwin et al. 2006). Irwin refers to this process through the Latin etymological root of the word curriculum - *currere* - itself a verb rather than the fixed noun that it bred (Irwin 2010). *Currere* is a process residing in the space between binary notions, binaries

such as the one between theory and practice, the very issue this project seeks to overcome¹.

Footnote 1; This dialogical structure is not antithetical to qualitative and quantitative research, as levels of reflexivity are also integral in more traditional methodologies. Traditionally, such reflexive dialogue often reinforces the internal coherence of the method/theory. This current research seeks to establish external coherence.

i-11

The space between the binaries of ignorance and knowledge is the realm of questions, symbiotically and reflexively evolving in their exponential growth. The evolution of questions in this research is intended to occur during the space of the art-making, folding in and back on themselves, progressing in tangential journeys. The traveller/researcher on these tangential odysseys, as in all research, is the source, whose existing knowledge, residing in self, is pushed forward and folded amongst external knowledge, then taken back and folded within the new self generated on the journey, changing as each new knowledge provokes questions that erode the surety of understanding and acceptance of the landscape it evolved from. These ‘reverberations’ which to Irwin (2004:34) are a way to “... reinterpret in order to provide greater grounding for understanding...” and can amplify knowledge, harmonically building complexity and timbre, aligning conceptually with the notions of ‘Hebbian Learning’, to be discussed later.

i-12

"The individual nature of our experience is caused by our pre-existing views and prejudices" (Palmo 2002:88).

i-13

Being tangential journeys there is no destination, no terminus of expectation where knowledge is eroded in forethought and presumption, limited to the determinate rather than open to the ambiguity. It is this ambiguity, a key space, that allows constant revisitation to find new knowledge within an otherwise familiar terrain. Across disciplines these tangents carry perceptions and understandings from other fields growing rhizomatically, allowing “multiple, non-hierarchical entry and exit points” (Beare 2010:163).

i-14

Part of the phenomenological roots of A/r/tography reside in Autoethnography, itself a qualitative means of addressing the lack in traditional methodologies. In this regard, this study is auto-ethnographic, employing “highly personalized accounts that draw upon the experience of the author/researcher for the purposes of extending sociological understanding” (Sparkes 2000:21).

i-15

Like A/r/tography, autoethnographies are “part of a new writing imagination that is based on movement, complexity, knowing and not knowing, and being and not being exposed” (Wall 2008:41), that seeks to overcome the concept of researcher as “contaminant” (Wall 2006:2; Kreiger 1991:47). Sparkes suggests authors are presumed to be veritable “Victorian children – seen, but not heard” (2000:22), but “...authors never can choose to vanish completely from their texts; they can only pick the disguise in which they will appear” (Golden-Biddle & Locke 1997:72-73).

i-16

Auto-ethnographic accounts remain outside of the criterion of ‘impartiality’ required in academia, with scholars expressing anxieties about its credibility, such as Pelias (2000:372) quoting renowned anthropologist James Clifford’s (1997:88)¹ dismissal of autoethnographic research within his autoethnographic account of lecturing. But such rejection is founded in tradition rather than data, as the same methods resulting in the same data would be valid if presented by a third party (Sparkes (2000).

Footnote 1-Ruth Behar, in discussing Clifford (1986), notes the required shift towards subjectivity in the field of anthropology, so as to “reflect a more profound self-consciousness of the workings of power and the partialness of all truth, both in text and in the world” (Behar 1995:4).

i-17

Wall (2006) wonders if subject positioned methods such as autoethnography, are more philosophy than methodology, but again, this position presumes that methodologies are not founded in philosophies. Science methods, while cloaked in objectivity, view the world through the lens of human intention – generating from our subjective understanding - rather than through an existential element of what ‘is’. What science reveals is human perception of what is there, however, ‘it’ exists without scientific

knowledge. The knowledge of how to be exists innately within what exists. 'It' – the rock, the wind, the tree- doesn't have to theorise why, or how 'it' is. The theorising is done by us. Thus, science, and all other epistemologies, are about human understanding of what is, which is totally irrelevant to what is, until we apply what we know about what 'it' is, to make 'it' not be what 'it' is, such as converting forests into disposable napkins. The philosophy of knowing is subverted within the philosophy of manipulation, change, and exploitation. And so, given that all knowledge is founded in philosophies, this subject-positioned research stems from a philosophy recognising the validity of n=1.

i-18

How Creativity of Art is applied in the study

Art making provides a cognitive space seldom available in modern Western society. It is a space of quiet application, occupied with purpose, but during production modes, potentially repetitive and cognitively undemanding. This space, scheduled during this research twice a day, allowed thoughts and questions to surface, emerging through the noise of occupied life to illuminate aspects of the familiar that shift to become incongruous.

i-20

The application of art as pedagogical method is increasingly recognised for its ability to inject new knowledge into traditional epistemology (Barone & Eisner 1997; 2011; Cahnmann-Taylor & Siegesmund 2008b; Eisner 1997; 2003; Irwin 2003; Irwin & O'Donoghue 2012; Lampert 2006; Leavy 2009; Milech 2006; Robinson 2008; Sinner et al. 2006; Sullivan 2010). It was applied in this study for three key reasons.

i-21

Firstly, art-making/creative process inherently converge objects and ideas - categorised as 'problem generation' (Getzels & Csikszentmihalyi 1976). To generate 'problems' requires the generation of possibilities, triggering connections between both evident and obscure facets of the issue at hand. But creative processes go beyond producing relationships. They employ a critical reflexivity, that when well applied, identifies what is actually present, warts and all.

i-22

Secondly, immersion in creativity is a sub-liminal mental realm, noted in this research as 'sagasuation' (see definition dot D). fMRI scans confirm the brain is more active and

integrated during creative daydreaming than focused concentration (Christoff et al. 2009; Jung-Beeman et al. 2004). The empirical data supporting the value of this form of cognition proposes Newton wasn't just lazing under the 'apocryphal' apple tree! The history of great science is peppered with 'Eureka' moments occurring in apparently non-productive, dreamlike states.

i-23

Thirdly, artforms communicate through metaphor, an inherently inter-related mode of understanding, where one element, or symbol is comprehended in terms of another (Balkema 2004; Barone 2008; Barone & Eisner 1997; 2011; Barrett 2007a; Bindeman 1998; Busch 2009; Davidson 2012; Eisner 1997; Greenfield 2008; Hannula 2004; Haseman 2006; Hunter et al. 2002; Irwin 2004; Irwin et al. 2006; Koestler 1964; Leavy 2009; Martin & Booth 2006; Pakes 2004; Perkins 1989; Reimer & Smith 1992; Springgay, Irwin & Wilson Kind 2005; Spurling 2004; Sullivan 2010). This opens a distinctive kind of knowledge not available in other domains (Bal 2003; Balkema 2004; Barrett 2007b; Bickel 2006; Burrows 2006; Cahnmann-Taylor & Siegesmund 2008a; Candlin 2000; Eisner 1997; Groppel-Wegener 2004; Hannula 2004; Haseman 2006; Irwin & Springgay 2008b; Martin & Booth 2006; Mc Niff 2007; Rubidge 2005; Siegesmund & Cahnmann-Taylor 2008; Springgay, Irwin & Wilson Kind 2005; Sullivan 2010).

i-24

The questions arising from within such cognitive states were harnessed as the "epistemological engine" (Maharaj 2002; in Slager 2004) powering motivations to enquire, and were recorded as journal entries. The recording and correlating of thought processes and the development of concepts that occurred during art-making practices enabled themes to become apparent. Those themes inspired further queries and questions, themselves the foundations of further research of both material and theory. This research bore relevance to the artworks being created, if only through emerging from the same source during the art-making process. The refined themes and theories generated both artworks and academic essays and papers, themselves 'dots' of knowledge, though possibly appearing entirely unrelated.

i-25

Alongside these journal notes, (see method dot m34 and results dot R11 for further discussion of the period and the purpose of this data) extrinsic and intrinsic factors possibly relevant to the space of emergence were recorded into a database. Elements

such as light levels, emotional states, and length of periods within immersion allow for expanded interpretations of the journaled entries.

i-26

The research exposed the variety of intellectual investigations that occur during the development of conceptual art, and considered a method of presenting overviews of interdisciplinary concepts in a manner that engages through the open lexicon of visual metaphor to invite wonder and enquiry.

i-27

Each of the 262 journal entries annotated during this research (13/3/09-6/10/12), when combined with other data such as the 24 exhibited artworks produced, are themselves traces of the journeys they generated - pedagogical journeys, artistic journeys, and heuristically subjective journeys. The remains of these journeys, collated and cached, lie as souvenirs within this research presentation, tokens in text trickling from journaled concepts, elements in art, complete and exhibited, as both data and report, and journeys mapped and graphed, allowing reader interpretation and engagement.

i-28

The journeys congealed into themes, chiefly around epistemological developments and sociological themes, illustrating the potential for extrinsic influence upon ideation. This became patently clear through entries journaled during, and subsequent to, the death of my beloved partner.

i-29

The presentation of this research proffers the knowledge generated throughout this research as 'dots' of knowledge, in a manner sympathetic with the theory of the inter-relatedness of knowledge. The knowledge has been reported both visually, as artworks, and reservedly, textually as essays and exegesis. Each section of text, complete in and of itself, is presented as an actual dot in an interactive image, revealed by touch. These dots (of text) bear relevance to each other through proximity and colour, allowing for a non-linear, and multi-valenced reading of the knowledge contained. This presentation method metaphorically explores possible roles new technology will play in the development of knowledge over the coming years, and, importantly, integrates the thesis' theory into the thesis by using patterns to extrapolate meaning -joining academic 'dots' of concepts and knowledge, isolated inside their own realm, but bearing relationship with, and drawing relevance from other knowledge - it is literally a thesis that joins our own dots.

It is important to note that few chapters in this exegesis conform to pedagogical etiquette of traditionally structured text. As has been stated, part of this thesis' knowledge generation occurs within the mind of the viewer/reader. The process of limiting the knowledge capable of being generated by this research through the application of didactic text is discussed at length (see dot XT1). Suffice it to say, that didactic representation of the assumed knowledge generated within this study won't be limited to methods the study is critical of. I acknowledge that elucidation of methods employed in the study are paramount in replicability and expansion of the concepts explored. Given that the research resides within the academic paradigm, the processes, their theoretical foundations, extrinsic and intrinsic influences, and motivations, are expressed in, among a variety of means, the standard academic format.

"By writing in different ways, we discover new aspects of our topic and our relationship to it" (Richardson 1994:516). It is this 'writing in different ways' that is central to this research, as these 'different ways' enable a re-envisioning of existing knowledge into new contexts.

Summary

The method employed in this research is entirely experimental, undirected and chiefly heuristic. A fusion of research methods - A/r/tography, auto-ethnography, action research - integrated, stochastic in its hermeneutic phenomenological methodology, with multiple media simultaneously applied, including the production of text – this text, journey text - questions and learnings integrated, evolving, rhizomatic. The method is "an ongoing process of art making in any art form and writing, not separate or illustrative of each other, but interconnected and woven through each other to create addition and/or enhanced meanings" (Sinner et al. 2006: 1224).

The process still journeys, art to idea, idea to art, stimulating both research through theory, and research through practice, splitting into journeys of a; topic, b;

environment, and c; technical skills. The resultant knowledge - responsive, evocative, provocational, and collaborative - stems from journeys to the edge, the edge of self, the edge of society, the edge of knowing. Such journeys of shifting perspectives become re-views from the margins of social perspectives, finding links through the retrospective view.

i-35

How different they are to the habitual perspectives of the econo/political theorists, emerging from the pea and thimble tricks of 'Collateralized Debt Obligations/Constant Proportion Debt Obligations' (see *Bathurst Regional Council v Local Government Financial Services Pty Ltd* (no5) [2012] FCA 1200 2012; *Wingecarribee Shire Council v Lehman Brothers Australia Ltd (in Liq)* [2012] FCA 1028 RARES J 2012), where the only path 'visible' is the one upon which their concepts crashed. Perspectives devoid of the "re-searching [of] the[ir] world [and failing to] enhance understanding" (Irwin et al. 2006:70; parenthesis added).

i-36

This research demonstrates its situational validity through both the annotated journey and the view from the current terminus. It "makes available a distinctive kind of knowledge not available in other domains and inaccessible to other (more traditional) modes of enquiry" (Pakes 2004).

i-37

Chapter 2

Literature review

Introduction

If literature reviews are the “mapping of a field of knowledge production”(Kamler & Thompson 2006:2), interdisciplinary literature reviews may become more outrageously large than the fabled 1:1 'Empire Map' (Baudrillard 1981) of the 15th century Borgias. The spread of such meta-analysis becomes organic, growing exponentially, becoming “unmanageable” (Milech 2006) and potentially overwhelming the concepts that initially fed them.

L-2

To manage the unmanageable, (*Google Scholar* returning more than 1,180,000 publications on creativity alone), and avoid Delamont and colleague's suggestion to “be boring” (2004), this chapter reviews fields directly related to two foundational elements of this research, namely creativity and Art-based methodologies. Methodologically, the review of these fields reflects the organic pedagogical nature of this research, starting from ignorance, growing through citation and cross-disciplinary ‘discovery’. Other literature reviews have been conducted during this research, entwined within the development of concepts emerging from the data generated within this study, (covering fields such as the psychology of social narrative structures, the appropriation of Indigenous epistemology, and even the entropy rates of contemporary materials), and are included only in the papers they generated. As the literature search constituted a large element of the project's research outcome it is necessary to be comprehensive in reviewing the literature explored.

L-3

The review of these two areas has forked into four key branches;

- Creativity, its source and facilitation; (search over 242 publications; keywords; creativity, scenario, visual literacy, gestalt/isomorphism).
- A sub-branch of creativity – non-conscious thought, referred to in this research as ‘sagasuation’, its neurological foundations, its manifestations and psychological theories. (search; 119 publications: Keywords –see term list in dot L71).

- A general review of creativity as pedagogy. (search; 147 publications: keywords; creative pedagogy, play as pedagogy, creative methodologies, art transference)
- Methodologies employed in art based research, focusing on A/r/tography, (search 145 publications; keywords A/r/tography, art-based research, practice-based research, art-based Ph.D. art-based methodology)

L-4

While each of these topics could be thesis in their own right, they methodologically ground this research, generated outside of the academic norm, but within the academic model.

L-5

Creativity, its sources and Facilitation.

What is Creativity?

Art, by its very nature draws upon creative motivations rising from unconventional headwaters, where streams of conscious and sub-conscious thought (referred to in this exegesis as *sagasuation* – see definition dot D) meet in a confluence of knowledge, creative thinking, and motivation. It is these unconventional headwaters that beget the questions driving creativity research; what is this “protean, amorphous” (Robinson 2010) cognition labeled creativity? From where does it stem? And what methods have been described that can facilitate its application?

L-7

This section provides a broad review of the research models and theoretical foundations of creativity research, rather than a detailed overview (see Batey & Furnham 2006; Adams 1985; Nelson 2005). It considers creativity research, methodologically divided between empirical measurements versus descriptive criteria (Kozbelt, Beghetto & Runco 2010; Bindeman 1998). Within these two broad categories reside further distinctions, such as ‘process’, or ‘product’ basis for identification, and methodological distinctions ranging from psychometrics to phenomenology, and recently, neurology.

L-8

Definitions of creativity

Despite creativity having been expressed from the earliest of cultural records, researchers, lost in semantic rhetoric since the time of Socrates (Klausen 2010), have struggled to clearly define the complex multi-faceted cognition, dynamically influenced by context and personal characteristics, that is simply labeled 'creativity'. The nearest to a consensus, itself fractured in arguments of Eurocentricity (Eysenck 1993b; Lubart 1999; Batey & Furnham 2006; Kuo 1996; Torrance 1995), sexism (Baer & Kaufman 2006b), and product focus (Beghetto & Kaufman 2006; Klausen 2010), defines creativity as the production of something both novel and useful (Poincaré 1913; Stein & Heinze 1960; Mednick 1962; Ghiselin 1963; Csikszentmihalyi 1996; Amabile 1995;1998; Runco 2005; Mumford & Simonton 1997; Feist 1998; Sternberg & Lubart 1999; Martindale 1999; Hennessey & Amabile 2010; Boden 1990/2004; 1993; 1995; see also Spearman's 1923 definition of intelligence). This is further complicated by categorisations of usefulness, "improbable and impossible" creativity (Boden 2004), and the argument that novelty and usefulness can be mutually exclusive (Kilgour & Koslow 2009). Creativity has also been defined as "the highest application of intelligence" (Gardner 1983; see also Cropley 1969), while other research distances creativity from intelligence (Eysenck 1993). Considering the complex cognitive operations that emerge as creativity, a spectrum of "definitions, conceptualizations, domains, disciplines" (Kozbelt, Beghetto & Runco 2010:21; see also Batey & Furnham 2006) is inevitable, and as such, there is no single model able to tie down a definition, let alone its sources, or facilitation (Batey & Furnham 2006). (For a substantial discussion on definition of creativity refer to Neilsen et al. 2008; Plucker et al. 2004). What has been clearly enunciated, however, are characteristics of highly creative individuals.

L-10

Characteristics of Creativity

While suitable definitions may be elusive, there are a number of characteristics identified by researchers as common amongst highly creative individuals. Identification of these characteristics emanate chiefly from psychometric studies, with methodologies ranging from biographical/historical through phenomenology to psychology.

L-12

Traditionally, creativity was correlated with intelligence. Early psychometrics such as IQ tests (Binet/Simon 1905; Terman 1916/1947) set research parameters. While Batey & Furnham (2006), seeing creativity as a human trait, align it with IQ research, such narrow concepts of intelligence, while undoubtedly an important element, does not in itself, spawn creativity (Eysenck 1993; see also Albert & Runco 1999). This “complex relationship between IQ and creativity” (Baer & Kaufman 2006:15) resulted in the broadening of definitions of intelligence (Gardner 1983/1999; Sternberg 1985).

L-13

One key characteristic identified in the creative process is the generation of problems. Getzels and Csikszentmihalyi's (1976) seminal study of art students posits creativity as founded in 'problem finding' (see also Poincaré 1913; Arlin 1975, 1977; Getzels & Csikszentmihalyi 1971; Getzels & Jackson 1963; Policastro & Gardner 1999), which was the identification of potential relationships within pre-existing elements. Greater identification of possibilities directly correlated with ratings of creativity and longitudinal success as a creative individual.

L-14

Another, and perhaps the, key research marker of creativity is novelty of thought, described as 'divergent thinking' - a preparedness to disagree, independence of judgment, to contemplate outside of the mainstream or *status quo* (see Guilford 1959; Wallach & Krogan 1965; Eysenck 1993; 1995; Amabile 1992; Barron & Harrington 1981, see also Definition dot). This aspect, once identified, has been the foundation for many psychometric tests of creativity (e.g. Guilford 1954; Wallach & Krogan 1965; Getzels & Csikszentmihalyi 1974; Torrance 1974), and is still employed in the *Torrance Test of Creative Thinking* (Torrance 1974), which measure and rate originality, flexibility, fluency, and expatiation of responses.

L-15

While Runco & Acar (2012) support the validity of 'divergent thinking' test, Eysenck, among others, noted “deep-seated misgivings” (1993:147; see also Torrance 1995) about the measurements in these tests. Other scholars argues they may not be identifying 'divergent thinkers', rather, individuals with a desire to rebel against dominant thinking (Brower 1999), be unconventional (Woody & Claridge 1977), or provide a 'taboo response' (Rawlings & Toogood 1997). They conflate types of thinking

(Baer 2011), and may just “measure a kind of memory retrieval process where the less frequent responses are highly valued” (Tijus 1988:169; see also Baer 2011).

L-16

(NOTE: I too have trouble with the idea of *divergent* thinking being correlated with ‘problem finding’. It is reasonable to argue the inverse, that cognitively, ‘problem finding’ is *convergent* thinking (Barron & Harrington 1981) as it correlates and links. In fact, the only aspect of ‘problem finding’ that is *divergent* is its divergence from the “learned industriousness” (Eisenberger 1998) of the ‘*authodoxy*’. (I use the word as a convergence, despite etymological roots - *the authorised orthodoxy*). A deconstructive reading of the term *divergent thinking* illustrates more about the ‘grand unifying’ mindset of the researchers, than it does about creativity.)

L-17

Regardless of testing, the identification/generation of problems/possibilities, while lying at creativity’s root, is not in itself enough to be creative, but needs to be combined with other characteristics and skill sets identified as common by researchers. Nelson’s meta-analysis has found that an “openness to experiences consistently emerges as having a positive relationship with creativity measures” (Nelson, 2005:16, see also McCrae & Costa 1997; Eysenck 1993; Amabile 1998; Feist 1998; Simonton 2000). Other attributes include; high valuation of aesthetic qualities, broad interests, risk-taking, attraction to complexity, high energy, intuition, autonomy, and the ability to accommodate and resolve antinomies (Simonton 2000; Cropley 1990; Cox 1926). Drawing from Getzels & Csikszentmihalyi’s (1976) psychometric study, it appears the ‘creative’ individual fits the stereotypical artist; “introspective, independent, imaginative and isolated from the community” (Ives 1977:38), and having high concerns for aesthetic values and low concerns for economic values. Many theorists argue that the key to creativity is “more than particular cognitive abilities”, it is “perseverance bordering on obsession” (Nakamura & Csikszentmihalyi 2002:258; see also Csikszentmihalyi 1996;1999; Cox 1926 in Guilford 1950; Terman 1947). This obsessiveness is one of a number of traits explored psychologically by factor analysis.

L-18

Factor analysis models of personalities, such as Eysenck’s 3 factor model (1993), and Costa and Mc Crae’s (1992) ‘Big 5’ factor model, have replicated such isolated introspective (Ives 1977), and obsessive (Csikszentmihalyi & Nakamura 2002)

characteristics, suggesting a link between creative individuals and psychoticism (Gotz & Gotz 1979; Mc Crae & Costa 1987; Eysenck 1993), neuroticism (Barron 1972), and both (Booker Fearn & Francis 2001; Wills 1984¹; Relevski 1999). Eysenck (1993:23), while correlating an "over-inclusive thinking style - the extension of boundaries of relevance -" with psychoticism, notes that "(w)hile this can result in creative cognition through unusual association, it is also a major component of psychotic thought disorder." But these, and other factors identified as aspects of psychoticism may, as Osche (1990) suggests, be more a manifestation of social independence.

Footnote 1; Both Booker Fearn & Francis (2001) and Wills (1984) conducted their research with musicians, (Irish – Booker etc. & UK - Wills) which influences interpretation –see dot L20.

L-19

Intriguingly, these characteristics apparently vary between forms of creativity, with some argument that artistic creators are more neurotic than scientific creators (Cattell 1963; Russ 1993; Sheldon 1994; see Feist 1991, Gardner 1997; Chavez-Eakle et al. 2006; Ghadirian et al. 2001 for alternate views), and performing artists being nearer neuroticism than visual artists (Eysenck 1992, in Nelson 2005; see also Booker, Fearn & Francis 2001; Wills 1984). These variations however, are apparently cross-cultural with results being repeated in China and India (Hu & Gong 1990; Mohan & Tiwana 1987, in Nelson 2005:27; see also Kaufmann & Sternberg 2006).

L-20

Many of the recognised characteristics of creativity, such as the ability to accommodate and resolve antinomies, correlate with characteristics identified as wisdom. "Wisdom is found in the interaction of the cognitive, affective and behavioural domains that allow this knowledge to form in the first place, and then the judgment about it to be evidenced" (Bassett 2006:298). Sternberg (2001) recognises wisdom comprehends the 'common good', a cognition that requires toleration, or even the embracing of ambiguity (Sternberg 1990). "To achieve this kind of judgment Kramer (1990) proposes using alternative modes of representation. As Cook-Greuter (2000) and Pascual-Leone (1990) seem to suggest these modes can include imagery, art and metaphor, along with meditation and spiritual practice." (Bassett 2006:299; see also Baltes & Staudinger 1993; Sternberg 1990; 2001; Sternberg & Jordan 2005; Csikszentmihalyi 1990; Stein & Toomey 2001). This is in no-way suggesting that creative individuals manage the "fine-

tuned coordination of cognition, motivation, and emotion" (Baltes & Staudinger 1993:76) that is the expression of wisdom, only the overlap in classification of characteristics.

L-21

It is interesting to note how creativity is presented as 'abnormal', rather than 'extraordinary'. For example, Eysenck's view of over-inclusiveness, Woody & Claridge's (1977) "uncontrollable impairment", Necka's (1999, in Hennessey & Amabile 2010) linking of creativity with impairment in concentration (see also Groborex & Necka 2003 in Hennessey & Amabile 2010), and Chakravarty arguing for "cognitive control"; (Chakravarty 2010), all build upon the Lombroso's (1891) concept of the 'creative' as an abnormal 'degenerate'. Relevski, (1999: vi) sums the situation up, "(i)t seems as though the characteristics closest to insanity are precisely those that seem most important to outstanding creativity". However, these perceptions of 'normality' may be the views of atomistic, reductionalist mind-sets seeing their own mindset as natural. (See Sternberg 2001 for discussion of values inherent in topic selection). Contrarily though, creativity's adaption skills, founded in the openness described earlier, have also been linked to well-being (Cropley 1990; see also Csikszentmihalyi 1997).

L-22

The Factor models view creativity as an innate human trait and, according to Eysenck (1993), among others, may exist autonomously of attested creative behaviour. But creativity has been further defined to consider "eminent" (Runco & Richards 1997) - culture shifting creativity.

L-23

The Product debate

The level of 'innateness' of creativity has generated a definitional schism along two definitional lines - creativity as a common human trait, or the application of a skill set to produce a socially recognised creative 'product' - as indicators of creativity. These titles effectively assess creativity as either a process, or a product of that process.

L-25

The definitional shift in assessment of creativity towards a form of verificationism

(Klausen 2010) has many titles; small 'c' and 'Big C' creativity (Csikszentmihalyi 1996), 'everyday', and 'eminent' creativity (Runco & Richards 1997), "P"(Personal) and "H"(Historical), (Boden 2004), 'Primary' and 'Secondary' creativity (Maslow 1967), and 'trait' and 'achievement' creativity (Eysenck 1993). Eysenck distinguishes these clearly, expressing 'trait' creativity as being a characteristic that is "normally distributed across the general population, akin to intelligence, or dimensions of normal personality" (Eysenck 1995, for alternative see Feldman et al. 1994). 'Achievement' creativity assesses the result (product) of an individual's creativity affect on the social outlook or structure (see also Sternberg 1996:43), and was assumed to be the only creativity in early creativity research (Albert & Runco 1999:27). Batey & Furnham observed the process "tr(ies) to specify the attributes of products that lead to a person being labeled as creative (e.g., Sternberg, Kaufman & Pretz 2002)" (Batey & Furnham 2006:358).

L-26

Csikszentmihalyi argues the need for product assessment reasoning that novelty of thought is only one element of creativity. He pointed out that "(n)ovelty . . . is like evolution", (Psychology Today 1999:59) in that only a few novel ideas will survive. Eysenck agrees, noting that psychotic responses, while original, are not creative (see also Feist 1998; Sternberg 1999; 1985).

L-27

Although these views carry validity, they don't deal with the inherent flaws in what Runco and colleagues describes as "extremely product oriented, external assessment criteria" (Runco et al. 2005:616). Beghetto and Kaufman (2007), Runco (2005), Klausen (2010), and Moran, John-Steiner & Sawyer (2003) are all perturbed with such criteria's over-emphasising of "fossilized" outcomes, and minimising the dynamic process. Malsow (1963), before these classifications were even proposed, warned that a product focus would fail to recognise genuine creativity, or that of a child. Even "Big/small c" creator Mihalyi Csikszentmihalyi (1996) recognised such flaws, noting J.S. Bach periodically failed this creative classification. The seeking of external acceptance also conflicts with Amabile's (1985) evidence of the negative impact of extrinsic influences on creativity (see also Beittel 1972; Hennessey & Amabile 1998; see Eisenberger and Cameron 1998 for alternative view). Ironically, the product classification also fails to recognise the act of creativity inherent in the subjective definitions of creativity. As Giambattista Vico declared (1744, quoted in Said E. 1978:5, see also Onians 2008), people can only recognise that which is familiar. Baer & Kaufman (2006b) question the

disparate lack of women assessed as eminently creative, despite scoring similar, if not higher than men on most creativity tests.

L-28

Creativity inherently resides outside the conceptual vocabulary of the society in which it is generated. The further outside that vocabulary it is, the more difficulty the society has comprehending it. Nobel laureate Max Planck famously remarked (cited in Eysenck 1993:162) "(a) new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it". So when assessed by the 'language of the day', it is inevitable that very original ideas are not identified and titled as 'creativity'.

L-29

Product focused classifications also conflate the temporality of creative processes. While each stage of production allows for new creative elements to be incorporated, few theorists credit that creative acts have inherently occurred prior to the decision to include the creative element into the production.

L-30

This focus on product may also illustrate cultural assumptions and perspectives, for example, the noted East/West variations in perceptual values of creativity, where Western views focus upon external products, while the traditional Eastern focus is internal self growth – (see Lubart 1999; Kaufman 2006). It may also be that the Western focus is on 'problem solving', rather than the more open conceptual and correlational capabilities of creativity. Does the Western focus on eminent/achievement creativity relate to a more psychotic cultural outlook? That idea is outside the gamut of this research, however it is interesting that Gotz & Gotz (1979b) found no correlation between Big 'C' creativity and originality (see also Relevski 1999; Fry 1999), finding a greater correlation with psychoticism.

L-31

For these reasons, Beghetto and Kaufman (2007) expanded the concepts with two further definitions – 'mini-c' creativity; "making room for the more subjective or personal (Runco 1996; 2004b), internal (Stein 1953), or mental or emotional (Vygotsky 1967/2004) forms of creativity" (Kozbelt, Beghetto & Runco 2010), and 'Pro-C' creativity, which seeks to differentiate professional from amateur creators.

L-32

Measuring Creativity

Theorists, throughout the twentieth century, have sought means of measuring the existence and processes involved in creativity. Measurements, or 'convenient scaling' (Sternberg & Lubart 1999), seek generalisable attributes that can be applied as either methods of production, or measures for comparison. To achieve these ends, a variety of measurement 'instruments' were developed.

L-34

Meyer (1990:449) has identified six major fields of creativity research, each with their own metric; psychometric (tests), psychological (factor analysis), biographical (case studies), biological (including neurological), computational (analogous software), and contextual (environmental), with these instruments applied to describe creativity's nature, make comparisons with non-creativity, and identify psychological factors within creativity. Within these six fields, both Hocevar and Bachelor (1989), and Lubart (1994), codified eight available metrics: (a) tests, such as divergent (e.g. Wallach & Krogan 1965), or convergent (e.g. Remote Association Tasks, Mednick 1962) thinking tests; (b) personality classifications, (e.g. Minnesota Multiphasic Personality Inventory); (c) cataloguing attitudes/interest; (d) biographical catalogues; (e) peer ratings (Consensual Assessment Technique, Amabile 1982); (f) product evaluation; (g) scales of eminence; and (h) subjective identification of creativity (e.g. Creative Self-Efficacy, Bandura 1977). As "creativity generally involves crossing the boundaries of domains," (Csikszentmihalyi 1996:9) researchers often apply various combinations of these assessments.

L-35

Many creativity tests have considerable reliability in regards to what the test measure (see Hélie & Sun 2010). However, while perceived as successful in IQ, psychometric's creativity metrics have never translated effectively into creativity research (Policastro & Gardner 1999). Terman's early studies failed to recognize the Nobel Prize winners in his cohort (Eysenck 1993b; see also Policastro & Gardner 1999; Kray et al. 2006 for critique). Sternberg & Lubart (1999) note concerns that psychometric tests don't adequately encompass creativity, and Glăveanu suggests the 'I' paradigm psychometrics from the 1950s-1980s are methodological reductionism (Glăveanu 2006:82). Despite identified gender differences in creative

outputs (Baer & Kaufman 2006), Batey & Furnham (2006) note that research has not effectively identified numerous variables such as age, sex, demographic and culture (see also Torrance 1995). Batey, (2012) has proposed a new matrix based measurement model that moves towards accounting to the complexity of creativity, and Urban, (2005) a non-psychometric creative thinking test utilizing drawing.

L-36

Despite expert assessment, creativity is a subjective phenomenon, and research methods have expanded to include phenomenological models. Phenomenology, as a method, emphasises rigorous description and understanding of the “whatness” of the psychological phenomena, rather than prediction and explanation (the why-ness). The changes in criteria led to the development of Biographical studies (Ghiselin 1952; Gardner 1994).

L-37

Recently, there have been neurological attempts to measure creativity, but this is more focused on neural location than existence. Modern neural imaging techniques are broadening creativity research, (see Flaherty 2005; Howard- Jones et al, 2005; Kounios et al, 2006; Christoff et al. 2009) with studies such as Jung-Beeman et al. (2004) documenting “insight” responses correlating with high frequency neural activity in the anterior temporal region of the brain, an area which is “associated with making connections across distantly related information during the process of comprehension” (Greenfield 2008:269).

L-38

Where does creativity emanate from?

While Karlyn Adams suggests “the only rule is that there are no, hard, fast rules concerning the source of creativity” (Adams, 2005:4), one thing is certain, the Greek perception of creativity as emerging from divine inspiration from the muse (Batey & Furnham, 2006) is not the source.

L-40

While ‘creatives’ have an intrinsic urge to create (Amabile 1985; 1992; 1995; Csikszentmihalyi 1996; Nakamura & Csikszentmihalyi 2002; Adams 2005), researchers took time to develop the urge to identify and annotate the process, and

establish a structure that could be developed and applied to define creative practices.

L-41

Shifts in creativity research illustrate historical/perceptual developments in Western conceptions (Batey & Furnham 2006) of creativity. Despite the importance to socio/economic structures, creativity - “humanity’s greatest resource” (Toynbee 1964) - was long considered the realm of the genius/artist (e.g. Galton, 1869; Cox, 1926 cited in Terman 1947; Maier 1930; 1931; Dunker, 1945), the conduit of the gods, a period noted by Glăveanu (2009) as the ‘*He*’ paradigm of genius. J.P. Guilford’s 1950 ‘call to arms’ speech at the American Psychological Association annual conference inspired a prioritising of creativity research, (militarily motivated; Guilford 1950; Razic 1967; Feldman et al. 1994; Glăveanu 2009) shifting the research perspective to what Glăveanu (2009) refers to as the individualistic, ‘*I*’ paradigm. The paradigm shifted again in the 1990s to the ‘*We*’ paradigm (Glăveanu 2009), refocusing studies to what Kasof (1995) described as “non-dispositional influences”, which “put the social back” (Hennessey 2003:184) into creativity, and developed definitions to that which is “constituted and influenced by, and (with) consequences for, a social context” (Westwood and Low 2003:236). This paradigmatic shift has subsequently expanded from sociological ‘*We*’ into the neurological ‘*We*’ (see Jung-Beeman 2004; Christoff et al. 2009; Ramachandran & Hirstein 1999; Ramachandran 2005; Jung et al. 2010).

L-42

Researchers have proposed a number of theoretical models regarding the processes involved in creative cognition and acts, that can be broadly grouped as evolution theories, confluences theories, and neurological theories, with substantial overlap between models.

L-43

Campbell ‘s (1960) *Chance Configuration Theory* proposes an evolutionary creativity of “blind” process. Despite being founded in random mutation -“chance” (Simonton 1988; Austin 1978) - this theory posits creativity as a process where the mutations build upon ancestral developments. The theory considers processes of evaluation and retention of the concepts deemed valuable. Simonton’s “Creative Darwinism” (1999) builds upon Campbell’s theory, focusing on time as a key component. Using historiometric analysis of creative greats, Simonton argues that time engaged in

practice produces both the technical knowledge/ability to be creative, and allows the emergence of the stochastic combinations that build upon themselves, “just as happens for genetic mutations and recombinations” (Simonton 1999:316). Eysenck (1993) supports Campbell’s theory with the proviso that the search is not random, but “always guided by explicit or implicit ideas of relevance” (Eysenck 1993:147). This theory has been criticised for undervaluing expertise, (Ericson 1999; Mumford 1999; Gabora 2007; Dasgupta 2004) assumptions of randomness (Russ 1999; Mumford 1999; Sternberg 1999) and being more dogma than science based (Sternberg 1999). Gardner (1999) was critical of the model implying it required conscious, or unconscious exploration of all possibilities in search of an optimal solution. My concern is that absolute randomness is inherently limited to elements already apprehended - “that what they can know is what they have made” (Vico 1744, in Said 1978:5).

L-44

Simonton (2012), endeavouring to overcome criticisms, reworked the “Creative Darwinism” theory as an algorithm of an idealised creative cognition process, unencumbered by habits of neuroplasticity (see dot L54). He proposes that the mind can simultaneously generate and test procedures, bringing to consciousness solutions nearest ‘unity’ (resolution). The algorithm seeks to model the processes of invention, citing Edison’s laborious search for a filament for the lightglobe. This model bears similarities with the ‘Geneplore’ model (Fink, Ward, & Smith 1992).

L-45

The second grouping, presented here is the ‘confluence’ models, which are the most preponderant, and are premised upon creativity being a conjunction of personality, cognitive skills and situational conditions. A number of theorists build upon Mednick’s (1962) associative concept of creativity (combinations of associative components), and Koestler’s (1964) “bisociation” of disparate, multi-planar thoughts, by expanding cognition to include domain knowledge/skills, and environment.

L-46

Amabile (1983; 1995) proposed a simple and elegant triumvirate of factors in her ‘Componential’ model. Creativity is the confluence of knowledge, creative thinking, and motivation (Amabile 1992), with motivation identified as a key criterion (see also Torrance 1995). Amabile also recognises the importance of technical/procedural

knowledge (see also Amabile 1998; Gardner 1994), a concept that corresponds with one element of Csikszentmihalyi's (1996) highly influential notions of 'flow'¹ - being a space where the challenge is marginally greater than the skill set, among other criteria.

Footnote 1; Csikszentmihalyi has documented the elements commonly expressed by creative individuals as part of 'flow', "and the descriptions do not vary much by culture, gender or age" (Csikszentmihalyi, 1997b:11). These elements are;

- "1. There are clear goals every step of the way.
2. There is immediate feedback to one's actions.
3. There is a balance between challenges and skills.
4. Action and awareness merged.
5. Distractions are excluded from consciousness.
6. There is no worry of failure.
7. Self-consciousness disappears.
8. The sense of time becomes distorted.
9. The activity becomes an end in itself".

L-47

Csikszentmihalyi's influential 'system' approach places creativity as a "synergy of many sources" (Csikszentmihalyi 1996b:1); an individual's cognitions, skillful operation in a domain, and field of experts assessment - where "in the last analysis, be seen not as something happening within a person but in a relationship of system" (Csikszentmihalyi 1996:36). Within this structure, the assessment by the field of experts distinguishes "Big C" – culturally acknowledged creativity - from "small c" - personal creativity. This distinction is explored later. (See also Kaufman & Baer 2005).

L-48

Weisberg (1999; 2006), uses Hayes' (1989; in Weisberg 1999; see also Gardner 1999) 'ten year rule' as a cornerstone for his "foundation view". This theory argues creativity convergently builds upon knowledge, rather than being in tension with it. This inter-relationship of post-facto, ordinary neurological processing aligns with this thesis' view that creativity converges knowledge in new and unexpected ways (convergent is again used here counter to the dominant definition of converging with the common, see dot L17). But then, it is hard to argue that creativity is not built upon accumulated knowledge without entering the genius paradigm.

L-49

Sternberg & Lubart's 'investment theory' proposes 'creatives' "buy low and sell high" (1999:10), "convert(ing) differences into advantages" (Policastro & Gardner 1999:223), with creativity occurring in a confluence of cognitive skills; synthetic (fresh perceptions), analytical (evaluative), and, being a product oriented theory, communicative (ability to convince).

L-50

Within the third group, the neurological model, is psychologist Colin Martindale's 'cortical arousal theory', a complex neural-network theory that argues defocused attention to stimuli, - a property of primary-process cognition (i.e., free associative, autistic, and focused on the tangible such as day dreaming/reverie, rather than the abstract concepts of secondary process cognition) spreads attention broadly, increasing conceptual associations (see also Kris 1952; Mednick 1962; Martindale & Hines 1975; Martindale & Hasenfus 1978). As such, "(t)he range of relevant concepts widens and the potential for creative insight increases" (Stokes 2007:89/90). This concept is not dissimilar to Eysenck's (1993) "overinclusiveness". However, Eysenck notes a "paradox, . . . or perhaps even an anomaly" (Eysenck 1993:169/170) in Martindale's 'incorrect' classification of cognitive and behavioural dis-inhibition as being introversions, rather than extroversions.

L-51

Creativity stemming from survival mechanisms is one of the most significant conjectures, but is an interesting neurological theory to have emerged in recent studies. Ramachandran & Hirstein, (1999; see also Ramachandran 2004) propose that creativity, specifically visual art, may be a game utilizing primordial 'pattern recognition' skills, and thus instinctual. It is argued that these highly developed skills provided extra time for 'fight or flight' assessments based only on elements, or visual clues, and extrapolated and connected to pre-existing knowledge to identify the whole. It is speculated that these perceptions of relational knowledges allow contemporary humans to play creative games, seeking out associative relationships.

L-52

Neurological scanning technology has lead to new speculations about the sources of creativity. For example, Jung et al. (2010) propose "a possible interpretation of [their] findings is that the generation of novel, original ideas is associated with less cortical

thickness within frontal and (certain) posterior cortical regions, requiring higher functional activation to initiate cognitive control" (Jung et. al. 2010:404, second parenthesis in original). While also noting that "a construct as complex as creativity will never be "localized" in the brain" (Ibid:400), the authors do not clearly address temporal delays between the EEG scans and subjective assessment of activity as creative, which is inevitably *post facto*, which may interfere with interpretations of their results. Christoff et al. (2011) propose creative thought to uniquely involve three distinct neural regions, the 'conscious, goal directed' lateral Pre-Frontal Cortex, the 'default network' through the midline of the brain ("the medial prefrontal cortex, the anterior and posterior cingulate cortices, the precuneus and the posterior parietal lobule" Christoff et al. 2011:265), and the Temporal Lobes of memory. (See Christoff et al. 2011:266-9 for more extensive review of potential neurological locations of creativity).

L-53

Albert & Runco (1999) propose environmental factors are the most important elements in 'eminent' creativity, but these factors may also be neurologically based. Contemporary neuroplasticity research (e.g. Maguire et al. 1996; Immordino-Yang 2007; see Stokes 2007; Doige 2010 for a generalist overview) argues that the environment - "developmental and family influences" (Albert & Runco, 1999) – govern, and/or generate, neuronal/synaptic structures (see Greenfield's 2008 'enriched environment' discussion).

L-54

Creativity as computer programme analogy is the last theoretical model. Newell, Shaw and Simon (1962) generated computer simulations of mathematical and chess creative thinking. Boden (1990) developed both theory and technology, proposing, and demonstrating (in musical, drawing and mathematical examples) meaningful 'creative' capabilities of computers using information search and evaluation. Considering the afore-mentioned research linking creativity with "insanity", this research domain begs the question – 'do we need to build insane machines, HAL?

L-55

Finally, a philosophical view of creativity, that throws light upon some of the perceptual assumptions residing within much creativity research. Bindeman sees the "frustration or inner tension that arises between the artistic subjective consciousness and its impossible desire to dominate its object (as being) the engine that drives the

entire creative process" (Bindeman 1998:73). The tension Bindeman refers to, resides within the complexity of the translation process - the space between the subjective desire within the concept, and its emergence as objective construct. This process could be described as 'lost in translation', an important, if complex, notion seldom represented within discussion of creativity. This analogy inherently acknowledges two 'creativities', commonly conflated in creativity research; the creative concept, and the translation process. This translation process, the unrecognised foundation of 'product' oriented views of creativity, as in all translation processes, loses implicit detail and complexity, while the concept, clothed in new semiotics is dressed with new meaning.

L-56

Facilitating Creativity

The development of systematic creative process was effectively first proposed by the physiologist, Hermann von Helmholtz (1891; in Wallas 1926), who described a three-stage model for creative thought. Wallas (1926) expanded this concept to four stages - *Preparation, Incubation, Illumination, and Verification*. Wallas' model has becoming the foundation of all subsequent models (Torrance 1988), with researchers adding or discarding steps as desired. Osborne (1953) and Koberg & Bagnell (1981) have seven stage models, expanding the preparation phases. Bandrowski (1985, in Plsek, 1996), and Barron's (1988) *Psychic Creation Model*, have five stages, adding an action stage, while Fritz's (1991), eight-stage model emphasises the importance of problem identification in ways similar to social change methods proposed by Prochaska et al. (1992; 2001). High profile methods, such as de Bono's "Six Hats" (2000), and Osborne's "brainstorming" (1953; see Lindgren & Lindgren 1965; Nisjadt et al. 2006, for critique; see Coskun 2005, for re-appraisal), applying similar structures, have expanded the awareness of the methods into the general community.

L-58

Creativity facilitation methods can be placed upon a continuum between two general categories; sociological/pedagogical purposes, and commercial purposes. Sociologically focused models are applied in the creative arts, and self help programmes (e.g. Cameron 1992, *The Artist's Way*; Partners for Youth Empowerment U.K. - *Creative Community Model*, 2011). The commercial models are applied in lineal, problem-based, economic frameworks, seeking "quality improvement, strategic planning, (and) reengineering"

(Plsek 1996:1), and have generated the field of scenario development.

L-59

Scenarios are about possible futures, rather than predictions (Godet & Roubelat 1996; Van der Heijden 1996; Peterson 2003; Shoemaker 1995; Van der Heijden et al. 2002; Van Notten 2005). Much of the scenario generation literature is founded in economics (Shoemaker 1995), and like other fields of creativity, there is little awareness/acknowledgement of other research paradigms. Being competitively business focused may contribute to this field's apparent xenophobia. For example, many theorists state the concept was a military matrix based system (DELPHi) developed by the RAND Corporation (Kahn & Wiener 1967 in Godet & Roubelat 1996; see Godet & Roubelat 1996, for alternative view), although J.W. Forrester developed a theory of *system dynamics* at MIT, that was used extensively by Meadows et al. (1972), in their *Limits to Growth* report to the Club of Rome.

L-60

While, Royal Dutch Shell is noted as one of the pioneers in the application of scenario planning in the mid seventies (Wack 1985; Peterson 2003), an argument can be made that Malthus applied the processes of scenario construction to identify the conflicts arising from over-population. Drawing upon historical knowledge of societal behaviour to project the likely outcomes of unrestrained "geometrical" growth, he applied psychological consideration (the acknowledgement that social responsibility to provide for one's own offspring dictate that marriage (procreation) should occur later in life), and even recognised the "difficulty in "prudential restraint" (Malthus IV:XIV:3).

L-61

Results from these formalized methods vary, with reliability often undermined by both data, and selective self-interest, to compromise any claim of universality. Nisjadt et al. (2006), in critiquing *Brainstorming*, argue that contrary to participant's own perceptions, group ideation is less than the sum of individual's combined ideation. Other research proposes external reward "has pervasive detrimental effects on intrinsic task interest and creativity" (Eisenberger & Cameron 1998:676 (while known for their criticism of this extrinsic argument, best expressed that claim); see supportive papers by Beittel 1972; Amabile 1985, 1998; Hennessey & Amabile 1998; 2010). This may be influenced by the psychological desire to please, described by Eisenberger & Cameron (1992) as "learned industriousness", which they argue, interferes with Amabile's (1998)

results. While I accept the foundation to the argument, I am less persuaded by their use of algorithmic, rather than the multi-review, subjective evaluation methods used by Amabile. After all, social perceptions of creativity are, by their very nature, subjective. Binnewies and Wörnlein (2011) illustrated the impact of this subjectiveness on creativity, showing the positive influence of 'Positive Affect' (enthusiasm, alertness, pleasure) pre-work on creative outputs.

L-62

Subjectivity is both foundation and flaw for these models. Foundationally, these methods allow time for subjective, creative concepts to emerge (Simonton 2000), but one ingredient – that of the permission to diverge and express subjective views - lies at the heart of all these models. To allow the 'brainstorm' (Osborne 1953), or the 'green hat of creativity' (de Bono 2000), permission to play is required, "contrary to the natural habits of recognition, judgment and criticism" (de Bono 2000:119; note the use of the term 'natural!'), so as to avoid "learned industrious" (Eisenberger & Cameron 1992) behavior. "(T)he result is that people who have never thought of themselves as creative start making a creative effort. Their confidence increases and soon they are as creative as anyone else" (de Bono 2000:115). These methods seek to release the inhibition of assessment, allowing the participants to wander into unknown, or even dangerous territory (see Mell et al. 2003; Miller et al. 2004 for discussion of dementia based loss of inhibition, and the effects upon creativity). The dis-inhibition effect noted by de Bono support the creativity as trait theory noted earlier.

L-63

The subjectivity flaw is, again, best illustrated in de Bono's six hats (1985/2000), where despite the apparent objectivity of the method, all the knowledge is eventually subjugated beneath the 'emotional' 'red hat' (de Bono 1985/2000:175; see also Loveridge 1995).

L-64

Subjectivity issues mean these methods have inherent political complications. Viewed within a de Certeauan (1984) perspective, the application of creativity by individuals - those of no 'proper' authorised *place* - is a *tactic* - a manoeuvre seeking fleeting power within the controlling space of authority. It is a claim of subjective power, "to promote self-esteem, motivation, social and emotional literacy, a sense of purpose" (PYE Creative Community Model 2012). These claims always conflict with

the *authodoxy* (see dot L17) - the “subject with will and power” (de Certeau 1984:36). The illustration of this conflict is important when seeking to place creativity within the currently controlled pedagogical paradigms, to be discussed shortly.

L-65

Despite concerns about the universal ‘problem solving’ applicability of these methods, they seek to codify cognitive practices of proven capabilities. Creative capacities are clearly expressed by humanity, and the application of these methods can, and does, increase the associative play that is creativity. Within that play emerge creative acts, which in some ways are similar to neurophysiological reflexes, relying on cognition below the level of awareness. This may appear as a mysterious process, but as Perkins (1981 in Plsek 1996) stresses, our inability to identify and label each stage doesn’t preclude our capacity to control the process. Wallas (1926) attempted that very task, resulting in his four-stage model of creative thought. Of the four stages proposed by Wallas, the second stage is of most importance to this research – that of *Incubation*.

L-66

‘Incubation’, and other Non-Conscious Creative Cognition research

Of creativity research generally, this study is primarily focused upon the creativity that generates within the non-conscious. This space covers a broadening range of sub-liminal neural activity (see Lewecky et al. 1992; Gardner 1984/1999; who expand non-conscious cognition, described in this thesis as ‘sagasuation’ (see dot D) beyond the parameters of this study), and has been variously described as either a wasteful dreamer space, or the sub-conscious realm of wisdom. From such cognitions have emerged inspired comprehensions, known as ‘insights’ - “a sudden, unpredictable, and non-verbalizable solution discovery” (Sio & Ormerod 2006:94), subsequent to an impasse (MacGregor et al. 2001; Seifert et al. 1995), in both sciences, and the arts. Materialising from un-known, but knowing cognitions, insight may quickly resolve a known, “*presented*” (Csikszentmihalyi, & Sawyer 1995), problem, or cogitate to “*discover*” (Ibid), and enlighten a previously unrecognised conundrum.

Early Western interest in non-conscious cognition was expressed by those with subjective experience of the ‘unconstructed’ emergence of inspiration. Poincaré, Hemholtz, Kekule¹, and Einstein², (see Orlet 2008; Csikszentmihalyi & Sawyer 1995, for eminent ‘creatives’ discussing the role of incubation within their practices), great scientist of their time, each referred to the nature of their inspirations having “never come . . . when at my working table” (Hemholtz, in Wallace 1926).

Footnote 1; All in Wallas 1926.

2; See Clarke 1971 *Einstein, The Life and Times*. New York: The World Publishing Company.

Traditionally, psychological research subsumed this creativity within day-dreaming, focusing on its psychoanalytic role to interpret and decode the psychological state that generated such thoughts, thus relegating the value of this cognitive process to one of illustrating flaws. But this incredibly complex cognition often subsumes both the process and the result, and binds together potentially many forms of unconscious neural processes. It is important then, to review a range of literature on insights from ‘spontaneous thought’, and their facilitation, so as to consider its role in integrating knowledge within this, and numerous other studies, and provide empirical support for its methodological application (see dot m21).

This section of will review 119 publications, using keywords ‘incubation’, and ‘pre-conscious thought’, which consider the debates about the existence of sub-liminal cognition, and then review the arguments proposing the root of process.

The waves of interest reflect much of the study of creativity, with interest burgeoning in the early twentieth century. Wallas (1926), building upon Hemholtz, and Poincaré’s foundations, described four stages of creative thought, a practice he notes as the *Art of Thinking*. Despite the author being an English snob, critical of those outside of his class, his holistic model considered many aspects of thought that lie outside of the American psychological considerations of creativity from the fifties onward. Wallas sees each of the four stages contributing to creative thought, but recognises the invaluable role of *Incubation*, noting the plethora of heuristic

examples quoted by great thinkers, such as Poincaré.

L-72

This understanding is noted by different names throughout the research, from 'incubation' (Wallas 1926), 'insight problem-solving' (Gilhooly & Murphy 2005), 'type 1 thinking' (Allen & Thomas 2011), 'primary process thinking' (McCrae & Costa 1997; Osche 1990), 'unconscious thought' (Dijksterhuis & Meurs 2006), 'spontaneous thought' (Christoff et al. 2011), 'unmodulated thought' (Sternberg & Lubart 1999), 'undermind' (Weinstein 1996; Claxton 1997), 'pre-conscious mental processes' (Kris 1950), 'non-conscious idea generation' (Snyder et al. 2004), 'accidental-informal thinking' (Loveridge 2008), 'intuition' (Claxton 1998), 'A-Ha moment' (Kounios & Beeman 2009; Ramachandran & Hirstein 1999), and Non Conscious Cognitive Processing (Jane & Campbell 2010).

L-73

To this list, I add the invented term 'sagasuation' - a cognitive soup that stews, seeps and simmers pre-existing 'knowings' in an unpredictable, and non-linear process that congeals into understanding, rather than progressing towards a solution (see dot D). It is required to fill a definitional hole in attempting to express this intangible cognition, as it describes a process that is non-linear, (i.e. not 'incubated' from conception to birth, see Koestler's (1964:164) criticism of Poincaré's mechanistic views), is not focused on solving identified problems, is not necessarily fast (Type 1 thinking, intuition), is unlikely to be accidental, describes the process rather than the result (Insight, A-ha), and is linguistically more aesthetic than phrases such as "non/pre conscious". It refers to non-goal directed cognition, open to serendipity.

Sagasuation is the brewing that leads to sagacious judgement.

L-74

Table 1 Similarities and differences across the mind-wandering- nonconscious thought process spectrum.

Mind wandering	Nonconscious
Similarities	
Below meta-cognition	Below meta-cognition
Associative neural process	Associative neural process
Combination of internal & external stimulus	Combination of internal & external stimulus
Intrinsically motivated	Intrinsically motivated
Differences	
Below meta-cognition	Below cognition
Emerges as narrative	Emerges as understanding/comprehension

L-75

"There is a conundrum in the behavioral manifestation of a cause that is, by definition, not discoverable by the individual and not presently objectively observable by neural imaging" (Ellwood et al. 2009:8; see also Orlet 2008; Kouider & Dehaene 2007). Within this conundrum lie relationships with the cognitive stillness sought in meditation, though sagasuation can, and does occur within an active mind. The ethereal nature of sagasuation is illustrated by the plethora of titles, which reveal the difficulty researchers have in tying down such an elusive concept, let alone designing and conducting research into it.

L-76

Beyond identification, a plethora of methodologies have been applied; psychological, neurological, a combination of both, and phenomenological, all in the quest to corral this mode of cognizance.

L-77

Research findings are, not surprisingly, heterogeneous with some studies clearly demonstrating its existence, and/or its effectiveness, while others either failing to identify anything, or producing data supporting conscious, rather than un/non-conscious, cognition. Methodological issues, such as absence of control groups (Sio & Ormerod 2009), subjective assessments (Orlet 2008), and varying cognitive load levels during sagasuation (Sio & Ormerod 2009), affect the consistency of results. Those that

have identified sagasuated cognitions propose a variety of potential causal factors and processes.

L-78

Existence of the sagasuation effect

While Wallas (1926), and Hélie & Sun (2010) recognised that both conscious and unconscious thought occur during this cognition, many other theories are more dichotomic.

L-80

“We are accustomed to speaking of “the” unconscious as though it were a psychical power. But the unconscious is no power-it is nothing at all. At best, one may call it a place where certain mental processes occur” (Arnheim 1972:287). Arnheim’s views are not isolated. To some researchers, it doesn’t exist at all. Wickelgren (1979), Robinson (2010), and Weisberg (2006) all dismiss this stage of creative cognition, basing their views on lack of hard data. (See also Browne & Cruse 1988; Olton & Johnson 1976; Perkins 1995 in Claxton 2006). Their questioning, apart from critiquing existing research, challenges the paradox of the intuitively apparent existence of non-conscious cognitive processing.

L-81

Weisberg (2006) cites a number of incubation studies (Olton & Johnson 1976; 1979; Brown & Cruse 1988) to support his assertion of lack of evidence. Having a history of challenging dominant creativity paradigms (see Weisberg 1999), he supports Brown & Cruse’s (1988) argument that incubation data results from participant’s conscious thought without the researcher’s knowing. This criticism assumes authoritative ‘inside’ knowledge of the thought processes of the participants, and is as speculative and lacking in hard data as the studies Weisberg dismisses.

L-82

Robinson (2010) is critical of the idea of ‘eureka/a-ha’ moments, suggesting these events, if not fictionalised by the creator (examples include, Coleridge’s account of his “Kublai Khan” poem [see Livingston Lowes’, 1927/1978, {not cited by Robinson}] remarkable sleuthing of the textual sources appropriated by Coleridge. See also Koestler’s review of Coleridge’s claims 1964:165], and Kekulé’s benzene dream), are built upon the earlier stage of Poincaré/Wallas’ creativity process- that of *Preparation*. Miller’s (2010), somewhat distracted critique of Robinson, fails to recognise Robinson’s

perceptual limitation. Robinson's presentation of ten 'eminent' creatives who didn't experience a 'eureka' moment, is reliant on 'product' focused creativity criteria. But his perceptual limitation, stemming from his linguistics background is best illustrated in his phrase "(f)ull writing . . . able to express any and all thought" (Robinson 2010:xxii). Thus, if it can't be written, it can't be thought. Beyond this, Robinson doesn't present enough evidence to dismiss the body of non-cognitive knowledge that the meta-analysis of Ellwood et al. (2009) and Sio & Ormerod (2009) present, discussed shortly.

L-83

Perruchet and Vinter's (2002) almost 'gestaltist' theory of "Self-Organising Consciousness" postulates that conscious elementary associative processes, where symbolic representations of problems also contain the solution, emerge as 'unconscious' thoughts. This is a computational "framework, in which the cognitive unconsciousness has no place" (Perruchet & Vinter 2002:299). (The theory appears based on Bak, Tang & Wiesenfeld's (1987) mathematical formula of associatively dynamic, spontaneous, 'chain reaction' through feedback loop processes - 'Self-Organising Criticality' (SOC) - though there is no reference to the theory, or citation of its authors.) This theory has some supporters (Bartolomeo & Dalla Barba 2002; Dulany 2002; Ellis 2002), with criticisms founded in the failure to utilise 'subliminal mere exposure' (SME) data (Bornstien 2002); levels of consciousness (Houde 2002); and failure to account for; motor skills (Keisler & Willingham 2002), biological evolution (Litman & Rebar 2002), and neuropsychological evidence (Lambert 2002). The authors base their theory in linguistic systems, however, other research posits that linguistics interfere with unconscious cognition.

L-84

Schooler, Ohlsson, & Brooks (1993) found that verbalizing cognitive processes, both during and after non-conscious cognition, impeded problem solving in comparison with those occupied in an unrelated activity. "(V)erbalization can result in the disruption of non-reportable processes that are critical to achieving insight solutions" (1993:166). The authors present emeritus thinkers arguing that non-linguistic thought resolves problems prior to linguistic expression, and argue that the processes are not translatable into words. Gilhooly and Murphy (2005) support this view, arguing that different types of cognition are applied to different types of insight problems; visual and linguistic. (See also Parisse & Cohen 2002).

L-85

One important combined neurological/psychological series of papers has instigated substantial evidence against the existence of the cognition. Dijksterhuis and Nordgren's (2006a; 2006b; 2006c), 'Unconscious Thought Theory' (UTT), asserts positive correlations between unconscious thought and complex decision-making, though re-tests have produced varying results. Warequier et al. (2009), found either no, or negative correlations between decisions and UTT, when re-running Dijksterhuis' experiments. Rey et al. (2009) also re-ran the experiments, finding no support for sagasuated thought, but noted improvement in the "immediate" response group over the "conscious" response group, suggesting apparent disadvantage of further conscious processing" (Rey 2009:372). Gonzalez-Vallejo (2008) argues that much research into Unconscious Thought Theory fails to acknowledge and incorporate cognitive psychological work in judgement and decision making, which undermines claims of superiority in UTT.

L-86

Queen & Hess (2009), while failing to find supportive evidence for UTT, (see also Zhong, Dijksterhuis & Galinsky 2008), did find support for the hypothesis that 'global' type decisions benefited from unconscious thought (see also Sio & Ormerod 2009). Their study found age related differences in conscious deliberation, though both cohorts performed positively in the 'intuitive' elements of the tests.

L-87

Posner's (1973: see also Smith & Blankenship 1991; Patrick 1935¹; Woodworth & Schlosberg 1954²) influential proposal that insight occurs because a break from conscious problem-solving cognition alleviates 'functional fixatedness' of mental fatigue, and re-energising problem solving, (see also Brown & Cruse 1988, see Ellwood et al. 2009: Sio & Ormerod 2009 for alternative evidence), can also be included as skeptical. While this theory considers cognitions, it doesn't totally preclude unconscious thought. Snyder et al. (2004) sought to test Posner's (1973) concept, now known as 'recovery from fatigue', by using surprise. Their surprise led respondents to assume the test, including a complex distraction task, was complete before further responses were sought. The researchers found little evidence of Posner's theory, as "(b)oth the number and the pattern of responses, especially the burst of new ideas produced after the break, indicate that solutions for an original problem may continue to be generated" (Snyder et al. 2004:1328).

Footnote 1; in Orlet, 2008.

2; in Stokes 2007. Both are included here to illustrate the age of the concept.

L-88

These theories dismissing sagasuation stand against the alternative view that incubation occurs as an unconscious cognitive process, with Ellwood et al. (2009), finding 75% of studies into sagasuation presented evidence supporting the concept. Of the papers that accept the existence of this form of cognition three classifications emerge; the incorporation of previously ignored knowledge, the forgetting of misleading mindsets, and restructuring the problems.

L-89

The first theory argues, “partially activated concepts may combine with others to yield fortuitous insightful ideas” (Sio & Ormerod 2009:95; see also Bowers et al. 1990; Smith & Blankenship 1991). This theory, as well as Posner’s, can be related to Kouider & Dehaene’s (2007) ‘Global Neuronal Workspace’, which proposes stimulus elicit thoughts, but priming of conscious thought inhibits sub-conscious thoughts generating into awareness.

L-90

The second theory involves selective forgetting, (also known as memory decay; Schooler et al. 1993; Gilhooly et al. 2012; Dijksterhuis & Meurs 2006; Woodsworth 1938, in Schooler et al. 1993), which proposes incubation erodes conceived knowledge, allowing for new relationships to emerge, a position sometimes supported by mis-leading cues test data (Smith & Blankenship 1989; Choi & Smith 2005 positive incubation findings may also align with this theory).

L-91

Finally the theory of ‘problem restructuring’, where concepts are re-organised, and re-appraised after failure to resolve, through either a strategy switch (e.g. MacGregor et al. 2001), or relaxing self –imposed restrictive parameters. This correlates with Simonton’s (1999) proposition that the ‘under-mind’ is actively performing blind variation tests while the conscious is effectively blind to the action itself. Thus a double blind methodology might, playfully be suggested to, be at play.

L-92

Neurological evidence

Empirical support of the existence of sagasuating cognitions is now coming from neurological studies of brain operations. Despite concerns around the validity of psychometrics (see dot L33), their application, when combined with subjective self-assessment ("participant's trial-by-trial judgments" (Kounios 2009:210); see Larsen et. al. 1985; Wrosch et al. 2011; for verification of validity through “Subjective Well-Being’ test) and neural imaging (see table 2), provides strong evidence for this form of cognition. (See Sawyer 2011; Greenfield 2008 for overview).

L-94

Table 2 Neuroimaging technologies and applications

fMRI	functional Magnetic Resonance Imaging	good spatial measures of blood/oxygen flows
PET	Positron Emitting Tomography	gamma rays to identify localised neural oxygen consumption (signifying transmitter systems activity)
MEG	Magneto encephalography	measures magnetic fields to provide real-time readouts of activity
EEG	Electroencephalographs	map real time neuro-electrical fluctuation

L-95

Smith et al. (2006), using fMRI, found support for sagasuuous cognition in the activation of the lateral temporal cortex, which corresponded with thought processes respondents were unaware of. Kounios et al., using fMRI and EEG, also reported “mental preparation leading to insight involves heightened activity in medial frontal areas associated with cognitive control and in temporal areas associated with semantic processing" (Kounios et al. 2006:882).

L-96

Jung-Beeman and colleagues (2004) identified two distinct patterns occurring in their neural scanning of insight responses, which demonstrated increased neural activity in the right hemisphere anterior superior temporal gyrus (RH aSTG). The authors propose this neural region “facilitates integration of information across distant lexical or semantic relations, allowing solvers to see connections that had previously eluded them" (Jung-Beeman et al. 2004:0507; see also Greenfield 2008).

Christoff, et al.'s (2009) fMRI study of day-dreaming suggests broad, associative cognitive processing may have physiological foundation even greater than proposed by Jung-Beeman. The team "observed parallel recruitment of executive (neural areas active during cognitively demanding tasks) and default (neural areas activated when least external stimulus occurs) network regions—two brain systems that so far have been assumed to work in opposition", which "suggests that mind wandering may evoke a unique mental state that may allow otherwise opposing networks to work in cooperation" (Christoff et al. 2009:871; see Christoff et al. 2011; Greenfield 2008; for detailed neural locations). Most interestingly, Christoff found that both networks were most active when participants were least aware of their mind wandering. In other words, metacognition is likely to interfere with the effectiveness of the sagasuation space. This also provides evidence of sub-liminal cognitions concurrently being "both conscious and non-conscious (see Kounios, et al. 2009; Allen et al. 2011; Nordgren et al. 2011), which provides a link between mind-wandering/day-dreaming and non-conscious sagasuation.

Of the sagasuation research conducted by psychologist and neurologists, only Varendonck (1921), a Belgian intellectual highly influenced by Freud, appears to have viewed it subjectively, from the inside. He is also rare in investigating sagasuation spaces that are not primarily focused on resolving specific problems (see Moss, J. et al. 2007). His phenomenological method applied meta-cognition to identify aspects of daydreaming/mind-wandering. As soon as he became aware that he was daydreaming, he would work backwards through his 'train of thoughts', noting, and journaling their occurrence and his emotional responses, in an attempt to establish the 'fragment of memory' that was its source. He noted that external factors were often a catalyst, igniting internal thoughts and motivations, triggered by visual imagery, and occasionally music. Varendonck, using the only tools available to him, generated data and theories that strongly correlate with current theories and evidence, from noting the eroding effect on mind-wandering of meta-cognition (Christoff et al. 2009; Orlet 2008), the 'creative's' habit of "allocat(ing) . . . attention in a diffuse manner' (Varendonck 1921:14 see Martindale 1991; Eysenck 1993; Ansburg & Hill 2003; Jung-Beeman et al. 2004), to the externality of catalysts. Simonton (1999), 78 years later wrote, '(t)he individual is being exposed to all sort of extraneous input, some external (everyday events, as well as

efforts on other projects), and others internal (retrieved memories, chains of associative thought), which are constantly ‘priming’ different aspects of the mnemonic and semantic networks surrounding a given problem” (1999b: 312, parenthesis in original; see also Seifert et al. 1995; Moss, J. et al. 2007).

L-99

It is interesting that Varendonck, who was highly cited by Wallas, is almost never credited. Anyone who has read Wallas, himself so often cited, must be aware of Varendonck, and must subsequently reject his ‘subjective’ evidence, despite theoretical similarities. If theories are speculative hypothesis able to be tested, then current results are proving the validity of much of Varendonck’s work, providing empirical evidence of the value of subjective assessment.

L-100

Generating sagasuated insights and understanding

While it is unlikely that such a complex cognition will ever generate a simple optimal technique, neurological evidence is illustrating methods that may improve the sagasuation processes.

L-102

“Our capacity for spontaneous thought increases during highly practiced tasks” (Christoff et al. 2011:260; see also Csikszentmihalyi’s, 1996 notion of ‘Flow - dot L47), which “lessen(s) the demand for conscious cognition” (Cronin 2004:17), allocating “cognitive resources . . . in a diffuse manner” (Sio & Ormerod 2009:107; see also; Christoff et al. 2009; Kouider et.al. 2007; Stokes 2007; Kounios et al. 2006/2009; Ansburg & Hill 2003; Finke, Ward, & Smith 1992; Martindale 1995).

L-103

Allowing concepts to arise that may not have deliberate ‘problem-solving’ roots facilitates a more effective process. Sio & Ormerod suggest “that the positive incubation effects found with creative problems are a direct reflection of their multiple-solution nature. When solving a creative problem, individuals benefit from performing a wide search of their knowledge to identify as many relevant connections as possible with the presented stimuli” (2009:107; see also Varendonck 1921; Martindale 1991; 1995; Eysenck 1993; Amabile 1985; Ansburg & Hill, 2003; Jung-Beeman et al. 2004; Norlander

2000; Finke, Ward & Smith 1992). "Individuals solving (divergent) creative problems were more likely to benefit from an incubation period than individuals solving linguistic and visual (psychometric) problems" (Sio & Ormerod 2009:107). Ellwood et al. (2009) provide evidence of greater value from substantially changing type of task.

L-104

Sio & Ormerod's (2009) meta-analysis found longer preparation periods yielded greater incubation results (see also Hunter et al. 2002). REM (rapid eye movement) sleep performs even better, according to Cai et al. (2009), who's research of 'primed' creative problem solving showed an almost 40% improvement over either quiet rest, or non-REM sleep. It is important to note that Cai et al. used a 'quiet time' period for incubation rather than the 'low cognitive load' discussed earlier.

L-105

A happy mind increases the likelihood of solving problems. Subramaniam et al.'s (2009) fMRI study suggests people of a happy disposition on arrival at the labs performed better than those with a neutral or negative mentality. This evidence supports previous data showing "positive mood biases cognitive control mechanisms in ways that facilitate insight, with anxiety having the opposite effect" (Kounios & Beeman 2009:215; see Subramaniam et al. 2009 for detail). Subjective agency also contributes to sagasuation effects (Madjar & Shalley 2008; see Killingsworth & Gilbert 2010 for evidence of mind-wandering generating unhappiness).

L-106

Beeftink et al. (2008) found that interruptions do not achieve the same incubation as self selected breaks, though they did lead to fewer impasses. Schooler, Ohlsson & Brooks (1993) (as already mentioned) recommend avoidance of verbalization of the process during the sagasuation period, and note elucidation even after the fact can be problematic.

L-107

However, not all methods are so clear. Gilhooly et al. (2012) note that the time between problem solving attempts and incubation should be short, suggesting "respondents to put aside the task immediately and return to it after a period (Gilhooly et al. 2012:9). Jane & Campbell (2010) suggest days are most suitable for primary students, but their research included research periods for the children, potentially confusing incubation with research. Cai et al. (2009) identified improvements with longer sagasuation

periods (see also Sio & Ormerod 2009; Christoff et al. 2011), with Ellenbogen et al. (2007) suggesting 12 hours of sleep being better. (See Cai et al. 2009 expansion of sleep and sagasuation).

L-108

Not all evidence presents sagasuation as positive. Gruis' (2005) study of general practitioner patients found evidence of 'day-dreaming' correlating with negative mental health and subjective well-being. However, respondents were already suffering ailments prior to enrolling in the study, and there was not a healthy control group to enable comparison. Difficulties establishing control groups is problematic for sagasuation researchers (see Sio & Ormerod 2009). Killingsworth & Gilbert (2010) also present evidence linking mind-wandering with unhappiness, and while they argue the cognition as causality, there was no correlation with respondent's mental states prior to, or after the research. It could possibly be symptomatic of underlying cognitive problems, or even coping mechanisms for sociological, or environmental issues.

L-109

Claxton (2006), a longtime advocate for the 'undermind' has adopted psychologist Eugene Gendlin's (1978) concept of 'focusing' on 'embodied knowing', a place of allowing out corporeal understanding, suggesting that therapeutically, the body manifests knowledge that can allow for increased awareness. It is a means of recognizing the 'felt sense' from "pre-conceptual promptings" (Claxton 2006:354).

L-110

Pedagogy and Sagasuation

Creativity's pedagogical value has long been identified, (Neill 1926/1974; Montessori 1917; Dewey 1938/1997; Steiner 1923; Holt 1965; Koestler 1964; Eisner 1997; 2002; 2004; 2008), but research into the pedagogical value of sagasuation has only been considered by a small number of researchers. This is not surprising, considering the complexity of reporting the cognitions. Pedagogically, these studies are focused on students, both primary and tertiary, (typically in the creative arts), and have found a positive correlation between incubation and student creativity (Wallas 1926; Catterall 1998; Medd & Houtz 2002; Webster, Campbell, & Jane 2006; Hunter et al. 2002; Hardiman et al. 2009; Immordino-Yang

2007). Some of the research, however, confuses sagasuation- a period of thought away from the focus task - with conscious elaboration of the focus task (e.g. Medd & Houtz 2002), undermining the relevance of their study.

L-112

Lewicki et al. (1992) have demonstrated the effectiveness of 'non-conscious' acquisition of information. Their research proposed knowledge acquisition occurs both consciously and unconsciously, but due to the complexity of the world around us, and the difficulty conscious cognition has discerning such complex inter-relations, the majority of the mental learning occurs at the nonconscious level. They see the unconscious being substantially more sophisticated at learning than the conscious mind (Loftus & Klinger 1992).

L-113

This proposition is supported by Howard-Jones (1998), who used a distraction task of 'nonsense sentence completion' to interrupt idea generation in design students. This, and subsequent research (Howard-Jones & Murray 2003), found improvement in the student's ideational productivity, possibly due to the participants defocusing attention from their previous direction (Howard-Jones & Murray 2003), as discussed earlier.

L-114

Support too from Catterall (1998), who found that his cohort of primary school children who drew Egyptological artifacts –a sagasuation period - prior to writing a story, produced "better organized and more detailed written responses" than those writing without the drawing period (1998, cited in Hardiman et al. 2009:34). Catterall (2005) argues that such sagasuated learning occurs in the "complex area of the neuro-function of learning and resulting skill transfer" (Catterall 2005:6).

L-115

Kounios & Beeman, (2009) cite neurological evidence supporting this proposition. "(R)ecent neuroimaging studies in humans demonstrate that neural activity related to post-training learning and memory consolidation occurs during the period of wakefulness following training. Thus, learning-dependent changes have been observed in spontaneous brain activity while subjects perform an unrelated task after learning either a spatial or procedural memory task" (Peigneux, Schmitz & Willems 2007; in Kounios & Beeman 2009:276). Christoff et al. (2011) propose this is due to "lower (external stimuli), which . . . facilitate the cortico-hippocampal interplay that is

considered to be crucial for the process of memory consolidation" (Christoff et al. 2011:276; McClelland, McNaughton & O'Reilly, 1995). McClelland and colleagues go further, suggesting "the hippocampal memory system (not only) participates in this reinstatement process, it can be viewed . . . as the teacher of the neocortical processing system (McClelland et al, 1995:424).

L-116

"These studies show that insight is the culmination of a series of brain states and processes operating at different time scales. Elucidation of these precursors suggests interventional opportunities for the facilitation of insight" (Kounios et al. 2009:210).

L-117

Paul Torrance, developer of the respected and often utilised *Torrance Test of Creative Thinking* (1974), recognised both the pedagogical and creative qualities of the "higher level thought processes" (Torrance 1979:33) in sagasuation. He developed a three stage "Incubation model of teaching" (Torrance 1979), which provides space for the emergence of "creative thinking skills and abilities (in) any discipline at any level from preschool through professional and graduate education and the elderly" (Torrance, 1993:233). Torrance's three stages attempt, in a similar way to other creativity methods, such as Wallas' (1926) and Osborne's (1953), to build motivation and enthusiasm for engagement in understanding. The first stage is "to arouse curiosity; to stimulate the imagination, and to give purpose and motivation" (Torrance 1993:233). Stage two reviews and inspects more deeply, through deferred judgment, as this allows for the development of inter-connected leadings. The third stage seeks to "keep the thought processes going . . . result(ing) in increased chances of successful incubation" (Torrance 1979:33). Torrance recognised that "incubation requires abilities, skills, and motivations just like all other aspects of the creative thinking process" (Torrance 1979:26), which "can be enhanced through practice and instruction that encourages . . . the interplay of two or more sensory modes of thought (Torrance, 1993:33). To Torrance "(a)pparent procrastination may result in greater incubation and creative achievement (Torrance, 1995:320).

L-118

Having reviewed creativity, its sources and facilitation, we shall now consider literature on the pedagogical value of creativity and move specifically to the

methodological literature applied in this study – A/r/tography.

L-119

Pedagogy review.

General pedagogy of creativity

Creative arts, as effective pedagogical tools, were recognised and employed in the early part of the twentieth century. Maria Montessori's *Casa de Bambini* (1907), Rudolf Steiner's *Waldorf School* (1919), and Alexander Neill's *Summerhill School* (1921), all built upon Froebel's 'education through play' to established 'progressive' pedagogies that drew upon creativity's intrinsic motivation, and contextualising capabilities. Later advocates, including John Dewey (1934), Arthur Koestler (1964), Elliot Eisner (1997; 2002; 2008), Mary Kalantzis (2006), Kalantzis & Cope (2008), Mieke Bal (2003), Tom Barone (2008), and Rita Irwin (2004; 2006; 2008), contributed to a theoretical spectrum that propounded both "the theory that arts curriculum and instruction enhance the disposition to think critically" (Lampert 2006:226; see also Burton, Horowitz and Abeles 2000), and the effectiveness of pedagogically harnessing the phenomenological motivations that manifests in artmaking. These theories currently reside in a hostile political landscape, where the validity of the skills and their transference has generated substantial debate.

L-121

This section briefly considers the research underpinning the theoretical foundations of creativity/art's pedagogical roles, though it does conflate geo/cultural variations. Questions of creative characteristics relevant to pedagogy, including transference issues are discussed. The review concludes with the political paradigms within creativity centred pedagogy.

L-122

It is important to note that this section conflates art-based pedagogies with more general creativity pedagogies, and compresses the spectrum of the perceptions of theorists.

L-123

Pedagogical Foundations

Building upon accumulated knowledge has generated an “invaluable relic” (Kliebard 1992; in Cox 2007) of contemporary pedagogy, which aims to be a “process of self-transformation that enables a person to negotiate changes that are as-yet-indeterminate” (Kalantzis & Cope 2012:92). Employing the “innate capacity to learn” (Yelland et al. 2008), pedagogical practices encourage the “(k)nowing (that) emerges from, and in response to, not-knowing. . . (a) process (which) emerges from uncertainty” (Claxton 1997:6; parenthesis added). Uncertainty is a key element of creativity.

L-125

The theories of pedagogical stalwarts such as Piaget, and Vygotsky have been applied to creativity-based pedagogy. Arlin (1975) proposed a fifth - problem-finding – stage for Piaget’s theories of development. Arlin argued that, placed before Piaget’s ‘problem solving’ stage, problem-finding “may best characterize creative thought, . . . and the discovery of new heuristics in adult thought” (Arlin 1975:606). Keen to dispel Arlin, and other’s criticisms of Piaget’s “rather sketchy” (Ayman-Nolley 1999:267) consideration of creativity, Ayman-Nolley applied Piaget’s mechanism of development theories – assimilation and accommodation - to creativity, while J. Kim (2006, in Hennessey & Amabile 2010) noted Piaget’s reflective abstraction as aligning with the mechanisms for creativity. Vonèche (2003) argued that Piaget demonstrated creative theory through his theories of Invariance and Transformations. Lindqvist (2003) presented Vygotsky’s “zone of proximal development” (1978) - learning in progressive stages, from and through the assistance of others – as an explanation of how creative ideas or problem solutions form.

L-126

Although these foundations have provided stable grounds upon which to establish contemporary pedagogies, pedagogy is not rigid, and a growing angst amongst theorists is pushing for pedagogical changes to meet the new environment. As de Bono points out “(i)n a stable world the standard situations of the past still apply” (de Bono 2000:3).

L-127

Cope & Kalantzis propose ‘multiliteracies’ as ‘new learning’, a “kind of weaving . . . primarily cognitive, between Vygotsky’s world of everyday or spontaneous knowledge and the world of science or systematic concepts, or between the Piaget’s concrete and

abstract thinking (Cope & Kalantzis 2009:185).

L-128

Others are proposing greater reassessment. Sawyer (2006), for example, presents a dismal view of pedagogical futures, arguing that the seismic shift in production in Western countries requires a complete restructure of the education system focusing upon knowledge, disciplined improvisational group processes and creative collaborations. (See also Kincheloe 2007; Denzin 2008; Claxton 1997; 2007; Cooper 2010; Adams 2011; Robinson, K. 2008; Greenfield 2008; Tacey 1995; Neave 2008).

L-129

Sternberg has developed his 'Balance Theory', a pedagogical programme, ("rather than a basis for education" Sternberg 2001:227), that while distinguishing between knowledge and wisdom, (which contemporary pedagogy fails to acknowledge), integrates wisdom's "intelligence related skills" (ibid). Critics of the programme suggest that equating wisdom with 'system of values' is undermined by ideological failures within 'wise' institutions such as the US Supreme Court (Halpern 2001).

L-130

Pedagogical paradigms do already fluctuate however. Darby and Catterall proposed the need for a "fourth 'R' –art (Darby & Catterall 1994; see also Feyerabend 1988). Gardner's (1984; 1999) recognition of 'multiple intelligences', though atomising, provided a seminal shift in pedagogical outlook. Gardner argued "(a) program rich in the arts should assume a significant role in the school" (Gardner 1999:148), concurrently rejecting 'Multiple Intelligences' as a pedagogical framework (Gardner 1999:89-90). Despite this, 'MI' led to curriculum changes throughout the world (Sew 2007; see Kincheloe 2007 for critiques).

L-131

But while the characteristics of creativity may be well applied to general pedagogy, there are doubts the current system would manage to administer such a system. Students identified as creative, by both psychometrics and creative output, are rejected by teachers in favour of compliant high IQ pupils (Getzels & Jackson 1963). A similar study, thirty-five years later found contemporary teachers held similar views (Scott 1999, in Hennessey & Amabile 2010). Beghetto (2007, in Hennessey & Amabile 2010) reported a similar perception in student teachers, yet to hold their own class. (See also Getzels & Csikszentmihalyi 1976; Chan & Chan 1999, in Hennessey & Amabile 2010; and

see Russell & Zembylas, 2007 for discussion on pro's and con's of such integrated education).

L-132

While Hennessey and Amabile propose there is a "bias against unique answers or problem solutions" (Hennessey & Amabile 2010:585), the issue of administrative disruption reported by both Getzels & Csikszentmihalyi (1976), and Scott (1999) are elements the 'progressive' educators allowed for in their pedagogical structures.

L-133

Skills Identified in Creativity

"Creative excitement and curiosity" (Newell-Walker 2002) has often been identified as key creative elements well applied to pedagogy. Csikszentmihalyi & Nakamura (2006) identified intrinsic motivations as the key to lifelong creativity and learning.

L-135

Theorists propose that identified creative characteristics are integral to learning, and should be integral to education. For example, Eisner (2002) presents a simplified list of ten elements, chiefly revolving around comprehension of complex relational knowledge and expression. These are skills that deal with circumstances that "demand the ability to take multiple perspectives, layer relationships, and construct meaning in unified forms of representation" (Burton, Horowitz & Abeles 2000:252).

L-136

Identification of creative characteristics, and their perceived values, variously categorised as 'key', 'core' and 'generic', are foundational to the pedagogical debate (see Billing 2007 for discussion). 'Generic' skills have been aligned with desirable attributes for higher education graduates (Billing 2003), being "critical thinking, intellectual curiosity, problem-solving, logical and independent thought, effective communication [research skills] and personal attributes such as intellectual rigour, creativity and imagination" (Billing 2003:341). 'Core' and 'key' skills are often domain dependent, and are not considered in this review.

L-137

Critical thinking is often associated with creativity, identified as "interpretation, analysis, evaluation, inference, reflection, and related dispositions as common to the definition of

critical thinking” (Halpern 2001; see also Catterall 1998). Beyond creativity and imagination, other kinds of meta-cognitive thinking have been implicated in the arts, involving the ability to: integrate divergent points of view, layer relationships, and construct unified wholes -in other words, construct coherence among relationships within complex forms -as in paintings, musical compositions, choreography, or poems (Eisner 1998; Perkins 1994)” (Burton et al. 2000:229).

L-138

Other relevant capacities identified include perceptual focus, conceptual flexibility, reflexivity, ideation elaboration, and openness to possibilities (see Eisner1998; 2002; Burton, Horowitz & Abeles 2000; Getzels & Csikszentmihalyi 1976; Catterall 1998). Neurologist Michael Posner suggests “openness to creativity in an art form is important in understanding how practicing an art actually produces changes in cognition” (Posner 2008; in Hardiman et al. 2009; for other characteristics of creativity refer to dot L11).

L-139

Dineen & Niu (2008) applied UK creative pedagogy to standard Chinese curriculum, and assessed both quantitative and qualitative data, which demonstrated the effectiveness of the programmes.

L-140

Transference as the key to Validity for an Arts-based Pedagogy

If identifying characteristics of creativity has proven difficult for me as a researcher, identifying transference of those characteristics to other domains has been even more problematic (Russell & Zembylas 2007). These concepts have become core to the debate on arts-based pedagogy. Establishing empirical data has again been problematic with divides aligning along those reliant upon metrics, or upon the application of qualitative data.

L-142

The existence of transference has been caught, once again, in definitional issues of both the learning process and transference (Melnick et al. 2008; Plucker et al. 2004). Billing’s (2007) meta-analysis of employment-based literature of transference provides a suitable definition of the concept of transference, “as rooted in the process of adaptation, a learner changing actively in response to a context in order to reach a goal” (Billing

2007:499). Neurologist's see transfer occurring when the "novel and trained tasks recruit overlapping processing components and engage shared brain regions (Jonides, 2004 in Moreno et al. 2011). Claxton's passionate argument provides a definition of learning process transference being "the conditions that equip people with the longer-term *dispositions*, the *personal qualities* and the *capabilities* to make full use of their varied ways of knowing, regardless of the messages of the particular setting they happen to find themselves in" (Claxton 1997:214; emphasis in original; see also Kalantzis & Cope 2012).

L-143

Substantial support for the existence of transference stems from qualitative research (Eisner 2002; 2003; 2008; Burton et al. 2000; Irwin et al. 2008; Sternberg & Williams 1996; Catterall 1998; Lampert 2006; Smithrim & Upitis 2005; Bickel 2006; Plucker et al. 2004; Russell & Zembylas 2007; Cahnmann-Taylor 2006; Brown 2001; Mears 2009; Sinner et al. 2006; Carvello-Johnson 2004; Dewey 1934; Taylor 2001), from philosophical rhetoric (Irwin 2004; 2005; Irwin et al. 2006; Claxton 1997; 2006; 2007; Claxton et al. 1996; Martin & Booth 2003;2006; Pakes 2004; Springgay, Irwin, & Wilson-Kind 2005; Adams 2011; Barone 2008; Leavy 2009; Winner 2000; Sullivan 2010; Balkema 2004; Catterall 2000;2005; Bindeman 1998; Cooper 2010; Marshall & Newton 2000; Robinson, K. 2008; Perkins 1989; Mc Niff 2007; Wallas 1926; Emerson 1841), and recently from neurological data (Immordino-Yang 2007; Rinne et al. 2011; Greenfield 2008). Halpern maintains, while arguing the need to teach for transfer, the public assumes transfer is automatic" (Halpern 2001:253).

L-144

Research into transference has been "moving from the traditional literary approach toward quantitative approaches to research synthesis described . . .as meta-analysis." (Rosenthal & Hetland 2000:3). This move has not been without debate. Burton et al. lament that "most studies of transfer in the 1980s and 1990s have been framed by a (value laden) unidirectional and linear model of learning in which certain capacities engendered in the arts are thought to travel to other subject disciplines and to be "causal" in supporting enhanced learning" (Burton, Horowitz & Abeles 2000:228, parenthesis added; see also Moreno et al. 2011). Burton's team, claiming evidence in their research (2000:252), argue that such lineal concepts of cognitive transfer fail when viewed with neurological evidence and Gardner's empirically supported Multiple Intelligences' paradigm (Burton, Horowitz & Abeles 2000).

L-145

Plucker and colleagues describe the “preponderance of myths and stereotypes about creativity . . . collectively strangle most research efforts in this area” (Plucker et al. 2004:83; see also Hennessey & Amabile 2004).

L-146

Quantitative researchers have long struggled to find any evidence of transference from the arts to broader domains. Burton et al. (2000) noted “Perkins (1994) has long argued, and persuasively, that thinking skills do not generalize beyond the context in which they are learned unless teachers directly address transfer and encourage youngsters to use their skills and competencies in other subject domains” (Burton et al. 2000:30). Kaufman & Baer (2002) employed both self-report and case-study methodologies to conclude that “the cognitive mechanisms underlying creative performance are domain specific, with the likely exception of *g* (a general intelligence factor)” (Kaufman & Baer 2002:575; see also Hetland & Winner 2004). (This ‘general intelligence’ notion folds back and correlates with DeYoung et al, who argue “people who are more intelligent, in the standard sense, also tend to be more insightful” (2008:280)).

L-147

Winner and Cooper’s (2000) meta-analysis failed to find evidence linking art-based pedagogies with any higher academic outcomes. The authors noted flaws in the conduct of research including lack of control groups, lack of curriculum applied in the research and evidence of the quality of arts education used in the research. The authors recognise their results may have been skewed by the academic metrics applied in the research, but argue what is important is to emphasis the characteristics of arts pedagogical value that can’t be obtained in a more conservative curriculum. This research has also been criticised for dismissing “non-experimental” modes of research, such those used in qualitative research, (Catterall, 2000) suggesting this skews the research outcome. There is also the issue of defining education through standardised metrics (Eisner 2000).

L-148

Smithrim and Uptis (2005), following recommendation of Winner & Cooper (2000), conducted a large, longitudinal qualitative and quantitative study of the Canadian “Learning Through The Arts” (LTTA) program. The results of the 6,000 respondents

revealed “a modest but statistically significant positive effect on student achievement on the math test dealing with computation and estimation” (Smithrim & Upitis 2005:121). Winner subsequently performed a meta-analysis of this and similar studies, reporting “mixed results” (Winner 2008).

L-149

Melnick et al. argued research “continues to fall short of proving a causal relationship” (Melnick et al. 2008:19) between creative arts and educational transference. Schellenberg (2011), having first established a link between music training and increases in IQ (Schellenberg 2004), followed up upon the media frenzy which generated from Rauscher, Shaw & Ky’s (1993) research relating increases spatial reasoning from listening to Mozart, (later shown to be temporary which aligns with neuro-plasticity knowledge, see dot L54), combined reviewed literature with his research results and concluded that the “results provide no support for the hypothesis that the association between music training and IQ is mediated by executive function” (Schellenberg 2011:284). Schellenberg argued “high-functioning children are more likely than other children to take music lessons, but not necessarily to become ‘real musicians’ (Schellenberg 2011:286).

L-150

When there is empirical support for transference, it is often only across narrow variations of a domain (Burger, Hetland, Moga & Winner 2000).

L-151

Evidence of transference has been provided in domains outside of creativity/art pedagogies. Williams et al. (2009) found substantial evidence of transference occurring through subjective explanation of abstract concepts, reinforced with practical examples, rather than art processes. Thorell et al. (2009) found transference occurred in memory training to other executive cognitions, but neural inhibition training failed to demonstrate any transfer. Rinne et al. (2011) disagree, suggesting transfer of arts skills may assist long-term memory.

L-152

Westwood and Low (2003) identify cultural impacts upon conceptualisation of creativity and innovation. They note “the emphasis on rote learning, memorization, didacticism, obedience and conformity, held to be the norm in Japan, Korea and Chinese dominated cultures, is interpreted as developing cognitive styles not conducive to

creativity" (Westwood & Low 2003:240; see also Billing 2007). Such cultural impacts are so complex to control they may inevitably impact upon the establishment of transference from the creative arts.

L-153

Authors such as Winner (2000), while recognising the lack of empirical data, argue that basing arts based curricula upon proof of transference distracts from the other qualities arts bring to education. Catterall is more forceful, "to say that the arts generally, or the visual arts . . . have little place in academic learning is tantamount to saying that the written word, or even representation more generally, has little place in academic learning" (Catterall 1998:10). This is important as traditional pedagogy, being reinforced by centralised assessments, rely upon 'rote' learning, which is the most resistant to transference.

L-154

If transference is the key to validity for an arts-based pedagogy, it would be worth considering the creative arts neurological foundations, discussed earlier. Human associative 'pattern recognition' (Ramachandran, & Hirstein 1999; Ramachandran 2004) capacity, illustrated by empirical data, demonstrates a cognitive practice that can be applied to transference. Alternatively, it would appear reasonable to argue that the broader the base of knowledge to be drawn upon, the greater potential for transference. As such, a broad arts education will provide greater resources upon which any transference may occur. Such syllogistic arguments, however, do not cut the empirical mustard in this complex and heated debate, and may only be considered in light of 'Ockham's Razor'.

L-155

As such, complex cognitions, such as executive function transfer, are unlikely to be resolved in epistemological structures that emerged from political societies. Therefore, this review may only be furthered by identification of the political debates.

L-156

Politics and Pedagogy

"Education is among the most politicized topics in contemporary America", argues Diane Halpern (2001:253). Many researchers and theorists across the globe express concern

that the “mythodology of learning” (Claxton et al. 1996 in Quicke 1996) “will eventually consume education as an emancipatory and socially mobilising public service” (Adams 2011:157).

L-158

The role of creativity/art within pedagogy, and the general role of pedagogy within society are inherently political, both in terms of the conservation of existing power structures, and the provision of resources to institutions that interrogate that very power. Winter et al. (2000:26) explicitly states education’s political nature, arguing “(i)t is the business of HEIs (Higher Education Institutes) to research, analyse and comment on social and political changes’ (Winter et al. 2000:26).

L-159

Cox reported the “conflict between subject-centered and student-centered approaches to learning” (Cox 2007:5) has been occurring since the nineteenth century. Wallas (1926) and Dewey (1934) both acknowledged centralised education “is about fitting (standardised) men into the economic system” (Fromm 1960: x), producing students that are “‘knowers’ rather than ‘finder-outers’” (Claxton 2007:38), as “(t)he command society could never trust learners to be agents of knowing” (Kalantzis 2006:11; see also Whyte 2007). Put simply, the concerns are that education, from primary to ‘higher ed.’ “is being subsumed into the culture of commercial services” leading “to ‘market segmentation’ and over-differentiated products” (Brien 2009:para 2).

L-160

“We teach our kids to be passive learners”, argues Gauntlett (2008:part 2), an “audience” (ibid), learning “in a special place, with special equipment, under the instruction of experts, using your deliberate, conscious intellect” (Claxton 1997:42). It is an education system where creativity and new knowledge is “suppressed by a society that encourages intellectual conformity” (Sternberg 1996:2), intended to “perpetuate the status quo” (Kincheloe 2007:24, in Sew 2007).

L-161

Perceptions are that the erosion of a democratically based pedagogy create pedagogical structures that are “the opposite of Dewey’s notion of enhanced democratic education” (Adams 2011:158), and “perpetuate out-of-date hierarchical systems which exclude alternative forms of ‘knowledge’” (Lycouris 2006:2). Ezzy (2003) positions the argument more sociologically, arguing ‘(r)ituals perform the function of “playback”,

where the centrally held beliefs and values of a culture are systematically replayed, over time" (in Pizaro 2006:115). Taylor (2006) notes "Dewey (1916/1930), Freire (1992), Horton & Freire (1990), and others have observed that the democratic impulse may require a particular independence of thought, based on the ability to question one's own - and by extension, cultural and societal- beliefs and assumption. The capacities of such self-questioning are most likely encouraged by certain forms of education that may not be widely practiced" (Taylor 2006:197).

L-162

This power struggle and the perceived sociological threats often stem from concerns about centralised curriculum and assessment. Russell (2007) cited a number of scholars expressing concerns that "integrated curricula may be related to political and business interests and administrative policies rather than student learning (Beane 1997; Brewer 2002; Efland 1990; Gee 2003; 2004)" (Russell, 2007:290; see also Irwin & Chalmers 2007; Sennett 2006).

L-163

French left-wing theorists have provided powerful ammunition in the argument. Claxton drew upon Bordieu's *Scholastic Fallacy* (quoting Bordieu) "(t)his fallacy . . . induces people to think that agents involved in action, in practice, in life, think, know, and see as someone who has the leisure to think thinks, knows and sees" (Claxton 1997:41). Barone compared the "omnipresent standardized exam" (2008:31) with Bentham's 'Panopticon', used by Foucault (1999) as an example a systemic form of self-regulation. The 'panopticon effect' may be at play as Oreck (2004) found a large majority of teachers recognised the pedagogical value of arts, though they reported they rarely employed them due to standardised curriculum pressure, and lack of self-confidence.

L-164

Creativity psychologists Hennessey and Amabile too recognise the "manifestations of the accountability movement ha(ve) come in general to de-emphasize creative behaviour in favor of the more easily quantified and assessed mastery of reading, writing, and arithmetic" (Hennessey & Amabile 2010:587). These threats recur regularly as illustrated by Wallas' elucidation that "American experience show the intellectual disadvantages involved in the compulsory enforcement of anything like a uniform system of secondary education" (Wallas 1926:20).

L-165

The scholarly fields of Critical Race Studies, and Whiteness Studies have illuminated the cultural foundations of 'normality' (see Clifford 1988; Bonnett 1997; Green et al. 2007; Kincheloe & Steinberg 1998; McWhorter 2005; Moreton-Robinson 2003,2006; Roediger 1999; Sullivan S. 2006). Kim (2005) reminds us that "educational systems are formed based on cultural expectations and ideologies" (in Hennessey & Amabile 2010; see also Feyerabend 1993; Irwin & Chalmers 2007). Such cultural outlooks assess failure to conform as "failure of the operator ((n)ot 'bright' enough, didn't think 'hard' enough, or not enough data), rather than the method" (Claxton 1997:12). And again this situation has been recognised before as Ralph Waldo Emerson (1841) pointed out "(n)o man can quite emancipate himself from his age and country, or produce a model in which the education, the religion, the politics, usages, and arts, of his times shall have no share" (Emerson 1841 Essay XII para3).

L-166

"The fact will one day flower out into the truth"

Henry D Thoreau (1906:Vol.1:18)

L-167

Some researchers illustrate that the jettisoning of creativity education is not occurring in Eastern countries, such as Singapore, which has actively enveloped creativity in the central curriculum. deCoker (2000, in Hennessey & Amabile 2010) reports Japanese teachers experience of schools in the Unites States as punitively strict and rule bound compared to Japanese classrooms.

L-168

Awareness of this socialized construct led Australian educationalist Bernie Neville to suggest "if we were to drop our egocentric or sociocentric (boundary between self/society and the world) assumptions, or even our anthropocentric ones, and start from ecocentric assumptions we might theorise education very differently" (Neville 2000:60, parenthesis added).

L-169

Others see the problem very differently indeed. For example, psychologist Hans Eysenck (1993) agrees with Runco (1993) criticising "an unholy alliance between trendy professors of education and left-wing politicians aiming to make education 'child-centred,' by which is meant emphasizing creativity without content . . . (which results in) a wholesale breakdown in education, leading to an adult population illiterate,

innumerate, and totally uncreative!" (Eysenck 1993:244; parenthesis added; see also Vernon 1970 for education concerns).

L-170

Moffitt et al.'s (2011) report on a remarkably large longitudinal study may be relevant, if out-of-left field. Their study considered 'self-control', and found that levels of self-control, such as "executive function, impulsivity and delayed gratification, effectively predict a variety of outcomes, from health, wealth, substance abuse and criminality" (Moffitt et al. 2010:2693). While the research didn't consider cognitive self-control within creativity, the findings, in the existing political environment, may support Runco and Eysenck's anxieties about claims of creativity's pedagogically benefits. However, the outlined beneficial outcomes described by Moffitt's team do correlate with notions of conformity and self-regulation.

L-171

However, it is important to note that "what complicates the analysis of such situations is that unlike inert material, the human being is a construing organism. Perception is itself selective and the meanings that individuals make of the situation depend not exclusively, but significantly, on what they bring to it" (Eisner 2000:46-7). And these perceptions change.

L-172

It is impending changes that will impact upon the social structures that are motivating some scholars to push for pedagogy accounting for future threats. Neville (2000) notes importantly, that none of the theorised stages of development in human cognition "propose the notion of inevitable progress of advancement in human understanding" (Neville 2000:57).

L-173

Cooper, for instance, argues against commodification of education, "as this impacts upon the capabilities and long term success of the nations" (Cooper 2010).

L-174

Greenfield, drawing from neuroplasticity research expresses anxiety that loss of broad, creative pedagogy will effect the physical construction of the brain. "Future generations may. . . no longer be so well equipped as their predecessors to place isolated events in a context" (Greenfield 2008:279). Hoare argues this may already be occurring as

"(d)isuse of abstract (cognitive) powers leads to atrophy and to a loss in the ability to apply such powers to learning and other behaviours" (Hoare 2006:5).

L-175

The recognition of the historical socio-cultural value of the arts cannot be ignored. The arts association with 'third tier' thinking has long been identified. Psychologist and cognitive neuroscientist Merlin Donald, argued that art was "a specific kind of *cognitive engineering*" (Donald 2000:4, emphasis in original), and critical in the evolution of neural development in humanity.

L-176

Having reviewed more general pedagogical literature we must now consider a more focused study relating directly to art-based doctoral studies.

L-177

Methodological validity of arts-based research

While philosopher James McAlister (2004) identified seven points of correlation between art-based research and scientific research, practice/creative art-based Ph.D.s remain at the periphery –on the boundary of academic discourse - and present difficulties of assessment. The academic expectation for a thesis is as a text based document, and venturing outside of semiotic familiarity carries with it echoes of Einstein's criticism of the indeterminate outcomes of quantum physics (quoted in McAlister 2004:27). This anxiety means almost all creative doctorates become split between praxis and theory. As Candlin so succinctly expresses, "the practice-based PhD potentially demands at least ***two sets of incompatible competencies***, one that satisfies the demands of the university, and one that looks to the non-academic structures of art production" (Candlin 2000:3, emphasis inserted; see also Dawson 2008; Marshall & Newton 2000). So why use a conflicting, binary method for research? James Walker (2004:6) argues that it is "the absorption in the process, and the ability to respond to feedback, and the very imperfectability of the process allows for something else to emerge, suggestions that might pass by unnoticed in a more streamlined process." It is the unpredictability of this process that provides the ground for new knowledge.

L-179

This section will review the foundations of Art-based Research (AbR), and the broader, Practice-based Research (PbR) philosophies, (the terms are often used inter-changeably, and applied here in the context of each scholar), consider the validity debate, and the development of methodological models employed, with a focus on A/r/tography.

L-180

Development of the methodological philosophy

Despite inherent strengths, limitations in the existing textual pedagogical structures have forced the development of broader methods of enquiry. The development of qualitative methodologies, such as 'action research', and 'critical analysis', occurred because traditional epistemologies had "evolved in settings structured to legitimize elite social scientists and exclude other forms of knowing" (Marshall & Rossman 1999:4; see also Denzin 2008; Guba & Lincoln 1994; Borgdorf 2006; Sperling 2004; Law 2003; Burrows 2006; Minchinton 2006; Balkema 2004; Myer 2006; Bickel 2006; Feyerabend 1993). (See dot m72). Eisner recognises that "(w)hat we are dealing with is a conception of how meaning is made and what shall count as knowledge or, to use a more felicitous phrase, how understanding is enlarged" (Eisner 1997:7). Bal criticises the epistemological hierarchy of the senses, as one of the traditional drawbacks of the disciplinary division of the Humanities" (Bal 2003:10; see also Sullivan 2010; Brown, N. 2000. Note also the "McGurk effect" which illustrates perceptual interference of audio senses). Borgdorf, in reviewing literature on this debate noted, "(i)t is not entirely coincidental that people's personal opinions usually correlate with their own affiliations" (Borgdorf 2005:2).

L-182

But to Law (2003) it is not the epistemological exclusion that is at issue, rather the denial of that exclusion. Paul Feyerabend (1993:295) charges that "(s)cience is much closer to myth than a scientific philosophy is prepared to admit. It is one of many forms of thought that have ever developed by man, and not necessarily the best. It is conspicuous, noisy, and impudent, but it is inherently superior only for those who have already decided in favor of a certain ideology, or who have accepted it without ever having considered its disadvantages and limits" (in Sullivan 2010:37).

L-183

Relationship with traditional pedagogical methods

Despite recognising the flaws and omissions in existing epistemologies, practice/arts-based research has strong correlations with existing methods. Visual research methods have been utilized as scientific data for the past century. Leavy reports that anthropologist, Mills (1952), “encouraged the use of visual art in anthropology, which ha(s) led to a variety of incorporations into method, as a source of data, analysis and interpretation, as well as representation” (Leavy 2009b:217; see also Cahnmann-Taylor 2008; Borgdorf 2006). Cahnmann-Taylor & Siegesmund (2008) note that the use of imagery as academic transfer of knowledge began with the use of camera in anthropology, and radiology, although botanical and biological art has a substantially longer history.

L-185

Of the many similarities between science and art (Eisner & Powell 2008; McAlister 2004), both McAllister (2004) and Slager, (2004) identified similarities in the unique, particular knowledge situated within each paradigm. And within all research, the unique, particular knowledge requires aesthetic judgments to be made (Davidson (2012).

L-186

“The object, rather, is to arm the subject with truth it did not know”

(Foucault 1994:101-102).

L-187

Validity of Arts-based methodologies

Leavy recognises the challenge of employing such ‘suspect’ AbR methods, “methods (which) have been interrogated around issues of validity, trustworthiness and authenticity” (Leavy 2009:15). Eisner further elucidates the tensions between academic expectations and PbR; imaginary vs referentially clear, particular vs general, aesthetics vs plausible truth; questions vs answers, metaphoric novelty vs literal utility (Eisner 2008). Accountability anxiety has been expressed by almost every PbR proponent, with Barone, (2008) noting the political loading on the word “accountability”.

L-189

To engender validity many scholars cite persuasive philosophers and scientists. These include; Brown (2000), Barone (2008), McNiff (2007), Barrett (2007), Irwin (2004; 2008), Balkema (2004), Lycouris (2000), Minchinton (2006), Bressler (2007), Haseman (2006), Bal (2003), Barone (2008), Biggs, (2003), Busch (2009), Candlin (2000), Siegesmund & Taylor (2008), Barrett (2007), Sinner et al. (2006), Marshal & Newton (2000), Bindeman (1981), and Milech (2006). McNiff argues that Rudolf Arnheim's *Art & Visual Perception* (1954), and *The Psychology of Art* (1966), and Susanne Langer's *Philosophy in a new key: A study in the symbolism of reason, rite, and art* (1951), *Feeling and form: A theory of art* (1953), "validated cognitive aspects of the arts to large academic audiences and established the intellectual basis for approaching art making as serious inquiry" (McNiff 2007:30).

L-190

So what are the criteria being proposed to prevent Arts-based researchers from being "just egocentric microbes processing the compost of academic 'output'?" (Walker, J. 2004:7).

L-191

Criteria for assessment of Arts-based methodologies

Assessment Criteria are central to anxiety about practice-based doctorates. Epistemologically, the suggested criteria from both scholars and institutional reports often overlap, although institutional criteria are generated with broader requirements, e.g. the British Economic and Social Research Council report (2005) includes suggested criteria covering economic basis, marketability, and auditability (see also Strand 1998; Australian Council of University Art and Design Schools report, (Baker & Buckley 2009); U.K. Arts & Humanities Research Board (AHRB, now Council)).

L-193

Winter et al. (2000), while not setting out criteria, conducted research from PbR examiners and established common strengths and weaknesses. Findings propose the important aspects of PbR are intellectual engagement, coherence, literature engagement, originality, generalizability, methodology, and presentation. Furlong & Oancea (2005), in conducting research for the British Economic and Social Research Council, devised a

matrix of assessment for PbR, which included assessment of epistemological, technological, social and economic qualities.

L-194

Biggs discusses at length the UK. AHRB criteria for AbR, which identifies the importance of defining questions, specifying research contexts, and specifying methods to advance knowledge (Biggs 2003:2-3). These simple criteria correlate with criteria set by scholars in a variety of forms. Biggs & Büchler (2008) set eight criteria; question, contextualisation, methodology, relevant for audience, text as “meta-commentary”, form/content relationship (efficiency of form in relaying content), application of rhetoric, and function of experience (first person thus non-transferable)¹ (2008:13-14). Haseman (2006) set five (research question, methodology, contextualisation, reporting, verifiability; see also Hamilton & Jaaniste 2009; AHRC 2009:66), Barone and Eisner (2011) six (incisiveness, concision, coherence, generativity, social significance, and evocation and illumination), and Boyer (1990) four (discovery, application, integration and education -in Marshall & Newton 2000). Griffiths (in Winter et al. 2000) argues that criteria for assessment becomes critical when assessing borderline PbR doctorates, as it allow for ‘proper and open review’ of the judgments (Winter et al. 2000; see also Piirto 2002).

Footnote 1; The idea that first person experience is not transferable conflicts with artistic transfer of subjective/emotion experience applied in literature and cinema especially. While the transfer is not complete experiential understanding, but filtered through the interpretative perceptions of the respondent, this can be said for all other knowledge transfer systems. Biggs and Büchler do ponder the “extent to which the external world is shared or personal that underlies discussions about appearance and reality” (Biggs and Büchler 2008:16; see dot L204), but dismiss it on the altar of unambiguousness.

L-195

These criteria, combined with a further review of literature produced four generalised criteria; Intentionality, Replicability; Textuality, and Publication. These four criteria will frame the review of the debate of the validity AbR.

L-196

Intentionality

The intentionality of the research is an important, if rarely considered, aspect of PbR research according to Biggs & Büchler (2007; 2008). They expand their concerns for PbR arguing that research cannot be conferred upon learning of the individual but requires an intentional contribution to cumulative epistemological knowledge (see also DEST 2007:3; Biggs 2003; Slager 2004a; Stock 2010; Hannula 2004; Eisner 1997; 2008; Haseman 2006; Webb 2008; Nimkulrat 2011; Cohen 2010; Hamilton & Jaaniste 2009).

L-198

Pakes (2004), despite dismissing Biggs (2003) model, relays intentionality as grounds for AbR, pondering if it is the intentionality to engage with the question that differentiates AbR from art. While Pakes prefers a greater reliance on the “objecthood” of the works, the proposed criteria fails to recognise assumptions in categorising questions, as engagement with the question occurs in both academic research and conceptual art. Duchamp’s (1917) engagement with the question of *what is valid art?* illustrates this point well, with his radical ‘ready-made’ sculpture *Fountain*- a urinal - theorising the inherent intentionality in art.

L-199

Intentionality has been questioned as valid criteria, at least within the application of art in the research. Wimsatt & Beardsley (1954), speaking of poetic arts, proposed the “Intentional Fallacy” concept as a counter to the then Modernist assumption of the intentionality of the artist. They argued “the design or intention of the author is neither available nor desirable as a standard for judging the success of a work of literary art” (1954:para3). Predicating their case on a number of points, the first is most relevant here, being the simple premise that a “poem does not come into existence by accident” (ibid, para4). Their fifth point is also worth consideration, where “an author, by revision, may better achieve his original intention. . . . But it follows that his former concrete intention was not his intention” (Wimsatt & Beardsley 1954:2).

L-200

Other scholars argue that intentionality focused upon the academic contribution can undermine the ‘rhizomatic’ nature of AbR (see Balkema 2004; Brown 2000; Zepke 2000; Irwin 2004; Irwin et al. 2006; Irwin & Springgay 2008).

L-201

Replicability

Replicability is elemental to scientific methodologies, and is often proposed as a fundamental requirement of PbR, although Batey & Furnham (2006:360) note that replicability is an issue for all creativity research. Within replicability resides complex epistemological issues, such as objectivity and the methodological processes, the design and application of which enable replication.

L-203

The anxiety of objectivity is prevalent in all disciplines, and by contagion, arts-bases research (Borgdorf 2006). Eisner (2008) worries about the apparent impossibility of N=1 having any validity what-so-ever. However particular the "1" may be, argues McNiff, change and insight in the personal realm is "increasingly being recognized, as a key source of corresponding social change" (McNiff 2007:37). Extrapolation from particular to general is known in scientific jargon as "inductive logic", and is accepted as suitably valid (Pakes 2004; Leavy 2009a; Sullivan 2010: see also Wall 2006;2008; Sparkes 2000; Pelias 2003). "Since what we know about the world is a product of the transaction of our subjective life *and* a postulates objective world, these worlds cannot be separated (Eisner 1991:52; emphasis in original).

L-204

Researcher interference in the research process found in autobiographically sourced data occurs even within particle physics, as recognised by Heisenberg (1972). Leavy cites Harding, (1993), and Jaeger, (1989) prompting the rise in researchers acknowledging their impacts upon their research (Leavy 2009a:19; see also Newell-Walker 2002). Tenni and colleagues propose it may be alleviated by "step(ing) outside the theoretical constructs upon which the . . . data was predicated" (Tenni et al. 2003:5).

L-205

Methodology

Application of method is even more fraught within AbR. Borgdorf recognises "that mainstream scientific research is always based on an established protocol and that universal criteria exist for the validity of research" (Borgdorf 2006:8). Eisner (2008) cites Gardner proposing that "Doctoral training was essentially that, a

training program designed to prepare a skilled journeyman in the use of conventional research methods“ (Eisner 2008:18; see also Rubidge 2005).

L-207

What Law refers to as “a form of epistemological hygiene” (Law 2003:3; see also Burrows 2006), Biggs & Büchler see as “a means to an end” (Biggs & Büchler 2007:67). Method puts rigor into the research “which is the strength of the chain of reasoning” (Biggs & Büchler 2007:68). McNiff (2007) too, requires the establishment of clear method (see also Bird 2000; Barrett 2007; Hamilton & Jaaniste 2009; Nimkulrat 2011), clarifying the PbR methodological choice over alternatives, such as sociology (Hannula 2004), and enabling a “systematic analysis of information” (Slager 2004a:12).

L-208

To Slife & Williams methodological validity requires interpretation of data “dependent on ideas that do not appear in the data themselves” (Slife & Williams 1995:6), as “data is not found, but produced” (Edwards 2002:140).

L-209

Piantandia et al. (2003) note, however, that titling the PbR as an arts based method allows for distinction between the science and art method, overcoming epistemological constraints, and allowing for variation. Slattery (2003) rails against the idea of using the “tools of measurement of modern positivism and the scientific approach to education” which he argues will not produce “a new aesthetic epistemology” (see also Martin & Booth 2003; 2006; Denzin & Lincoln 2003; Lincoln 2009; Walker J. 2004; Law 2003; Burrows 2006; Mitchell 2006; Loi 2006). Leavy proposes “(t)he arts simply provide qualitative researchers a broader palette of investigative and communicative tools with which to garner and relay a range of social meanings” (Leavy 2009:11), and thus “demonstrate the dynamic interaction of people and environment” (Hunter et al. 2002:389).

L-210

The replicability of aesthetically derived knowledge is another area of concern. Leavy, (2009) notes two means of assessing aesthetics in AbR; theory and method. Theory is complex in attempting to define ‘good art’, something not founded in consistency (Leavy 2009a; see also Piirto 2002). Baker & Buckley’s research of aesthetic valuations provided results showing considerable variation between

examiner assessments (Baker & Buckley 2009). That leaves only methodological consistency.

L-211

Barrett (2007; 2004) applies Dawkin's (1981) concept of 'meme' as "cultural replicator" to illustrate her argument for replicability. Barrett argues "(t)he exegesis is a primary means of realising creative arts research as 'meme' (2004:1) - "a vehicle for fixing ideas in our collective consciousness" (2004:3). Artworks, she argues drawing on Carter (1990), can "get transformed into economic interest" (Barrett, 2004:3), leaving the exegesis "to replicate and elucidate the value of studio enquiry processes" (Barrett 2004:6). However, Barrett's concept subjugates transmissive capacity of the art element, beneath the 'credibility' of text.

L-212

Textual requirement

Barrett (2007a), despite insisting it is the dialogue between art and the subjective critical text that articulate outcomes and practices in AbR, somehow places the transference of knowledge within the exegesis, as meme (Barrett 2004/2007b), effectively dismissing the such capacities in artworks. This is a large and critical element of the AbR credibility debate (see also Biggs 2003; Biggs & Büchler 2007; 2008; Hannula 2004; Milech 2006; Sullivan 2010; Davidson 2012; Candlin 20000; Lycouris 2000; Barone 2008; Eisner 1997; 2008; deVries 2004; Hamilton & Jaaniste 2009; Bickel et al. 2011; Irwin 2004; 2008; Bird 2000).

L-214

Inherent, yet seldom expressed in this debate, is the proponent's bestowal upon text of precision communication. Eisner, in seeking context to avoid the 'Rorschach syndrome' of competing interpretations (Eisner 1997), argues for "context to prevent people getting lost" (2008:21; see also Biggs 2003; Biggs & Büchler, 2007; 2008). This flawed assumption is best illuminated by Cazeaux's ironic criticism of one proponent of text - Sullivan (2010)- for producing text that is "vague and unsubstantiated" (Cazeaux 2008:115). As such, "spoken and written language is thus a pragmatic tool, not a prerequisite of validity" (McNiff 2007:35).

L-215

To Wilson (2004), it is this very ambiguity that is AbR's vital contribution to epistemology. Perkins point out that the paradoxes in a poem do not disqualify it as a vehicle of understanding, "(r)ather the kinds of coherence that count vary from context to context. A poem ought to be coherent in its symbolism, . . . but can revel in paradox" (Perkins 1989:115; see also Eisner 1998). Haseman eloquently expressed his concerns as "excluding 'poetically treated' forms from 'legitimate' means of representation, can only result in an impoverished understanding of what it is to know, what it is we can say, and what it is to be human" (Haseman 2006:5).

L-216

Such ambiguity is, in itself, another important debate. The con'text'ualizing of the exegesis limits the potential of the arts to expand epistemic knowledge through new 'language'. The exemplar argument comes from Pakes (2004), who draws on Ryle (1949) to argue that knowledge in practice may not be translatable into words (Pakes 2004; see also, Candlin 2000; Busch 2009; Langer 1942; Leavy 2009; Balkema 2004a; Cahnmann-Taylor & Siegesmund 2008; Perkins 1989; Slattery 2003; Eisner 1997; Slager 2004; Loi 2006; Piirto 2002). Traditional epistemological "languages select, and in selecting they leave out what they do not select" (Hayakawa 1069:8). Even Biggs and Büchler (2008:15) reluctantly acknowledge the constraints of language. Strand argues that this epistemological privileging has placed the creative arts in an invidious position" (Strand 1998:xviii).

L-217

Hannula (2004), in arguing that PbR must follow the classic modes of research and summarise the experience that emerged in the process, throws light upon another of the debates, the diminution of the creative work as research data. 'Datafication' of the creative elements motivates much criticism of the traditional epistemological stance. For example, Pakes, in taking issue with Biggs (2003) contextualising '*Intentional Action*' model, asserts that it relegates the art component to "merely derivative importance" (Pakes 2004:5; see also Marshall & Newton 2000). The extreme of this concept is condensed by Marshall & Newton, who present it as "(i)f the work necessarily requires a text to explain it, this implicitly characterises the work itself as not research" (Marshall & Newton 2000:2). While it is important to note the tradition role of text is to elucidate the research data, the subjugation of the creative element to simply data is difficult issue to resolve.

L-218

Candlin (2000) expands the complexity of the AbR textual debate by recognising the inherent conflict between competencies; that of creativity, and that of reporting. While these skills need not be mutually exclusive, it is clear that AbR requires poly-lingual neural skills, that in institutional spaces evaluating defined competences, can disadvantage researchers with more developed creative skills. It is also important to note the irony that this debate occurs here as text. (For further discussion of the complications of textual assumptions see dot Xt).

L-219

Publication

Just beyond the issues of textual validity lie issues surrounding publication.

L-221

Central to the requirement of research is “generation of new knowledge (Biggs & Büchler 2008; Eisner 2008; Barone 2008; Barrett 2004/2007; Haseman 2006; Cahnmann-Taylor 2008; Cohen 2010; Hannula 2004). New knowledge, to some scholars, is constituted by the “contribution to cumulative epistemological knowledge” (Biggs & Büchler 2008:16). ‘Cumularity’ requires dissemination of that knowledge, for without dissemination, it can only be the “personal advancement of the individual” (Biggs & Büchler 2008:8; see also deVries 2004), not research. Qualitative stalwart Yvonna Lincoln now disagrees with such criteria, “reserv(ing) the right to get smarter” (Lincoln 2009:5). This concept is open to the same criticism as Csikszentmihalyi's argument of externally assessed “Big C’ creativity, both of which place creativity/research’s credibility exclusively with the reception of the product.

L-222

Traditional academic dissemination occurs through institutional peer review textual journals. Issues exist within this structure such as publisher’s rights and accessibility concerns (see Joshi & Nikose 2010; Lane 2006). But Eisner (1997) identified the inability of the current publishing systems to deal with non-text forms. Non-academic digital dissemination through developments in both the internet, and the hardware, are generating new multi-modal distribution methods that incorporate text, video, and audio data (Downs 2005). Both Greenfields (2008), and Eisner (1997), argue for the effectiveness of non-textual knowledge dissemination of complex dynamic (emotional) knowledge through cinema, a method resisted by academia. This ‘accessibility’ to a

broad audience is a key feature of AbR (Barone 2008).

L-223

However, even with these new media, the knowledge generated from PbR is “liquid knowledge” (Balkema 2004a), and thus spills knowledge when transmitted outside of its predefined, and containing media/method (see also Lycouris 2000).

L-224

Structures of Arts-based Research Methodologies

The creative doctorate's structure has been categorised into three general methods, focused upon either the academic exegesis, (eg; Milech 2006; Hamilton & Jaaniste 2009); or artistic methodology (Rubidge 2005). These retrospectively assigned categories describe the variations in attempts to develop methods that expose knowledge unavailable in the traditional ‘seven chapter scientific’ model. Milech (2006; see also Hamilton & Jaaniste 2009) summarised the exegetical models based upon the exegesis’ relationship with the creative works as; the ‘context model’, the ‘complementary model’, and the ‘research question model’. Hamilton and Jaaniste (2009) presented a variation of the third model, which will be discussed shortly.

L-226

In the ‘context model’ the exegesis places the research and creativity into a theoretical frame of reference, setting the academic antecedence of the research, while seeking to allow the creative work credit. Bird (2000:3) argues “...the outcome of practice or theory without it being put into a contextual framework, cannot be treated as research”. This model *splits the research*, requiring the practice element of the research to “be contextualised in terms of research-intentions to limit the proliferation of its meanings, ensuring it conveys the relevant message and knowledge outcomes” (Biggs 2003; summarised in Pakes 2006). Milech (2006) states this method can become unmanageable due to the broad research required to establish the contexts. Hamilton & Jaaniste (2009) perceive even greater danger with such contextualising creating texts that may run parallel but not intersect with the creative practices at all. “The problem, of course, when the researcher’s creations are absented, is that an ambiguity emerges and they may appear to be tangential to, or even irrelevant to the thesis, which could

effectively stand-alone" (Hamilton & Jaaniste 2009:5). (This may possibly be valid for this present exegesis, given the complexity of the project.)

L-227

While the intention is to contextualise and allow documentation for other researchers to pick up upon (Milech 2006; Bird 2000), this limiting of ambiguity in outcomes defeats the strengths of multiplicity in the practice-based research method (eg. Pakes 2004). In this regard, the context model creative Ph.D.'s "directly contradicts efforts to have the practice-based component recognised as a potentially valid research outcome" (Marshall & Newton 2000:2).

L-228

The 'commentary model' also splits the research, with the exegesis describing the research process and elucidating upon the artwork. It aims to "tells the story of the research, its aims, its methods and its achievements" (Milech 2006:9). Effectively, this method posits the creative work as research and exegesis as supplemental. This is also known as the science model (Marshall & Newton 2000), or somewhat disparagingly, the "compliance "model, as it "overtly aligns the exegesis with university research guidelines and protocols" (Hamilton & Jaaniste 2009:6). It is a more "reflexive, personal and subjective account by the researcher" (Hamilton & Jaaniste 2009:6), but risks failing to contextualise the research within its academic field, and being unable to meet the generalise-ability criteria set by scholars such as Biggs and Büchler (2007).

L-229

These methods are caught in 'binaries/ dichotomies, where "(t)he contextual model orientates the researcher to look out at what sits beyond the practice, while the commentary model assumes the perspective of an internal, intimate relationship with the practice" (Hamilton & Jaaniste 2009:6).

L-230

Milech's third model -the 'research question model' conceptualizes each component of the thesis as *independent answers to the same research question* - independent because each component of the thesis is conducted though the "language" of a particular discourse, related because each "answers" a single research question" (Milech & Schilo 2004:8). This model, in seeking to overcome the previous model's binary limitations, actually applies 'Orientalist' binaries (Said 1978). The nature of Said's binary structures is that 'value' defines itself by 'other'. This creates an interplay between the two

manifestations of the research, the practice and the exegesis, suggesting, also, a Derridian *différance* (Derrida, 1978) with each manifestation confirming its relevance by the lack it demonstrates in the 'Other'. Burr (1995) succinctly clarifies this concept as “a quality (that) is present depends upon implying what is absent” (Burr 1995:73 parenthesis inserted). As such, in this model both exegesis and creative work hinge on the “research question posed” (Milech 2006). This method is intended to allow for growth from the reciprocity. This method would align most with Dewey, (1934; see also Kaila 2004).

L-231

Hamilton and Janniste (2009), ignoring Milech’s ‘research question model’, proposes a forth – “Connective”- model, which, they argue is used by the majority of students. In this model the exegesis is “complex and genuinely difficult to produce as a form of writing, for it combines a hybrid of genres and styles, and necessitates a poly-vocality” (Hamilton & Jaaniste 2009:7). The model, they argue, meets the ‘functional’ need of the academy, through original contributions, and the ‘formal’ need through topic selection, method, domain location, and publication.

L-232

Rubidge (2005), provides a similar overview, but shifts focus to the artworks themselves. She proposes three models; ‘practice-based research’, where “artistic practice . . . interrogat(es) a pre-determined theoretical or technical issue” (Rubidge 2005:5); ‘practice-led research’, where the questions driving the research are generated by the artist’s reflexive practice; and, ‘research into/through artistic practice’, which envelopes concepts of non-theoretically focused practice, such as professional, non-academic artists that have “pushed the boundaries of the discipline forward” (Rubidge 2005:7/8; see also Bennett 2009).

L-233

Outside of AbR anxieties over text/art binaries, the same dichotomic anxieties of thesis writing manifest in the general academic community. Kamler & Thompson, for instance, lament that “writing is treated as ancillary . . . the invisible and taken for granted labour of the doctorate” (Kamler & Thompson 2006:1).

L-234

A/r/tography

Candlin (2000:3) proposed the conundrum, “Does the theoretical or intellectual investigation take place in relation to practice, or through the accompanying text? A/r/tographers, the final model reviewed here, see them as intertwined. “A/r/tography inquires “through an ongoing process of art making in any art form and writing not separate or illustrative of each other but interconnected and woven through each other to create addition and/or enhanced meanings” (Sinner et al. 2006:1224).

L-236

A/r/tography seeks to integrate the Artist/Researcher/Teacher with a complex and ethereal methodological manifesto of lived research (see Irwin 2005; Wilson 2004) that draws upon seminal philosophical theorists. Aristotle’s consideration of *theoria* (knowing), *praxis* (doing), and *poesis* (making: see Irwin 2004) is interwoven with the ‘rhizomatic’ theories of Deleuze and Guattari (1993), and Bourriaud’s (2002) *Relational Aesthetics*, to provide a stable epistemological ground for an otherwise shifting and almost intangible process.

L-237

Irwin relates Aristotle’s notions with “*curriculum-as-lived* which is often referred to as *currere*, the Latin root word for curriculum . . . meaning “to run the course,” (which) emphasises the doing, being, making, creating, and living” (Irwin & Chalmers 2007:179; parenthesis inserted, italics in original). This running the course allows for the non-linear growth of questions and knowledge, rhizome like in their interfolding, non-hierarchical nature. From this space, emerges "attention to the *in between* where meanings reside in the simultaneous use if language, images, materials, situations, space, and time" (Irwin, 2008:106, italics in original).

L-238

It is the inter-relationship between these elements that draws from Bourriaud’s *Relational Aesthetics* (2002), where the work of art represents a social *interstice*” (Bourriaud 2002:16, italics in original), and "arena of exchange" (Ibid:17). Irwin argues that “(t)hrough relational inquiry binary opposites now become embedded and folded together and demand an interrogation of what it means to live ethically in a relational world” (Irwin 2005).

L-239

To Bourriaud contemporary art is a “linking element. . . a principle of dynamic agglutination. An artwork is a dot on a line” (Bourriaud 2002a:21). Building upon this, “a/r/tographical research calls for an interrelation between image [or creative act] and text, not that one is descriptive of the other. Visual encounters exist simultaneously with textual understanding . . . (rather than the) insertion of images into a research paper or exegesis” (Irwin & Springgay 2008:119; first parenthesis in original, second added).

L-240

The a/r/tographic method is built around a series of ‘renderings’ – the “theoretical spaces through which to explore artistic ways of knowing and being research (Springgay et al. 2005) such as “Contiguity”; the “interrogations of interstitial spaces . . . (where) processes and products are not separate and distinct but are in contiguous interaction” (Irwin 2005; see Irwin 2003 for jazz analogy). Other ‘renderings’ include the reflexivity of “Living Enquiry”, and the use of “Metaphor and Metonymy” to illustrate relationships, thus making “sense of the world through our senses” (Irwin 2005; Springgay et al. 2005). “Openings” create fissures and ruptures in interpretation, through which move “ideas before flowing back in response” (Irwin 2005), and “Reverberations” “let other's work and words resonate throughout” (Irwin 2005; see also Springgay et al. 2005; Beare 2010).

L-241

This method, which “incorporates the transformative practices of action research and autoethnography” (Bickel 2006:118; see also Porter 2004; Lymburner 2004; Davidson 2012; Springgay 2004), encourages the researcher to move “beyond the use of existing criteria that exists for qualitative research and toward an understanding of interdisciplinarity, not as a patchwork of different disciplines and methodologies, but as a loss, a shift, or a rupture where in absence, new courses of action un/fold” (Irwin & Springgay 2005; see also Lincoln 2009).

L-242

“A/r/tography is a contemporary challenge to the limitations of compartmentalized disciplines” (Bickel 2006:121; see also Pente 2004; Irwin 2007; 2003), where “researcher may or may not seek to answer a specific research question. Instead, sources may generate even more questions and take new and unexpected directions in the course of inquiry, often making sources both the process and product of arts-based

research" (Sinner et al. 2006:1242; see also Irwin et al. 2006; Eisner 2008). As such, "an assessment of any a/r/tographic work will depend upon its compelling ability to yield access to new insights about, a particular phenomenon" (Irwin & Springgay 2008:119; see also Nath 2004).

L-243

"(A)/r/tography . . . open[s] up conversations and relationships instead of informing others about what has been learned" (Irwin & Chalmers 2008:118). This openness aligns well with social outreach, and collaborative projects, such as Irwin and Springgay's international *Richgate* project (Bickel et al. 2011) and Beare's (2009) *Theater of Possibilities* project, performing complex pedagogical roles. Bickel and colleagues (2011) propose "the complexities of a/r/tography as a practice of collaboration" (Ibid:88), "is best understood and practiced with a combination of theoretical guidelines and practices that accrue from relational aesthetics (the artist's contribution), relational inquiry (the researcher's contribution) and, relational learning (the teacher's contribution)" (Bickel et al. 2011:87).

L-244

Residing within a/r/tography lie other phenomenological methodologies, such as 'practitioner action research', (Davidson 2012). Of these it is the aforementioned autoethnography that must be considered. Growing from Malinowski's (1967) journal studies, (see too Varendonck's (1921) autoethnographic contribution) this method validates its rigour through openness. Such "highly personalized accounts . . . draw upon the experience of the author/researcher for the purposes of extending sociological understanding" (Sparkes 2000:21; see also Ellis & Bochner 1999; 2006 Ellis, Adam & Bochner 2011; Ellis, 1999). It prevents "(k)nowledge and theory becom(ing) disembodied words on the page" (Ellis & Bochner 2009:431). The act of exposing the author confronts the researcher as "contaminant" (Wall 2006:2; Ellis 1999; Kreiger 1991:47) fallacies of traditional methods that treat authors as veritable "Victorian children – seen, but not heard" (Sparkes 2000:22).

L-245

Pelias (2003:372) expressed his concern about his autoethnographic account of his lectureship, quoting James Clifford (1997:88), "[o]ne could hardly count on being awarded a Ph.D., or finding a job in an anthropology department, for autobiographical research". But this is *entirely founded in tradition rather than data*. Sparkes (2000), who published an autoethnographic study of his physical demise as an athlete made the

point that if someone else had used the same methods to establish the same data he used autoethnographically the research would be seen as valid.

L-246

Wall (2006) wonders if subject positioned methods such as autoethnography, are more philosophy than methodology, a position that presumes that methodologies are not founded in philosophies.

L-247

Conclusion

Having reviewed over 900 publications in preparation of this chapter, it is clear that immense variability inherent in academic dialogues could enable justification for almost any course of action, let alone methodology. As methodology is about a course of action distilled from the field of knowledge, the grounds for this method's course of action is now firmly founded. The next chapter elucidates the methodology applied, which addresses Cahnmann-Taylor concern that "(t)here are still more researchers writing *about* arts-based research criteria than those producing examples of what it looks like..." (Cahnmann-Taylor 2008:12).

L-249

Epilogue

One scholarly issue that has emerged from this literature review is a personal concern where scholars present data which conflicts with generally available knowledge. For example, Sullivan's (2010:11) cites, unchecked, Efland's claim of 'Pre-Raphaelite Brotherhood' being 1860's American artists, a claim failing to acknowledge the manifesto and exhibitions by the British artists of the same name in 1849/50, a prime example of the generation of 'infact' (see definition dot D). Another relates chronological dates used by Pizzaro (2006) that does not align with other historical data. Another is Barrett's (2007) claim of artists being suspicious of theory. Unfortunately, Western art history is replete with "ists" and "isms", which suggest the suspicion is not of theory, but atomising classification. While recognizing my own academic foibles, it is

clear such elemental flaws undermine claims of credibility, despite the validity of their arguments.

L-250

Chapter 3

Methodology

Detail of the method and how it will be applied.

Having clarified the values and processes in art-making that are useful, this section considers the actual processes practiced to generate the concepts, tracing them from art-making, through to their application as interdisciplinary tools for pedagogical practices. Being an education-based thesis, this project sought to consider the pedagogical potentials and implications of applying art practice within the learning process. It will not seek to fulfil the criteria that may be set to assess creative-based research in fine arts or other disciplines.

m-2

Introduction

Throughout the process of making the artwork elements of this thesis, details within the process inspired questioning. Potentially arising without traceable cause, the questions could relate to the concept being explored through the artwork, or arise apparently irrelevant to the topic at hand. It is proposed that these questions generate from the cognitive space allowed within the art-making processes, combining the intrinsically motivated exploration that is art, with accumulated pre-existing knowledge. This thesis proposed that the very processes in art-making, allow for both 'sagasuation' – a cognitive infusive process which allows for the emergence of deeply comprehended knowledge, sometimes identified as 'insight' (see dot D)- and the motivation to enquire into existing pedagogical resources.

m-4

The cognition within the sagasuating space, is proffered here as a pedagogical advantage, chiefly through the provision of time for the distilling of understanding and the generation of questions. Within those questions resides the motivations for a meta-analysis of knowledge, which allows for the generation of new knowledge. This new knowledge is a convergence between both knowledge pre-existent within the mind, and knowledge pre-existing within the epistemological tradition of academia, and combined in new and novel ways as part of the research project. Through the journaled recording and correlating of questions that arose from an autotelic and holocentric immersive art-

making journey, this research intended to consider the effectiveness of art-making to generate the “enhanced environment” that Greenfields (2008) refers to as a means of developing greater neural connection, and the resultant deep knowledge.

m-5

This space of sagasuation is a means of applying the A/r/tographic methodology, a form of “living enquiry”, “(c)ontinuously asking questions, enacting interventions, revising questions, and analyzing data, in repeated cycles” (Irwin 2010:42). The phenomenological focus of A/r/tography provides the internal means of considering a phenomenon incapable of being reviewed externally.

m-6

The means of reporting this research is contained within the theory, with the results reported as intertwined image and text.

m-7

Theoretical Motivations

Almost all sagasuation research uses either convergent or divergent creativity psychometrics as research instruments in ‘sterile’ controlled conditions. The few remaining studies, utilise phenomenological methods (eg. Varendonck 1921), or are anecdotal stories (eg. Poincaré 1913). Having discussed the strengths and weaknesses of these psychometric methods (see dot L16; L36), this current research removes such practices from sterile laboratories back to lived conditions, allowing the ‘natural setting’ of the studio environment to nurture ‘sagasuation’. It seeks to address the “anybody’s guess” that so concerned Barron & Harrington (1981:443), by asking the respondent for subjective knowledge. For without a real-time neural scanner to identify and log all cognitions, the only means of reviewing the occurrence and operation of such cognitions is phenomenologically.

m-9

There is also a dearth of phenomenological, first-hand research into the application of space, both environmental and the ensuing cognitive capacities, (and the subsequent arising questions), as an interdisciplinary learning process (see Leavy 2009).

m-10

A/r/tographic Methodologies

The methodology applied in this research is a hybrid 'action' method developed to enquire into knowledge unavailable through traditional methodologies. A/r/tography is subjective. It is a research methodology that studies knowledge residing in the space between binary notions, seeking to overcome dichotomic perspectives, such as those between internal and external, or theory and practice.

m-12

A/r/tography is founded in *Currere*, (the Latin root of curriculum), itself a verb rather than a fixed noun (Irwin 2010), and is a process of practice that resides in the space between binary theoretical notions. Irwin argues for the importance of such practice, "for practice without theory is active and relevant, whereas theory without practice is abstract and lacking significance" (Irwin 2003:64).

m-13

A/r/tography is thus a practice-based research methodology about living inquiry which "incorporates the transformative practices of action research and autoethnography" (Bickel 2006:118). The method "employs all forms of qualitative data collection (interviews, observations, document collection, field diaries, etc.), yet it also involves the process of artistic engagement (creating artforms in response or collaboration, or as evocation, or provocation) (Irwin 2010:42, parenthesis in original).

m-14

The method emerged from a converging space between Deleuze & Guattari's (1987) complex and interrelated theories of 'rhizomatic relationships', and Bourriaud's concepts of *Relational Aesthetics* - art as "state of encounter" (Bourriaud 2002a:18). Founded in such dynamic theories, A/r/tography applies concept rather than pursuing strict methodological techniques. Concept as process allows for "inter-subjective locations of understanding" (Irwin 2010:43; see also Bal 2002), in turn opening the interplay between the rendering methods applied to knowledge. This interplay is illustrated through the thrusting slashes subsumed within the word *a/r/tography* itself, with each slash rendering the confluences of contiguous identities (Artist/Researcher/Teacher) within the researcher.

m-15

The rhizomatic nature of A/r/tography "allow(s) for multiple, non-hierarchical entry and exit points" (Beare 2009), interstitial spaces between meanings, questions and the

knowings. In-between spaces are “not merely physical locations, or objects, but a process, a movement and displacement of meaning” (Irwin and Springgay 2008b, xx). It is a space of possibilities where *currere* burgeons. The in-between is the space of sagasuation - the stewing - after preparation, but before ingestion.

m-16

Upon these A/r/tographic foundations is laid knowledge, emanating from the literature review and cognitive processes proposed to generate insightful thought. Wallas’ (1926) four stages of thought (preparation, incubation, illumination and verification), bolstered by contemporary neurological evidence (see dot L91), was combined with Csikszentmihalyi’s concept of ‘flow’ (Csikszentmihalyi, 1996) - a cognitive space of immersion within the chosen task¹ (see dot L47). Such meditative immersion would, however, preclude the meta-cognition required to monitor the emergence of thoughts and ideas during the sagasuation period. Accounts of sagasuated insight events by noted scientists, such as Poincaré and Hemholtz, suggested their possible generation in immersive cognitions, but prior to the absorbing meditative space of ‘flow’. This pre-‘flow’ cognitive space correlates with both Wallas’, and recent researcher’s (Sio & Ormerod 2009) application of ‘interpolation’ tasks, acting as means to distract the mind from designated problem tasks during a sagasuation period.

Footnote; Once this space is entered “distractions are excluded from consciousness” (Csikszentmihalyi 1997b:8), and so, being in the space of ‘flow’ allows no ability to record. It is also unsuitable in this research as ‘flow’ is a space of production, rather than exploration, as “very clear goals” (ibid) muddy the openness to possibility this research seeks to employ (Irwin, 2004).

m-17

This research, in attempting to study that which cannot be studied from outside, recognises its lived basis of enquiry, allowing for external impacts upon the concepts explored to influence the resulting perceptions. The integration of broad considerations becomes a key strength of A/r/tography, both in its recognition of the role of the researcher in the research, and the role of process in establishing understanding.

m-18

While this research sought to generate potentially insightful understandings, there was no specific problem to be resolved – the foundation of almost all incubation focused research. Instead, an open and expansive learning process was the goal. As such, the

application of art-making was intended to provide both the ‘interpolation task’ to allow the undirected non-conscious thoughts to emerge, and engender curious and expanding enquiry, as well as a means of reporting results through publishing by exhibition.

m-19

Definitions

Sagasuation is a term used frequently throughout this research. It is an neologism, etymologically morphing from the word *sagacity*, that expands the conceptual complexity of the cognitive space that allows for non-conscious thoughts that align and correlate pre-existing knowledge. (See dot D, L72).

m-20

Methodology applied

The methodology of this research sought to provide space for both sagasuated correlations of information, and subsequent enquiry. Preliminary knowledge of the existence of sagasuation’s effects had emerged from earlier, non-methodological art-making exercises, conducted by the a/r/tographer.

m-22

To generate these cognitive spaces, a schedule was devised to allow a variety of circumstances. Ninety minutes of free thinking time at the beginning of each study day was scheduled, with an ‘interpolation task’ of creating non-product art works. This period was followed by 2 hours allocated to research and writing of papers and the exegesis. Following lunch, four hours was allocated to the production of product-focused artworks, intended to be exhibited as part of the research. The day finished reviewing literature.

m-23

The research was conducted in a controlled environment through the scheduling of space/ time - its occurrence in the same location¹, allowing both the exclusion and inclusion of various external stimulus, such as music and podcasts.

Footnote; Certain occasions required variation to the location of the afternoon period, such as data collection expeditions (see dots m42; r66).

m-24

As stated earlier, this research has an 'n' = 1 - a self-selected, primed, phenomenologically focused researcher – the a/r/tographer. The respondent/researcher/author (me) is a post graduate, distance ed. student, who identifies as a female, Quaker, and aged 46 at the commencement of the study. The respondent has a history of creative skill based employment, and was finishing up as a working commercial photographer at the commencement of the study. The respondent's academic background is limited, recovering from a failed final year of secondary education to achieve a Masters of Visual Arts degree. (It is important to note that respondent completed only two years of tertiary education prior to this study, and is not drawing upon years of research practice skills in conducting this project. This clarification is included here simply to assist in assessment of the potential pedagogical value of the method.)

m-25

To overcome some of the conflicts inherent in such self directed/selected data, proscribed parameters were limited, so-as-to 'let things happen' and note what comes out the other end. Containing what may enter the process will inevitably influence what comes out the other end, and such broad parameters were intended to allow for experimentation in the development of creative conceptual thoughts and notions. Subjective review is also known as reflexivity, and is a key strength of the art-making process, and thus not "controlled" out of the research.

m-26

Processes Details

The methodology of the morning period (12/3/09-6/10/12) applied 'interpolation tasks' to create a sagasuation space for ideas to germinate. It was not about producing a product, but about producing a 'space', a lived space of undirected and unassessed 'play', where the physicality of the line or mark absorbed the focus of the mind from both the wash of daily concerns, and influences of assessment.

m-28

Within this space a variety of art techniques were employed, all of which resided outside of artistic methods and skills previously practiced, however, the chief media was drawing. There are a number of reasons for the application of drawing as the interpolative task in the sagasuative space of concept generation. Firstly, it is not part of

my habituated arts practice, and so it was assumed that drawing would disconnect the process from the product fixation of creativity identified and criticised by Runco & Richards (1997).

m-29

Secondly, drawing lacks social capital in the art market terms. The art of 'drawing' is substantially poorer in terms of price, even for meticulously drawn images. Thirdly, the applied process of drawing used pre-existing shapes and patterns drawn from existing images in my archive of professional photographs created over the past 30 years. This removed consideration of the image structure, shifting the 'art-making' to an almost 'colour-by-number' automaton process. The choice of using existing images was made to ensure that there was no period of 'freeze', in attempting to determine which way the image may begin. Getzels and Csikszentmihalyi (1976) found the period of time spent generating potential images was a determining factor in 'Big C' (Csikszentmihalyi 1996), or 'eminent' (Runco & Richards 1997) creativity, so the inclusion of predefined shapes as the interpolation task was deliberately aimed at not being "Big C" creativity (see dot L26). The images applied were already of an appealing structure and allowed a guided but free space for the mark-making to occur. As such, the mark making became the product/goal.

m-30

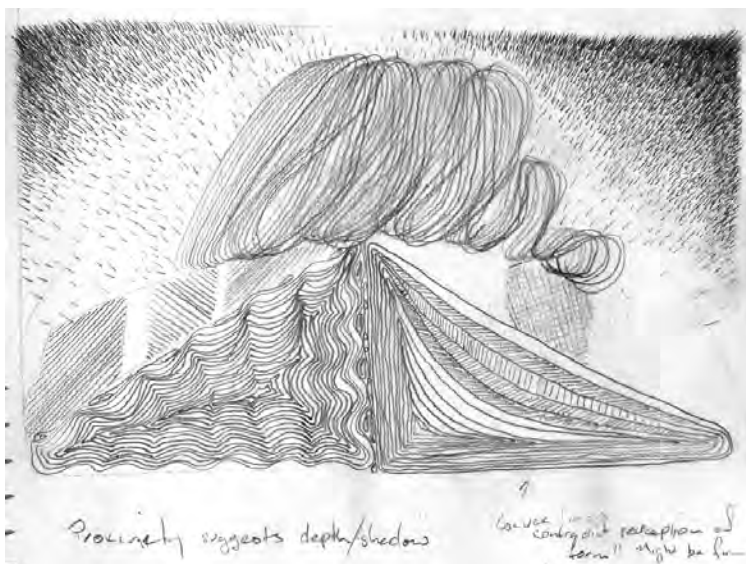
The media included charcoal, pencils, ink, crayon and wax. Each medium/method was explored for a set period of one month, and each drawing carried out in varying timeframes dependent upon the detail and technique applied to the work. The techniques varied from random doodles, contour drawings, tonal drawings, colour fields, colour application, and included a period of wax carving. (A selection of these images is included in the appendix section of this exegesis. See dots xs 1-13)

m-31

The variety of media applied in each stage of this aspect of the research, apart from being learning events in their own right, was intended to allow for correlation of art-method with the subjective valuations of the concepts that emerged during their production. The variety of methods were also intended to allow for consideration of the potential intensity of the sagasuating interpolation tasks.

m-32

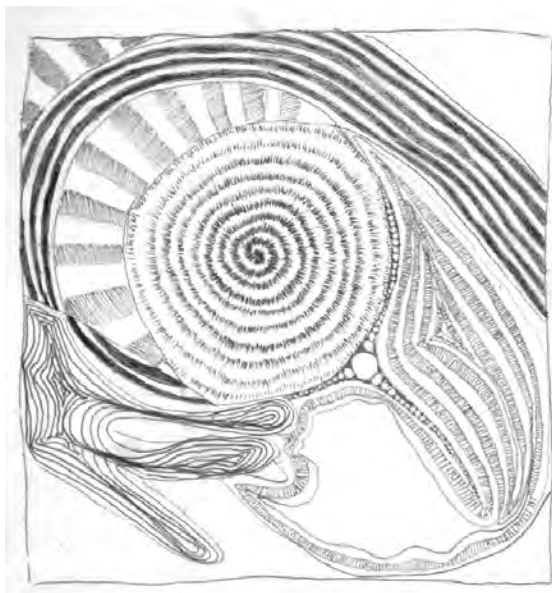
Examples of the drawing programme. All images A4



XS-2 20/1/11 Graphite on Paper



XS-4 24/1/11 Graphite on Paper



XS-7 7/5-8/5/11 Graphite on Paper



XS-8 20/5-7/6/11
Colour pencil on
Paper



XS-10 4/8/11 Crayon on Paper



XS-12 17/8/11
Crayon on Paper

Ideation

During the daily sagasuation period, questions, concepts and ideas that emerged were recorded briefly as textual notes and logged as part of the journaling process. Emerging thoughts, occurring over the period of 721 days, were inevitably filtered and assessed for value, thoughts deemed interesting or relevant to the learning process were subsequently recorded. The criteria were based upon initial cognitive and visceral responses, filtering out routine domestic thoughts, etc. Preliminary responses to the thoughts classified them as themed, or not.

m-34

Psychological and neurological research (see dot L103) proposed a wide gamut of temporal periods best suited to sagasuated insights/understandings. Correlating the recorded concepts - the data generated in this period - with the conceptual outcomes, was intended to allow for identification of catalysts for such thoughts, and perhaps provide some evidence of temporal periods between input and 'insight'. Emergent themes would potentially illustrate variations between internal/emotional triggers and external intellectual/theoretical triggers.

m-35

These concepts are defined as such;

Emotional - Intrinsic interpretation and response to psycho-social events; embodied, relational, psychological processes (Lazarus 2006); "internal feeling states, emotion-related physiological, attentional processes, motivational states" (Eisenberg & Spinrad 2004:338). Key factors; involuntary, unintended.

Intellectual/theoretical - Combinations of intrinsic and extrinsic knowledge. Ideas that are classifiable within the epistemological knowledge base, expressed as semiotically communicable knowledge.

m-36

Post drawing time

Following the sagasuation period, two hours were allocated to researching and writing the concepts into an academic format. Themed concepts emerging from the sagasuation period were used as catalysts for further and deepened enquiries in preparation for the writing of essays. For example, an initial and ongoing theme within this thesis is that of how the atomisation of knowledge results in mis-knowledge.

Being based entirely in the interdisciplinary concept required a broad and evolving review of literature. There were no enclosing parameters, resulting in research 'surfing' epistemological fields, in ways similar to current social internet habits. The journeys were tracked and recorded through the chronological filing of academic papers, and through the recording of details and summations of those papers in an *Endnote* database. This research period (2009-2012) was intended to produce learning outcomes proposed through the method.

Emerging from the sagasuated concepts and subsequent literature search, the writing allowed the expansion of the notions into the more traditional academic realm. The process of elemental enunciation was intended to further clarify the emergent concepts. The practice of academic writing was also an intended learning outcome for the researcher.

Afternoon art time: Variation from morning

Afternoon periods of four hours were allocated to the production of artworks for publication/exhibition. This period was intended to allow for extrinsic motivational influences to be reviewed in comparison with the morning session. The greater external influences were by necessity aural, chiefly through listening to music or podcasts of *ABC Radio National* programs, such as *All in the Mind*, *Artworks*, *Philosopher's Zone*, and *Big Ideas*. These programmes were regularly listened to prior to the research.

The afternoon period applied various media, and occurred in various locations, For example the imaging of the *Google Earth* series of works occurred at the desk used for morning sagasuation periods, while experimentation with drips and wave viscosity occurred in the studio/workshop. Concepts emerging from these sessions were, where possible, recorded in the same manner as the morning sessions.

The works emanating from the afternoon sessions, having emerged from the same cognitive space and process as other recorded data, can thus also be seen as data.

Within their image remains traces of both data collection process and sagasuated thoughts that may never have translated effectively to textual semiotics. As is the nature of art in an A/r/tographic methodology, these works also contain within them the analysis and publication of the gathered data, issues that will be considered shortly.

m-44

Development of method to include environmental data.

These research periods occurred throughout the candidature period, but were in three distinct periods. Initially, (12/3/09-14/7/10) the journal notes were recorded anticipating alignment with subsequent literature research. As the study progressed (30/7/10-23/02/12), it became apparent that recording the intrinsic and extrinsic environment in which the data was generated would assist in identifying patterns. As such, a simple questionnaire (as a *FileMaker Pro* database) was designed to record potential influences occurring at the time of concept awareness. This questionnaire of Likert scales (Likert 1932), included queries of whether the study environment was one of production (for assessment, including publication) or playfulness, and so included data from outside of this specifically constructed cognitive space. While consideration was given to the possibility of recording environmental influences at regular periods, it was deemed that the environments' relationship with the ideation was the relevant factor, and further recording would likely confuse analysis.

m-46

Factors that potentially influenced the confluence of concepts and ideas were identified and recorded based upon these criteria;

Health: (1= poor, 5= good)

Nutrition; consideration of dietary inputs over the past three days.

Rest; consideration of effective sleep period and potential impact on cognition.

Hydration; consideration of influence upon cognitions.

Local environment: (1= poor, 5= good)

Comfort; consideration of thermal/ humidity comfort, or distracting physical irritants, such as insects.

Ambient noise; consideration of potential impact of distracting noise.

The following responses were recorded through 'radio' buttons from a pre-existing list, allowing multiple selection.

External inputs; choice of- None, Radio, Music, Podcast, Academic paper.

Light; Consideration of potential influences of wavelength and luminosity.

Choices – Sunny, Cloudy, Roomlight, Desklamp.

Weather; choices – Bright, Dull, Wet, Windy, Stormy.

Inspired?; instant value assessment of the thought – yes/no.

Mental Production Stage:

Production; consideration of mode of production at ideation.

Choices - reading, writing, art conceptual, art making, daydreaming, unrelated activity.

Production workmode; consideration of concentration intensity and deadline pressure.

Choices – deadline, resolved (process directed), content (goal directed), 'Flow' (Csikszentmihalyi's notion see dot L47), unrelated activity.

Experimental workmode; consideration of variety of experimentation methods.

Choices – fun 'play' (undirected), exploring (directed), lost (disoriented).

Concentration period; period of time within uninterrupted sagasuation space.

Range; less than 15minutes – greater than120 minutes.

Psychological wellbeing – Likert scale radio buttons –(1,poor and 5= good).

Psych general; subjective consideration of psychological state in preceding days.

Prior to session; Subjective consideration of psychological state immediately prior to session.

Psych @ concept moment; Psychological state at moment of ideation.

Level of conscious thought prior to session.

Level of conscious thought at ideation.

Progress satisfaction; consideration of anxiety level at project advancement.

Initial Valuation; Consideration of motivation interest in the idea.

Motivation; Subjective consideration of enthusiasm for project.

Conceptual Stage; consideration of alignment with project schedule.

The data was recorded by 'self-report' observations, tied to the journal note/artwork link. This data was intended to be presented visually as a graph. The triangulation of these datasets enables interpretation of the events that may have contributed to the cognitive responses. Each of the datasets remains available for review.

m-48

Proposed analysis of data

"many problems in social science research . . . cannot easily be addressed in a traditional linear manner" (Brunk 2002:201).

m-50

Corresponding with Bourriaud's (2002) Post-Modern notions of *Relational Aesthetics*, and the rhizomatic foundations of A/r/tography, this research acknowledges the role of the viewer/reader in analysing the knowledge generated within the study. As the knowledge generated is not complete until the reader/viewer engages in a dialogue with the research, analysis remains open allowing the reader/viewer to generate their own knowledge. As shown, this is the case with all research, but is especially relevant in the complex and shifting space of subjective human knowing.

m-51

Having said that, this research can present some correlated analysis of the data collected to allay potential anxieties about methodological validity. The variety of data recorded in this project demands a number of analysis methods.

m-52

Analysis of the progress from concept to output, either as text or image, can reveal this method's pedagogical value. Consideration of this required correlating the journaled concept's relational themes and tracing the search of literature that the concept inspired. The intention was to consider how the emergent concept influenced the resulting image or text. (While the ideation was open and undirected, it was proposed that such open structure contributes to educational development).

m-53

Creating artworks founded in the knowledge emerging from this study is inherently an

act of analysis, as is the subjective analysis that occurred at the moment of ideation. Both these forms of analysis, having been identified, have been reported.

m-54

Analyses of the 262 journaled notions that emerged from the period have been distilled into themes, analysis of time of day, and correlation between initial and current valuation.

m-55

Analysis of the environmental data is presented in the exegesis as a series of images to illuminate patterns that may emerge in the viewer's perception. The images are displayed as a chronologically animated graph, allowing analysis of the relationships between the twenty five factors recorded with their corresponding notions, over the duration of the research, as well as presenting each individual record (see dot RD-19).

m-56

Reporting processes

Presentation

This thesis is, at its core, undirected. The research generated from the method is "rhizomatic" (Irwin et al. 2006), autonomous, unshackled, growing where it needs to through reflexive enquiry. The presentation of the data will also, by necessity, be largely undirected, which may appear problematic when the purported purpose of research is the intentional contribution to new knowledge (Biggs & Büchler 2007; 2008). However, the theories employed in this research demonstrate knowledge transmission always has two parts – that of generation, and that of interpretation, by the writer and reader, or in this instance the artist and viewer. While Eisner may suggest that "from a purely intellectual perspective, the exploration of alternative forms of data representation is simply a symptom of a fertile imagination seeking to discover its limits" (Eisner 1997:5), methods of presenting data a; require suitably parsimonious imagination, b; acknowledge the presentation's methodological influences on interpretation, and c; acknowledge "the ultimate meaning of the artwork or scientific work is no longer merely understood as static, predetermined, and formal but as contingent on and correlated with the type of receptivity it generates" (Bindeman 1998:69).

m-59

Biggs, amongst a number of scholars, argues for the deliberate limitation of potential meanings in research. "If the aim of research is to communicate knowledge or understanding then reception cannot be an uncontrolled process" (Biggs 2003:6). Having demonstrated implementational failures of this goal, both juridically, and academically (see dot xt1), opens possibilities for multiplicity of knowledges to be shared and built upon, rather than caged and tamed. In the context of artworks, allusory meaning subverts authority, as the ability to remain 'correct' and 'authorised' crumbles when there is no stabilised ground to build power upon (see de Certeau's 1984 concepts of 'place'; or Berger 1972). While some elements of the data are analysed, either visually or textually, the method applied, stemming from methodological fissures, avoids seeking to define the outcomes demanded by Biggs and cohort. A Quaker phrase, "speak truth to power" illustrates the validity of subversive presentation methods, and as a 'Quaker by conviction', I feel compelled to inform 'naked emperors'.

m-60

The presentation method employed in this research presents challenges to the traditional means of communicating research results. The uncharted nature of this research, both in method, and content, allows for further experimentation in the presentation of the research. As such, reporting of this research will occur in true A/r/tographic style, with image and text interwoven, both as exhibition and exegesis.

m-61

Exhibitions

Completed artworks have been published through exhibition throughout the research period. The concept of 'equivalence' (Strand 1998) correlates visual publishing with journal publishing. Each of the exhibitions, borne of conceptual foundations, relate knowledge and concepts that generated out of the sagasuation space. Within the exhibition space text subverts the potentialities in the open, allegorical and abstracted meanings of visual arts. As such, text was not included beyond the bounds of the images, for example, ten exhibited works contained elucidative textual reference, namely the *Google* logo and geographical location.

m-63

Textual Exegesis

The textual presentation of this research is enfolded within the concept driving the research - that of isolated 'dots' of knowledge, that when tied together become epistemic maps, that when viewed from a distant perspective present patterns.

m-65

Having emerged from this research as veritable conceptual 'dots' (journalized concepts), the reporting method presents the text generated in this research in two distinct ways. Firstly, the emergence of themes from within the sagasuation space were combined and congealed into essays and conference papers. These papers are manifestations of the inter-disciplinary learning emanating from this research. Built on concepts rather than disciplines, the enquiries expanded to consider aspects that were deemed relevant. These papers journeyed through very diverse topics, such as, anthropology, sociology, Indigenous Australian epistemologies, and entropy rates of modern composite materials, These are contained within this exegesis as appendix dots.

m-66

As is already obvious through the reading of this exegesis, this research's second method of textual semiotic presentation lies within an image. Beyond aligning with the theory prompting this research, the method of presentation is an exploration of, amongst other things, contemporary non-linear knowledge communication methods, and one of the oldest and most successful knowledge transmission methods to have existed –that of Indigenous Australian epistemologies. (The ethical consideration of referencing Indigenous knowledge is considered in both the ethics section of this chapter, (see dot m95) and the appendix essay on appropriation – dot XA1). The use of the touchscreen is as an artistic interpretation, rather than a technological development.

m-67

The 'touchscreen' presentation of the exegesis incorporates all the exegesis text as 'pop-ups' within a cohesive image of dots – 'dots' of knowledge. Reading of this self-referential image occurs on a multiplicity of layers and levels. Initially, the visual structure of the image elucidates the contextual relationships within the 'dots' of text, with colour and proximity correlating the matter of each dot to those around it, isomorphically revealing the research's knowledge pattern (see Hofstadter 2000:49-50; Kepes 1995; Ramachandran & Hirstein 1999; for discussion of isomorphism). As "isomorphisms induce meaning" (Hofstadter 2000:49) patterns relate an order of flow

in the text, with each dot numbered sequentially within each chapter. –ie. methodology chapter paragraph 14 is M14. This enables citation, and a sequential reading, if required, as “(n)ot knowing where to go and what to look at . . . (results in) indecision and anxiety (which) make for tiredness” (Marling 1997:83, in Gröppel-Wegener 2004; parenthesis added).

m-68

However, as convenient as lineal reading has become, having developed through years of refinement, it presents authorised interpretations, potentially limiting the complexity of the extracted knowledge. Textual elements in this exegesis open meanings by permitting rhizomal (Deleuze & Guattari 1987; Irwin 2004; 2006; Springgay et al. 2006; Balkema 2004) reading, with “multiple, nonhierarchical entry and exit points. . . , with one point connecting to any other point. Like a mesh of lines on a road map, there are no beginnings or middles, merely in-between connections between points” (Beare 2009:163; noting the compliance with Doctoral requirements for a title page etc.). This method generates “constructions of knowledge as infinite and in-process” (Winters et al. 2009:8). (See Hofstadter 2000; Derrida 1974, for other examples of multiple reading structures).

m-69

Presenting the exegesis digitally takes advantage of the substantial contemporary publishing advantages available in transferring knowledge. The use within the exegesis of chronologically animated graphs, documentation video and imagery, and links substantially increase both the quantity and quality of information available for readers, and other researchers.

m-70

The validity of this presentation method will, and can only be assessed, subjectively, through use, both academically, and more generally upon the web (Joshi & Nikose 2010; Norris 2008). The subjective reasoning is justified in assessing this presentation model, and validates the subjectivity deeply folded into this research.

m-71

Validity of methodology

Validity issues within this exegesis apply, among others, to the subjective review of ideas prior to journaling that occurred within this study. These complications also occur

within any study involving humans. An ‘impartial’ researcher, and their ‘subject’ both have the reflective space to vet any answers or responses prior to committing them to a report. As such, the method is suitably applied in this research.

m-72

Arts validity

Discussion of the validity of art/practice as research has been extensively considered in other chapters of this exegesis (see L186, I7). Issues such as the likelihood of Eisner’s anxiety over the *Rorschach syndrome* (Eisner, 1997:9 - where each viewer/reader confers their own idiosyncratic meaning) may be relevant, depending upon discipline and objective. However, the method applied in this research does allow the knowledge to be contextualised within the needs of the academic audience, meeting Biggs & Büchler’s (2008) criteria for Practice-based Research.

m-73

The subjectively heuristic nature of this research is unavoidable. Theological philosophies which are central to the researcher’s world view have identified the integral nature of knowing (eg. Thich Nhat Hanh 1968). Emanating from the same intellectual/emotional locus, this, like all studies, is a subjective seeking. To seek inherently illuminates an awareness of absence, revealing things other than academic knowledge, if only as side effect to the required contribution to culturally cumulative knowledge (Biggs & Büchler 2007; see dot L220).

m-74

Subjective reporting bears validity in other disciplines. "(S)elf-report personality measures consistently maintain favorable comparisons with personality measures using other methodologies" (De Neve & Cooper 1998; see also Diener et al. 1985; Flett et al. 1988; Korte et al. 2010; Larsen et al. 1985; Prochaska & Norcross 2001; Wrosch et al. 2011; McCrae & Costa 1987). The interdisciplinarity of this research project builds structural strengths through concept, which provides clear methodological validity.

m-75

Methodological Limitations

Assumptions made within the methodology

Assumptions guide all research. Some, clad in the pretence of objectivity, still remain founded within assumption that we can ‘know’, and that the results will be relevant to

broader comprehensions.

m-78

Within this research lies the assumption of generalisability, that the particular knowledge will relate to the generalised fields within which it resides. Other assumptions, such as personal capability to complete such a project, are seldom enunciated, but are core to the commencement of any project.

m-79

While the recording of emerging thoughts is a valid method, it inherently carries an assumption of relationship with the non-conscious thoughts. While both empirical (eg. Christof et al. 2009; Jung-Beeman et al. 2004) and anecdotal experiential evidence (eg. Poincaré, Hemholtz), support the theory of this relationship, the recognition that non-conscious thought is not a lineal and rationalist process must be acknowledged. Given that, there may be no direct links between the non-conscious thought of sagasuation and the emergence of thoughts occurring in the same time periods.

m-80

Methodological Conflicts

Within the method's application of a sagasuation period lies an inherent methodological conflict – that of interrupting the research period to record the emergent concepts. The recording interrupts the very process purported to generate the concepts (see Schooler et al. 1993). An alternative was to voice record the ideations prior to recording them textually within the journal, which proved equally distracting due to the technical requirements of recording, and subsequent reinterpretation during annotation. This issue remains an unresolved methodological conundrum.

m-81

Repeatability Issues

There is an inherent conflict when scholars seek to “replicate” a study which revolves around phenomenological research, especially when explored and expressed in the non-semiotic forms. Key to repeatability is the limitation and control of factors influencing outcomes in the research. Heuristic phenomenological research, often used in qualitative, arts, and practice-based methods, while meeting research criteria through the provision of new knowledge, cannot control all factors involved within the production of the knowledge. **To do so runs counter to the strengths of qualitative**

and practice-based methodologies which provide knowledge that all factors are not controllable. These strengths clearly illustrate these method's challenges to the simplistic assumptions that factors, let alone all factors, can ever be controlled.

m-83

The knowledge this research generates is a method that in itself is repeatable. However, as is the case for all creativity research (Batey & Furnham 2006), the plethora of influences occurring throughout the study cannot be entirely isolated. An integrated mind (and cognition itself) uses a variety of available information to generate responses. The responses generated out of this study cannot be isolated from factors outside either the researcher, or the study. As such, external factors beyond the control of the researcher have influenced the research direction and, as a result, outcomes. Significant events, such as the death of both my beloved life partner and my Father, have influenced both the direction and the outcome of the research, and is unlikely, and definitely undesirable, to ever be included in the replication of this study.

m-84

The other "repeatability" issue invoked in practice-based research is that of intellectual property rights and citations. The intellectual property rights inevitably become problematic when arts, or practice-based research uses the idiosyncratic techniques and styles of an arts practice within the process or content of the research. Artworks, such as Mark Rothko's colour fields, convey new knowledge, but the replication of research practices, such as Rothko's, which results in data/products appearing to be Rothko paintings, is either valid research, or appropriation and plagiarism. This is even more complicated when the artist is herself influenced by other artists, or theorists (Rothko himself was influenced by Barnett Newman). Within the academic realm there needs to be room for such replication.

m-85

The issue for pedagogical practices resides in the inability to adequately reference non-semiotic knowledge within the non-textual form. There is no provision within the art methodology of inserting citation references. Jean-Michel Basquiat 'referenced' inordinate numbers of artists, chiefly Cy Twombly, as has Magritte, Duchamp, David, and a plethora of important Western artists. Like all referencing, pre-existing knowledge allows for comprehension of reference, but Western academic epistemology marks such references with signs denoting the source. Non-textual artforms do not carry such symbols, be it in dance, music, or visual arts, leaving referencing only to erudite

spectators, or textual titles. Such non-referencing is inherently problematic to traditional academic research guidelines, and may potentially be resolved through digital technologies.

m-86

Existing knowledge/ priming

Issue of 'priming' (see Moss et al. 1997; Larsen & Deiner 1985;1987) are relevant, both in influencing the operation of the research and in its subsequent interpretation. The subjective knowledge and motivations that engendered this research project have inevitably echoed throughout the project as awareness of potential outcomes, and cannot be 'dis-(kn)owned'.

m-88

For example, priming posed difficult methodological questions (see journal summation for 22/3/11), especially while considering the evidence of the negative influences of extrinsic motivation on creativity, (see Amabile 1985; 1998; Eisenberger & Cameron 1998; see dot L61). The emerging questions proposed if it was better to have set periods with external influence and periods without, or would the mindfulness of the enforced silence influence the outcome? Put another way, if a 'quiet period' is scheduled, does knowledge of the intention influence attentiveness or allowance of 'mental chatter' in which ideas are sometimes embedded? The priming complication through the influence of intention is beyond the temporal constraints of this research, and so, recording of influences were restricted to motivation and ambience.

m-89

Double Blind

As Newell-Walker (2002:49) states "what is selected as significant has been influenced by researcher subjectivity, and is hard to check." As this limitation occurs in non-phenomenological research, it is equally a limitation in phenomenological/ autoethnographic/heuristic research/artographic inquiry such as this. But as this limitation does not invalidate non-phenomenological research there are no grounds to invalidate this phenomenological research either.

m-91

There are likely weaknesses in the non-linear knowledge transfer, where there is no guarantee that knowledge required to comprehend knowledge can be provided in a

timely manner. The possibility of the sociological 'McDonald's syndrome' – the desire for pre-prepared/'predigested' pulp – may undermine the effectiveness of this knowledge transfer method.

m-92

Ethical Considerations

As this research has an n=1 cohort, and the cohort is the researcher, there are no institutional ethical requirements regarding the generation of the data and protection of the participants. While it is easy to acknowledge that the participant accepts the responsibility for consequences arising from the study, it is impossible to identify long term ethical considerations that may result from the study. Professional, political and personal consequences of exhibiting and publishing highly personal data inherently carries risks which are unforeseen. There is no method of resolving this issue without anonymity, but that displaces any pedagogical value arising from the research.

m-94

Another area requiring ethical consideration is that of references to Indigenous epistemologies and methods of knowledge transmission. This is a particularly vexed issue in Western epistemology, especially in biology, pharmacology and chemistry, anthropology, and the social sciences in general, as much of the foundational knowledge in these disciplines has generated from Indigenous knowledge. These issues have themselves generated such disciplines as Critical Race Studies, and Whiteness Studies, disciplines within Western epistemology that have challenged the imperialist nature of knowledge ownership in Western culture.

m-95

Authorship is a critical facet of referencing within the entire Western academic structure, the author becoming the 'owner' of the knowledge, with rights of authenticity and citations. Historically, knowledge was appropriated from the traditional custodians uncited, (eg. Spencer & Gillen 1899/2012), in fact becoming the possession of the researchers – a currency with which to purchase the credibility of career. This is still the case with regard to copyright in Australian law (von Doussa 1998; Hardie 1998; Janke 1997; 2000). Thus, the interface between Western epistemological philosophies and Indigenous knowledge has been as problematic as the physical interface between colonists and dispossessed/colonised.

But it is critical, when considering the problems with the flawed anthropocentric worldview of Western epistemology, to be able to refer to other methods, other worldviews, to refer to ways of being and important philosophical and ideological knowledge embedded in such epistemologies, if only to avoid “the dismal doctrine that no rapprochement is possible” (Johnson 1985:6).

As such, this thesis obliquely refers to Indigenous knowledge, referencing and noting the value of the knowledge and its traditional epistemological basis. This is performed in a manner that does not plagiarise, claim authorship, subvert the value of the knowledge or methods of Indigenous knowings, or transgress rights and responsibilities of the ‘keepers of the knowledge’ specific stories or images. Instead, the thesis argues for a subversion of Western viewer’s naïve perceptions of such knowledge, as a means of challenging the current socio/environmental practices that are appropriating and colonising the future. (See paper *Appropriating the Dreaming* –Appendix xp).

This thesis ‘pays respect to Country’ through three methods. Firstly, the ongoing liaising with Indigenous communities, including Moondani Balluk at Victoria University, which clarified boundaries and specified means of respectfully honouring the people’s and their epistemological systems. Secondly, reference to Indigenous knowledge and transmission methods is included in the thesis as pedagogical content, promoting the value of Indigenous epistemologies, and ensured by conforming to Western epistemological citation requirements. It has also safeguarded against inappropriate appropriation of Indigenous knowledge by not using, or remarking on specific Dreaming knowledge, with discussion being restricted to knowledge transference methods.

Thirdly, any artworks referencing Indigenous knowledge hasn’t used any Indigenous patterns or designs, rather only pre-existing Western patterns. Artworks referencing Indigenous knowledge have been clearly identified as non-Indigenous, not offered for sale, or sold, so as to ensure they can in no way be perceived as attempting to exploit Indigenous resources of art and painting.

Respect for the wisdom and success of the Indigenous knowledge methods resides at the core of this study, having generated the initial concept, and led the intent of the learning throughout the research.

m-101

Summation

This chapter has provided the fundamental structures applied within this research. It has presented data supporting the validity of the method and the means of analysis of the data/knowledge that has emerged from this research. The application of the a/r/tographic methodology allows an open and integrated method, which illustrates the value of indeterminism. The provision within the method of variety of learning spaces allowed for sagasuated cognition, as well as more traditional pedagogical processes. In combination, these processes have engendered concepts journaled and correlated as catalysts for further and deepened enquiries in preparation for the writing of essays. The results have been reported visually, through both text and image, entwined and interleaved.

m-102

The methods were motivate by a recognition of the need to overcome the atomising habits of existing epistemologies. This method too has flaws, such as issues of indeterminism, priming and complications in presentation. However, the validity of the open process is supported by the method's ability to both acknowledge and alerts readers to flaws, allowing the knowledge generated within the research to be interpreted with the same validity as more traditional methods.

m-103

Chapter 4

Results and Discussion

Introduction

Each separate element of this project entered into during this study has been into darkness. The apparently enlightened idea wasn't sufficient to illuminate the landscape enough to reveal structured paths, only to suggest where the journey may need to head. This has been its purpose, to 'wander', not in any sense aimless, but guided by a reflexive sense of terrain. There have been few dead ends.

r-2

This chapter should simply shed light upon the research process and outcomes. However, the resultant data meanders too, reviewed but not reigned in, licensed by the incapacities of sanctioned text. As such, while this chapter traces the influences of the sagasuation methodology on the research, and the research on the subsequent sagasuation, it is a tangled explication of results obtained by odyssey, of both conceptual developments of theory, and technical developments in the researcher's -my- art-works. The chapter 'paints' an image, using a variety of 'brushes', occasionally as textual incarnations of various conventions, that co-relates an inter-play of knowledge to allude to multitudinous meaning, emerging from the completeness of complexity. Seeking to shift knowledge from the artificial constraints of Western epistemology will not be achieved by deliberately limiting potential interpretation through tying meaning to the intentions explored.

r-3

4

other than visual, preferably in words, whereas when a painting or a sculpture needs to be supplemented and explained by words it means either that it has not fulfilled its function or that the public is deprived of vision."

Naum Gabo (in Zeki 1998).

r-4

Having reviewed the concepts, means, and intentions driving the research, the chapter will consider succinctly the themes emerging from the journaled 'meditations', so-as-to allow for interpretation of the "researcher's standpoint . . . *relationship to the Other* . . . (and potentially reveal) what the researcher thinks *counts as knowledge*" (Lincoln 2009:7; emphasis in original, parenthesis inserted). It will then elucidate the pedagogical processes expounded in the theory as case study - tracked through the evolution of journaled concepts, researched papers, and artworks produced contemporaneously with the text - concepts which emerged as a conference paper. An ensuing discussion of learning journeys – the pedagogical journey, the art journey, and the phenomenologically subjective journey – considers the variety of pedagogical results from the method. The final section of the chapter considers methodological implications and problems.

r-5

"We choose lenses that are border, racial and ethnic, hybrid, queer, differently abled, indigenous, margin, centre, Other. Fortunately, qualitative research—with or without the signifiers—has been porous, permeable, and highly assimilative"

Yvonna Lincoln (2009:8).

r-6

Sprouting through these topics is a bricolage of documentational images of the data, published through exhibition, animated graphs, maps, and textual quotes from journal notes, combined and juxtaposed to reveal meanings that manifest during the study.

r-7

Learning is not always about answers. Learning is a process that may provide some answers. Answers are in themselves defining and dismissing of some learnings. Learning is a practice

Researcher's Journal entry 3/7/09.

r-8

It seems that this organic research method is itself a metaphor. If I can trace back all the thoughts and research, it would have to stem from (sic) the one pattern recognition event of the noticing of the "dot painting golf course". All the reading has stemmed from this 'point', much of it for interest in knowledge exploration, but some of it out of a need to justify what I am doing as valid.

Researcher's Journal entry 10/3/10, (parenthesis added).

r-9

Data Collection

This research proposed to trace the ideas generated within the art-making space to their engagement with academic learning. Data generated within this study has been divided into textual reporting, and graphs and other non-textual reporting, such as expressed in the artworks. The artworks both emerged from the data collecting space and are themselves expressions of data. This is inevitable as the subjective location of the data sources overlap. However, while the source overlaps, each aspect of the research space engendered a different learning. Sagasuation provided space to generate questions, which led to a pedagogical learning, while the production of artworks, which inspired pedagogical learning also led also to more practical and administrative learning.

r-11

Analysis of the content and environmental circumstances surrounding the collection of the data wasn't anticipated to be an integral element within this research. It is placed here only to expand some of the interstitial, or more peripheral factors within the research, seeking to allow for greater interpretation of results, rather than provide some form of quantitative and positivistic analysis.

r-12

Themes emerging in Journaled notes

262 journal entries emerged from a variety of cognitive spaces during the research period (12/3/09-6/10/12). The journal notes were written as *streams of consciousness*, blurted out (and included here) without the removal of dyslexic typing and half formed ideas. They perform as shorthand mnemonics for the emerging thoughts, most covering a variety of themes wending across a variety of disciplines. The themes seemed to emerge organically as a self-generating system, autopoietically forming into configurations that engendered further research of existing body of knowledge.

r-14

Initially assumed to emerge from sagasuation, the insights journaled were recorded at various times of day, and while much of the initial hypothesis was borne out in the research, it wasn't as expected. The non-product focused morning art-making period

was anticipated to be the most fertile ideation period. However, while almost 75% of the journaled ideas emerged during the art-making periods – both morning and afternoon - the morning period was only slightly more productive than the afternoon product-focused art production. Ideas deemed suitable for journaling also emerged while reading, often as tangential concepts to those of the paper/book, though these amounted to less than 3% of entries. Ideation during non-research periods, such as walking the dog, awakening, and domestic duties generated approximately 14 % of entries. The remainder generated during periods of intense research writing, almost exclusively in direct response to the circumstances occurring at the time.

r-15

The relevance of the circumstances - the externalities that Varendonck (1921) identified as the most common source of his day-dreams - can be identified throughout many, if not most, of the journal entries. The externality of methodological issues, including conceptual developments, anxieties of validity, and conflict with positivist rhetoric, were key themes in slightly less than half of all journal entries. This, interestingly, is reflected in much of the Art-based Research literature, which either demands acknowledgement of methodological validity, or riles against such requirements. While validity issues and criticisms of social power structures were dominant, almost one third of those entries considered methodological complexities within the research and means of resolving them, such as identifying the value of the annotation of external and subjective psychological data, recorded to assist in broadening the research.

r-16

The other key theme revolved around creativity, chiefly definitional (approximately one-quarter) and around one-twelfth considered new artwork ideas and production issues. External impacts, including recognition and responses to grief, amounted to approximately one in ten entries, with the remaining themes focused upon sociological considerations, which included atomization and appropriation. The remaining entries referred to subjective and heuristic personal growth.

r-17

While each of the journal entries has been grouped here by their primary topic, none can be classified simply within the range of identified themes. Inherently, the complex concepts emerged intertwined, with multiple themes incorporated and connected, as might be anticipated in a concept-based research project.

r-18

One example of the entries broad complexity is *15/4/09 devalued sorrow thoughts*. Emerging from an afternoon art-making period, it is a complex reflection upon my subjective response to being dismissed as ‘unknowing’, and the unexpected recognition of the solace experienced in sadness. This concept expanded to the new and potential ‘knowings’ empathetically expressed. “Could it be that (in) my espousing of the wisdom and knowledge of . . . Koori (epistemology) that I might be trying to make things better, and as such, apparently devalue the sorrow of their losses” (Journal entry 1/4/09, parenthesis added). While recognising the complexity within each individual’s perception and response, these thoughts exposed potentials for understanding, both within myself and in broader social issues - elements of complex situations and responses otherwise unidentified. Elements, while not complete, when placed within the landscape of complexity allowed for emergence of new knowledge.

r-19

Within this research there are, unsurprisingly, numerous indeterminate results. One such case was the lack of apparent links between the types of drawing /art created during the sagasuation periods, such as drawing with pencil, crayon, or brush, and any variations in ideation, both quantitatively and qualitatively.

r-20

Learning Journeys

In a heuristic and phenomenological study such as this, the journey glacially gouges out and carries traces what was. Past perspectives that fed my motivation and fuelled changes recede, leaving souvenir pebbles, lying like mnemonic Brother’s Grimm breadcrumbs. Reclaiming crumbs of journeys past reveals multiple concurrent paths.

r-22

How many concurrent learning journeys can there be in such a study? There is the epistemological journey through the academic landscape, splitting, wending and doubling back. There has been the journey through the artworks, begetting surprise knowledge, unexpected and stochastic. There are reflective responses that illuminate other learning, such as the exhibited works reflecting the learning of art purpose and process. There is the reflective review of self in stress, illuminating the habits swept beneath the familiarity of being. And then there has been the tangled journey of

personal grief, which is inexorably entwined with the aforementioned academic learning.

r-23

Each of these learning's appear as separate paths, apparently distanced, isolated, each path wending from journey's start to destination. But as each journey is itself phenomenological, its echoes carry across the fissures of the mind, influencing and harmonically amplifying some elements, and negating others.

r-24

Pedagogical progress

The distance I have travelled within the academic paradigm is clearly enunciated by the vastly different interpretations of texts, shifted perceptually by experience and time. Subjective knowledge, enhanced by inputs from innumerable scholars, both enriched and changed the interpretations of papers re-read, consequently generating a personal anxiety about my own potential for previous non-comprehension. The generation of doubts, borne within realisations from such shifted interpretations, illustrates both the fallacies in the simplistic arguments for precision textual elucidation, and the dynamic nature of knowing. Such dynamic unfolding of complex knowledge also illustrates the suitable application of the reflexive and rhizomatic A/r/tographic method as discussed elsewhere.

r-26

Having read and reviewed in excess of 900 papers and books, there is little reason to be surprised by my awakening anxiety. Knowledge gained from engagement with academic repositories has eroded, shifted and bolstered understandings held prior to the commencement of the research in 2009. For example, learning from research, such as Tinbergen's research on *supernormal stimuli* (1951; 1953; 1962)¹, combined with Lewis' (1976) tongue-in-cheek physics-based proposal for destiny, challenged my personal sense of autonomy, while reviews of social 'overshoot' (Brunk 2002; Tainter 2006; Weiss & Bradley 2001), bolstered my personal environmental concerns motivated by the "silly idea" that originally generated this research (see dot Z1).

Footnote 1; Super normal stimuli experiments conducted by Nobel prizewinner Nico Tinbergen, and later by Harvard Psychologist Dierdre Barrett, demonstrate

that certain criteria for assessment can be isolated and over-enhanced, leading to self defeating behaviour. For example, Tinbergen found that baby herring gulls responded to supernormal 'beaks', -over sized and super coloured but unattached to any bird. Rather than gain food from their parents waiting beside this artificial beak, the chicks consistently responded to the supernormal stimuli. Another example was a goose that became obsessed with keeping a volleyball, which bore super enhanced markings of a goose egg, on her nest, ignoring the incubation of her own eggs. Barrett applies this behavioural concept to humans.

For further reading see;

Tinbergen N. (1951) *The Study of Instinct*, New York: Oxford University Press.

Tinbergen N. (1953) *The herring gull's world: a study of social behavior of birds*, Oxford UK: Frederick A. Praeger Inc.

Tinbergen N., Krukk & Paillette (1962) Egg Shell removal by the Black-headed Gull (*Larus r. ridibundus* L.) II. The effects of experience on the response to colour, *Bird Study* 9:2 p.123-131.

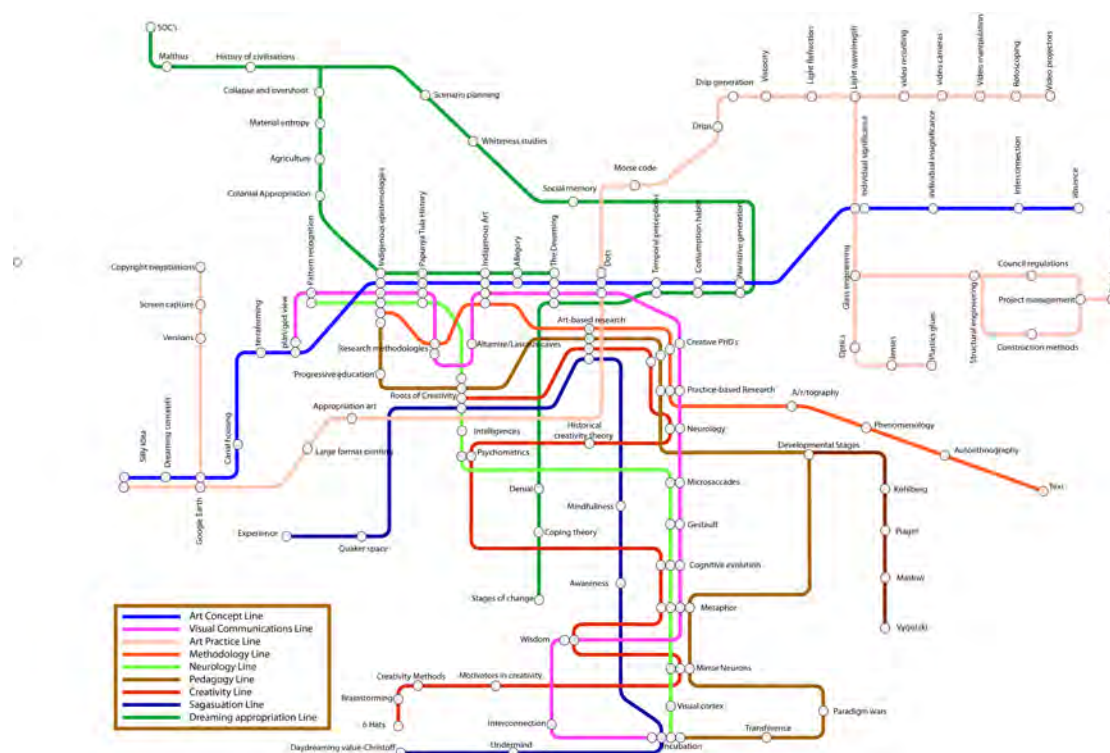
r-27

Other pedagogical results from this research reside within the advancement of academic skills. It is clear from re-reading earlier chapter and paper drafts that the structure and clarity of the writing within this research has moved towards a more conformative skill. Within that process, the poetic breadth appears to have been progressively minimised. This shift corresponds with Balkema's anxiety that Art-based Research needs to avoid a cognitive academic tourniquet around the methodological contribution of its existing, and broader non-academic capabilities (Balkema 2004).

r-28

In organising the mapping of the learning journey it has become apparent that there is no lineal progress in my learning. Each area is so interconnected that the readings occur across disciplines rather than in a simple manner, i.e.; there was not a consistent and singular reading of creativity texts followed by a singular and consistent reading of neurological texts. The relationships of the conceptual journey are mapped here to expose the junctions and interchange locations between the concepts driving the readings.

r-29



This can be seen as a wandering, "like a dog sniffing lamp-posts" (Loveridge 2011), wide open to methodological criticisms from lineal personality types who's worldviews minimise complexity. What can and must be seen from the progression is that the path was searching, open and unfocused, in the manner proposed by the method. Haphazard? Possibly, but only if the intended structure aimed to get to a specific, defined location. Instead, each of my research 'wanderings' arrives at an understanding, even if that understanding differs from those within the discipline being traversed.

r-31

Emergent Sagasuation: A case study.

The effectiveness of this method as a pedagogical tool is readily apparent in results, even if the origin of the effectiveness still remains unclear and emergent. One example of art's role in my pedagogical journey is evidenced by the preparation of a paper. Rooted in the concept that initiated the entire research project, (journalled at the time as "silly idea"; see dot Z1), it is possible to trace conceptual developments through the

journal notes, artworks from the period, chronological tracking of the literature searches, and variations in drafts of that paper.

r-33

The paper concerns contemporary society's colonisation of future societies, and appropriation of a 'creator/god' role in those societies' creation narratives.

r-34

Conceptual evolution, evidenced by journal entries, show a slow initial development, emerging from the "silly idea" as art-works (2008-2009) -views from the 'god-like perspective of plan-views of human traces. These aerial images, seen on a flight into Melbourne, were conceptually focused upon environmental threats from Western culture's atomised epistemology, and the holistic Western Desert epistemology and knowledge transfer. (It is noted this discussion of the art-works conceptual basis, while normally assiduously avoided, is included here as a 'commentary model' to enable reflection of the pedagogical processes within the study.) Textual enunciation of the specific concept was journaled 18 months (1/5/10) later during a morning sagasuation/drawing session. A variety of image developments occurred during this, and subsequent periods, with the scenario concept for the paper emerging almost twelve months later (12/4/11), when academic opportunity to present the concept arose. The temporal lag between ideation and emergence is a key variable of insight sagasuation, being entirely unpredictable it challenges the quick 'return-on-investment' demands of contemporary culture.

r-35

Sagasuated conceptual development continued to occur during the following month, with journal records occurring while working on related images in the late afternoon art-making period, generating and expanding the structure, and grounding the concept methodologically in scenario. This structure, selected prior to definitive knowledge of the conceptual methodology, is a means of incorporating the interdisciplinary elements of the nascent concepts. Subsequent research supported the choice, which required research into diverse themes; scenario modelling, Indigenous epistemologies, whiteness, and critical race studies, social collective memory processes - both oral and textual, meaning making and the development of 'divine' narratives in creation mythology, material entropy rates, and societal collapse. From these themes emerged other elements deemed necessary to review to substantiate the scenario, such as

neural/cognitive evolution, the psychology of 'white' behaviour, exemplified in the new geological term 'Anthropocene', Niccolo Machiavelli, and "self-organising criticalities" (Bak, Tang & Wiesenfeld 1987).

r-36

As predicted by Schooler and his colleagues (Schooler 2002; Schooler, Ohlsson & Brooks 1993; Winkielman & Schooler 2011), the shift in focus from sagasuating art-work to the literature search correlated with a reduction in the emergence of concepts deemed worthy of journaling. This may simply have been due to the concepts being immediately transferred to the paper, rather than the journal. However, the mean generation of journal notes diminished from around two entries every three days prior to the commencement of research, to one entry every four days during its production, with a corresponding shift in journal content from broad ideation to methodological, and sociological perturbations.

Footnote 1; data period 1; 1/1/11- 12/4/11. @ 5 day weeks = 74 days ; 56 Journal

entries = 0.72 ideas per day

Period 2; 12/4/11 -1/10/11 @5 days per week =140 days: 38 journal

entries = 0.27 entries per day

r-37

While the journaling of ideas diminished, the research, comprehension, and writing practices developed. Textually tying together so many disparate threads to support the scenario, all related and deemed important, required a steep learning curve, in me - the researcher, across a number of disciplines, and produced structurally complex interrelated drafts that did not 'conform' to the academic ideal of one idea per paper.

r-38

Having commenced with limited experience in the writing of academic papers, and ongoing difficulty writing pedestrian paced academic texts, meant many laboured attempts at the written presentation of the paper. Always framed as an oral, rather than textual presentation, with visual imagery to support and expand key concepts, the paper's reception by the audience was excellent, and phenomenally better than the paper's reviewer's who deliberated exclusively on the textual script to express concerns about structure, or the inclusion of more than one idea per article, as noted above.

r-39

It could be argued that being a meta-analysis of existing research this paper re-presented existing data rather than new research. However, new knowledge emerged, initially in me, through a “pattern recognition” (Ramachandran & Hirstein 1999) event, but also more broadly, as the created images and the presented paper shifted awareness of the invisibility of the familiar, illuminating conjunctions within societal assumptions of time and consumption through inter-relationships in existing knowledge. This knowledge was contained and transferred via raw references to Western Desert epistemological art, allowing new perspectives upon a familiar landscape.

r-40

As a learning experience, this project provided invaluable experience in idea development, literature research practices, textual structuring, and presentation, and unexpectedly illustrated the territorial claims within academic disciplines driven by academic’s egos. (Sadly, the conference closed with a dismissal of the contribution of the “uppity post-grads” (oddly enough not aimed at me)– the majority of contributors).

r-41

Art Journeys

Methodological note:

I have been anxious that I haven't been generating thoughts, but it was exciting this morning having come in and expanded my cellular awareness concept. I had questioned the concept of intelligence, especially the ability to use intelligence to undermine intelligence.

I found myself thinking... "here I am, after a few days off over Easter, and back into allowing the space, rather than having the space taken up with somewhat superficially important things".

Back in 'process mode' or at least trying to be in 'process mode'. In this case things have generated ideas whereas previously I just seemed lost.

It does appear that the method has allowed for concepts to generate and for ideas to be questioned.

Researcher's Journal entry 27/4/11 (Typos in original).
r-43

Of the journey embarked upon without destination, it has been the artworks that have expanded and grown most unexpectedly. As the entire study materialised from the questions emerging in artworks, their artistic direction appeared clearly mapped - a

process of aesthetic developments, initiated in deliberateness and controlled by my determined intention. Change breathes change –unexpected. The pilgrimage to pay homage to Indigenous epistemologies was stymied by a single statement of social anxiety, and subsequent direction to change. Knowledge evaporates in the deserts of social paranoia. My resulting manoeuvres danced the ‘death of integrity’, as my artworks slinked and sidled around the imposed paranoid parameters.

r-44

But in adversity is opportunity. Jettisoned concepts emancipated perspectives, with the resulting art-works growing from guano to sparkle in a new guise. New works- new learnings- new techniques – new knowledge. Integrated learnings emerging visually, experientially, demanding new understanding and skills.

r-45

Exposed during grief by revelation of unwitting practice - words emerged, photos emerged, separate, subsequently bound in a book sharing meaning beyond initial comprehension. Their emergence from apparently unrelated purpose opened an understanding of autonomy and sagasuation, where cherished concepts, though liberated, never stray far from familiarity. (See dot Ra24).

r-46

And so, artworks emerged from the concepts of the research rather than driving the research. ‘Dots’ became spheres. Spheres became drops. Drops became drips. Complexity conflated in drops of inter-related visions - suspended. Intention being just a drop in the ocean of meaning - significantly insignificant.

r-47

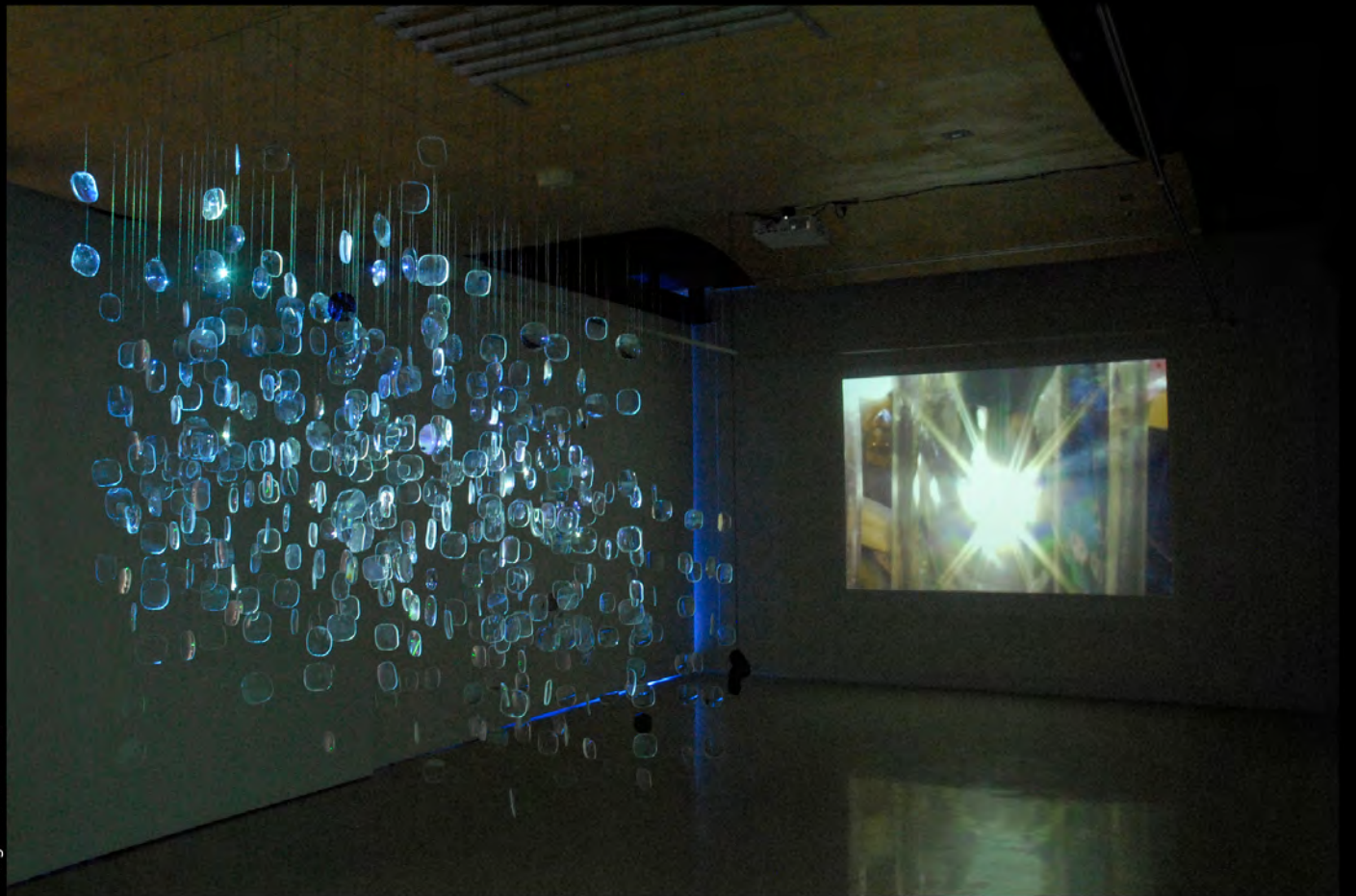
The journey is traced through three exhibitions (of which only one was examined)- three series, displaying 24 created works, firmly fed from the single root, branching out and evolving, losing their evident genetic heritage as they morphed from paper to light and water.

r-48

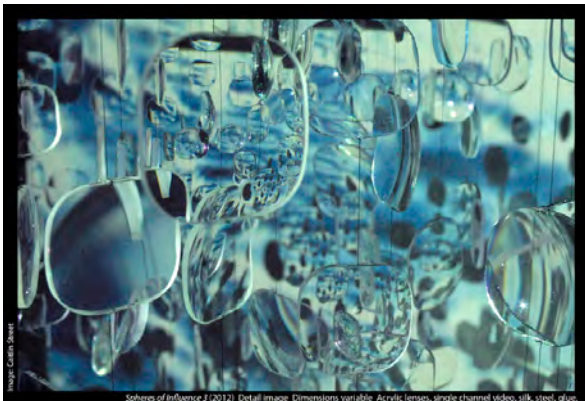
Within their family remain another eleven finished works awaiting, and embryonic siblings gestating till suitable environmental conditions prevail.

r-49





Spheres of Influence 3 (2012) (Left - detail), Spheres of Influence 6 (2012) (Right). Documentation image



Spheres of Influence 3 (2012) Detail image Dimensions variable Acrylic lenses, single channel video, silk, steel, glue



Spheres of Influence 3 (2012) Detail image Dimensions variable Acrylic lenses, single channel video, silk, steel, glue



Spheres of Influence 3 (2012) Installation image Dimensions variable Acrylic lenses, single channel video, silk, steel, glue, aluminium



Spheres of Influence 3 (2012) Detail image Dimensions variable Acrylic lenses, single channel video, silk, steel, glue

Having been immersed in art, I see that this very process of change is where the magic resides - in shifting perspectives and proportions, where the waves of implication wash over concepts, depositing meaning, and leaving accumulated layers of interpretation - unstable and shifting - for the reader/viewer to build upon. It is this shifting perception that invites wonder and enquiry. For it is in this interconnectedness that understanding lies. To dismiss other potentials is to fail to assess the terrain upon which to base our assumptions.

Researcher's Journal note 4/5/10

r-50

Subjective Journey

The self-learning occurring during this study emerged in environmental crisis, micro-environmental stresses mimicking the macro environmental stress that materialised from the “silly idea”. Stress from stress of steep learning curves in multiple new disciplines, stress from deadlines, and stress from the death of my beloved, accelerated manifold shifts in the familiar, generating new perception and new understandings. Such fundamental shifts resulted in the distillation of personal characteristics, which when sieved revealed kernels of being, normally clothed with ego and habit. These learning's occurred without intent, without awareness, and without control - side effects of the bitter pills of life.

r-52

One such bitter pill became a realisation of insignificance. Having spent a year comfortable in my critique of the psychometric mis-classification of divergent thinking (Guilford 1959) which is effectively convergent thinking with broader criteria, I eventually found the argument presented in a key older paper (Barron & Harrington 1989) which re-affirmed that I had critically reviewed the literature, but also undermined the sense of contribution to new knowledge. But beyond subverting my own ego, it also illustrated the value of including older texts in the research. This concept lay dormant, un-nourished by latter researchers conforming to traditional canon, until being re-born recently as ‘new’ knowledge (Baer 2011). (Note: Baer, as an

established scholar in the field of creativity research would unquestionably have been aware of Barron & Harrington's article).

r-53

Abstracted concepts within papers generated other interesting subjective learning. Reading Martindale's (1992) discussion of creative people's need to limit stimulus by social withdrawal, for example, generated a recognition of my own previously unrealised behaviours involving ongoing conflict between being present, social and engaged, and the need for substantial space. This conflict is not apparent to other's perceptions of me, but illiterates, like all of humanity, are very skilled at strategies of illusion.

r-54

Other abstracted theories contributed to subjective awareness of personal characteristics, either unknown, or unacknowledged. Interestingly, the sense of self-recognition in the factor analysis criteria assigned as 'creative' (Eysenck 1993; McCrae & Costa 1987; 1997) revealed home truths that both disturbed my self-perceptions, and in some ways, liberated as a means of self-acceptance.

r-55

The learnings from death are vast and complex - ironical for life's only certainty -with fleeting comprehensions of eternity regularly observed during re-immersion in the journal notes concerning my partner Anne's illness and death. While having noted the mnemonic value of re-reading journal notes (24/6/09-journal entry), the entries dealing with grief, and even those simply contemporaneous with her illness and death, are mnemonics of pain that undermine my capability to breathe, and avoid falling into the pain of loss that has tagged me ever since. There is ultimately no escape, and it has been an integral part of this study. Can this knowledge be attained without being burned upon awareness?

r-56

The inevitability of change, combined with the learning to accept change, are two particularly important lessons gleaned from these swamping surge of shifts. Noting nothing remains stable, nothing is permanent, especially when disengaged from human temporal perspectives, is a lesson beyond assessment criteria. Awareness, re-inforced by research into 'overshoot' and societal collapse, (Beddoe et al. 2009; Brunk 2002;

Meadows 1999 1997; Tainter 2006; Weiss & Bradley 2001) echo the dawning of delusional fixated-ness embedded in aversion to change.

r-57

Subjective reflexivity allowed a recognition of the complex relationship between change and achievement, as without change nothing is achieved. Hearing a BBC (BBC World Service, 29/7/09) report while sagasuating, placed the seeds of such awareness. Nepali blind children, it was reported, were experiencing their environment for the first time, as they were guided through the Himalayas by American mountain climbers. To the shunned and cloistered children, devoid of such tactile experience, each manoeuvre was an achievement, opening their senses to wonder. But each pause, each hesitating step, each achievement of the children trampled the climber's summit driven goals.

r-58

Following the knowledge of the inevitability of change, arrived the realisation that in a place of no change, of unceasing and incessant permanence, gilt lives become caged.

r-59

Visual Data Presentation

Elements of the knowledge obtained during this research are presented visually.

r-60

The environmental data, recorded to correspond with journaled data, is presented as an animated graph (see dot RD19). This graphic representation method - developed within, from, and as part of this research - utilizes the visual capabilities of the human brain, revealing temporal relationships within the data's matrix pattern that is not apparent with traditional graphing methods. This method utilizes much of the capabilities of digital publishing unexplored in the academic realm, and is, in-itself, a contribution to new knowledge.

r-61

Peer reviewed exhibition

The visual results of this research manifesting as artworks were published in three separate exhibitions, each a series of works in themselves. Each of these works, and their documentation, are enclosed within the orange dots in this exegesis. Each exhibition recorded positive attendance and audience response, both from artistic peers,

and the general public. The second exhibition, where prints of the works were for sale, sold nine of eleven available works. The final exhibition, at the Counihan Gallery in Brunswick, received very enthusiastic responses from the public, as well as a very positive review in the arts pages of the Melbourne Age newspaper (6/10/12;

63 <http://www.theage.com.au/entertainment/art-and-design/your-weekend-in-the-galleries-20121005-273yq.html> – accessed 6/10/12).

r-62

Potential issues and further considerations

Several issues arose during the research that requires review and consideration.

r-63

The recording of journal entries presented some challenges to consistency of the research processes. The inherent cognitive conflicts between modes of thought - ideation and recording – remain unresolved. As verbalisation has been shown to interfere with sagasuated ideation (Schooler 2002; Schooler, Ohlsson & Brooks 1993; Winkielman & Schooler 2011), this is an elemental neurological issue unable to be overcome.

r-64

Another journaling issue occurred during the production of the non-digital exhibited artworks. For example, the works were created in various locations, such as the end of a two kilometre long pier at Port Latta, in a boat, in a hospital ward, or in my workshop. Each of these distinctive locations made it more difficult to stop and annotate the concepts as they emerged, which is important as delays in recording allowed for changes and evaporation of some ideas. Poincaré talks about always having his notebook, which would apparently provide a simple solution, however, it's worth considering the different level of subjective agency between the epochs. Train and foot travel allow for distraction in ways that driving a vehicle in traffic doesn't. Unfortunately therefore, some of the concepts that emerged during the making of the exhibited works were not recorded, or acted upon. While the ideal was to record ideation immediately, the recurrence of other concepts that were journaled suggests the possibility that insight and understanding rising from the depths may resurface, allowing for later recording.

r-65

Conflicts in cognitive modes also became relevant when switching between immersive periods of artwork and the exegetical elements of this research. The review of journal notes illustrates awareness of this complexity. It is apparent that immersive cognitions generated different methods of thought, and moving from the exhibition production back into the academic realm required almost ten days to effectively move from the open cognitions of the artwork production to the lineally contained cognitions required to identify, plan and academically present the exegesis.

R-66

Another journal recording issue was its direct impact upon the time left available for artwork production, which resulted in occasional variations in the schedule. Variation in schedules also arose under pressure of deadlines.

r-67

Other issues relate to academic experience, such as those arising from the breadth of the inter-disciplinarity of this study. Lack of academic experience in each of the fields explored during the meta-analysis of the data may have allowed for mis-interpretation of discipline specific knowledge. For example, the term 'heuristic' carries different connotations in educative pedagogy (to enable people to discover or learn something for themselves), to the same word in psychology ("the processes of breaking problems down into small parts for simple resolution", Eysenck 1993:149). Sufficient reading is required to ensure such terminology does not result in mis-interpretation, which may have unintentionally occurred in this study. This inexperience may also result in missing key theorists due to unfamiliarity with key terminology, a factor especially relevant for isolated, 'distance ed.' students.

r-68

Another issue arising from lack of academic experience impacted upon the writing of peer-reviewed papers for publication. As each discipline has epistemological etiquettes, attempting to fit emerging 'square' concepts into 'round' disciplinary holes demanded greater time than was readily available, and resulted in the composition of fewer papers than had been anticipated by me - the researcher. The annotation and research conducted in this study, however, still allows for the writing of such papers upon completion of this exegesis.

r-69

Other potential academic limitation stems from lack of experience in designing, producing and analysing extrinsic statistical data. Unforeseen technical issues led to the loss of some environmental data, leaving gaps that potentially undermine the veracity of the entire dataset. However, as such data was not within the direct gamut of the research, having been deliberately minimised and included here to enrichen rather than unequivocally prove, such limitations do not in any sense invalidate the qualitative a/r/tographic nature of this research project.

r-70

Touchscreen presentation.

The touchscreen presentation method of this exegesis is viewed as a continuation of the artwork. The touch screen works as a visual image, related to the early artworks developed within the study. It performs its role visually, and presents a different method of reading and knowledge integration that is new to existing pedagogy. However, the exploratory nature of this particular presentation method may impact upon its potential effectiveness.

r-72

The application of the touchscreen method increased the complexity of writing encapsulated within the dots, in a way similar to attempting to write a crossword puzzle that worked in both diagonals, as well as vertically and horizontally. While writing 'enclosed' paragraphs is a normal part of academic writing - where each paragraph contains one concept - the attempt to write in self-contained but laterally inter-related paragraphs became very complex, especially given the dictate that the exegesis be presented in the traditional lineal textual manner, as well as the touchscreen, which requires the text to work in both paradigms. Ironically, the complex inter-relationships between the textual and visual structures can create a rigidity resistant to amendment.

r-73

Grouping text by theme and relating those themes by proximity was the goal, but reality has a habit of challenging theoretical ideals. Practical considerations meant that paragraphs placed proximally could not always be read in any order, as "zones of proximal development" (Vygotsky 1978) required delivery of certain aspects of the

knowledge prior to more finely developed aspects of the same theme. The potential for reading paragraphs in the reverse order bears similarities with flicking through a paper tome. But 'art is life' and the text follows in the footsteps of the project, as it wends and wanders, overlapping and reverberating.

r-74

Complications due to technological limitations also affect the effectiveness of the method. The *iPad* operating system's licensing provisions limit access to suitable, and otherwise familiar operating processes. Funding limitations, and the 'single-tasking' environment required reconsideration of technical processes, resulting in the loss of some common technological advantages of digital publishing. Systems limitations, camouflaged beneath promotional hype, are often only exposed once the learning trail leads to the very incapacity.

r-75

While there is much in this exegesis that is relevant and useful, there are inherent problems in the delivery of information outside of habituated examination reception methods. There are three specific aspects playing out in this presentation method that I perceived as challenges to the reader. The first challenge is the assumption that the reader will dedicate substantial amounts of time required to engage with and correlate the text, especially in a sociological environment that is 'time poor' and desiring of simple, easily digested, familiar practices. The second challenge is the assumption that the knowledge is perceived as groundbreaking, relevant and comprehensible, beyond its novel non-conformity with canonical requirements. The third assumption places great faith in the archival access to the technological delivery, and is based upon the exegesis being self-contained within the device.

r-76

T.S. Eliot (1924) noted the power of canonical 'inertia' suggesting it is only through conforming to tradition that advancements (in literature) are recognized, a comment directly relating to the issues with Big C creativity "

r-77

Commentary/Street: dreamtime uncapitalised

There is also substantial evidence that the sagasuation space within the research method produced outcomes different to those obtained by more conventional pedagogical methods. The analysis of the journal notes, while identifying recurring themes, also illustrates variations in subjective valuation of ideations that emerged from this cognitive practice.

It is clear from the journal entries expressing inherent conflicts between ideation and recording, that ideation in the sagasuation space was negatively impacted upon by the method itself. This correlates with evidence of verbalisation's negative interference with sagasuation (Bickel et al. 2011; Schooler 2002; Schooler, Ohlsson & Brooks 1993; Winkielman & Schooler 2011).

In reviewing the effectiveness of the method applied in this research, it is not surprising that results are somewhat ambivalent. There is no doubt, that the method's application of the intrinsic motivation, noted within creativity theories, has led to substantial learning across a very broad range of topics. The skills at locating, and evaluating relevant academic papers have improved, illustrating clear learning outcomes. These results also illustrate the effectiveness of integration that lies at the heart of creativity.

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Open Peer Commentary

Submitted commentary on this article from the qualified readership of this journal will be assessed for publication in future issues as Continuing Commentary. Syntheses and integrative reviews are encouraged.

Is the Phenomenological method worth the paper it's written on?

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The author of the target article failed to account for the inability of phenomenological research to separate and identify the motivator within the research motivation, from the motivation present and expressed by the respondent prior to the research period. Clearly the respondent was pre-equipped with the stimulus required to participate in such a project. It is unsuitable to extrapolate the motivation from the method, when evidence of pre-existing motivation is clearly expressed in the respondent's commitment to self-select and conduct such research in the first place.

Author's response.

Street succinctly scuttles any inadvertent claims of replicability for this research project. The pre-disposition of the respondent is clearly illustrated by self-selection. Self-selection itself is influenced by subjective assessments, which have been shown valid for many years (Diener, et al., 1985; Larsen, Deiner & Emmons, 1985; De Neve & Cooper 1998; Wrorsch, Amir & Miller, 2011). Having said that, Street alludes to the next step in this research project, that of application of the method to a broader cohort of both creative, and 'non-creative' individuals. Such a project, however would still not overcome concerns of conceptual self-selection by respondents.

Insurmountable flaw?

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While the author of the target article presents interesting proposals, there is an anomaly in the theory, in fact, in the whole foundational philosophy that grounds the research. Inherent in concepts central to this thesis is the idea of individual, the atomised single unit, of personhood that is core to western philosophy. In this study, the cohort exists as an isolated unit, $n=1$. It has been assumed that we can extrapolate the knowledge of one to many, of micro to macro. This is in direct conflict with the criticism within the study of atomising western philosophies/pedagogies, and the extrapolation of meaning applied to broader applications. Is the study's method itself atomising the individual from the larger society that each individual is dependent upon? What is the purpose of integrating the individual, if in the process the individual is atomised from the whole/society? The author must address the means of integrating the rupture in the philosophies grounding the research if the method is to be accepted within traditional academic parameters.

Author's response.

Street raises particularly important issues regarding pedagogical methods of integrating the individual's knowledge within the general society. To clarify briefly, the research is critical of selective extrapolation for short-term political gain, while recognising the subjectivity inherent in such judgment. Cognitive response research is inherently focused on the cognition of the individual, due exclusively to cognition being an individual phenomenon.

The question opens much larger pedagogical debates of politicisation and the power exerted by contemporary social/economic/political perspectives on education. Contemporary methods of socially integrated research, such as *queer*, *Action research*, and *Critical Race Studies* have sought for decades the means of placing the individual within the surrounding socio/political structures, to contest prevailing hegemonic paradigms that seek to isolate out this individual, so well enunciated by Foucault.

Summation

This chapter has presented the data gathered and tallied in a variety of method and media, to present a broad and complex review of the effectiveness of the method applied in this research. It discussed the large phenomenological shifts and pedagogical growth identified by the research method, obtained through a triangulation of pedagogical journeys that illustrate the integrative pedagogical value within the methodology employed.

r-80

The final act of review and assessment is taken from a daily journal note (26/10/2010) - a stream of consciousness entry that itself flashes and glints off concepts and understandings, reflecting in itself the processes and complexities of this study's methodology.

r-81

I sit here seeking enlightenment. Hurry up.

The thought of the child comes to mind. It is the thought of the naive understanding, the wisdom that emanates from their ignorance. I wonder if that is what enlightenment is, that fleeting interest and understanding, flashing before us as a spark of insight. We use the terms quite regularly.

I think of those before me that have sought enlightenment. those that are held up as beacons on the journey. When I look closely they have the burdens too. They fall prey to the inability to hold the truth. Thomas Merton, such wisdom, such pain, to then go and hide in his hermitage.

I keep hearing the child. The one who flits disconsolately from thought to thought. Is that wisdom? Is that enlightenment? The idea that complete understanding is incapable of being held seems reasonable enough. But the fleeting glimpses are but succulent appetisers for the mains. When will it be served?

The child plays, aware of the now, immersed in the matter at hand, but changing with the wind. Is that why we need to jettison our child? The inability to focus is condemned in our society. Childish. "Grow up, will you!" "It's time you matured and focused on your goals."

Why is the child not focused? Why is their determination at their play so problematic? In many ways focus is the jettisoning of apparent irrelevancies. Who makes that decision? When?

Accepting that the water we seek drips through our porous hands is itself a wisdom. How can it not be? Maybe that is the enlightenment that we seek? – comprehending that the understandings we glimpse are but the reflection from the waters dripping through our fingers.

After all, the things we describe as rich are the elements of complexity. Can a sunset inspire with one colour? Is this a new series of artworks?

I described concentrated focus to Peter, the spiritual guidance person on this retreat as walking through a pine plantation, bereft of diversity and the richness of the natural environment. Which one nourishes the soul, a mono-culture, or a varied forest? Is the difference between the adult and the child the desire to produce something of worth, timber for tissues? Is that what maturity and focus are- the gift to others who then don't have to make the journey themselves? Is that why we see childish adults as problematic, as they do not contribute to the growth of the whole towards comfort and surety? Nourishment of the heart is not enough for value to be assigned.

Researcher's Journal entry 26/10/10

r-82

Chapter 5

Conclusion?

I pause to catch my breath.
Emotional blisters and cognitive calluses remain
as souvenirs of my odyssey
home, here to the place I first started
– my desk, where some years ago an academic application emerged.

But it is not my place of origin,
my point of departure.
I am not my departed me. I am more.

C-2

The tickets were clear,
one way, stopping all and any stations,
drawing fuel for further
travels, traversing connections and branch lines
through scholarly stations already furnished with the associations and
experiences of earlier 'travailleurs'.

C-3

And in this intentionally integrating journey, with time
spent in sagasuating silence,
the traces track the effect of tuition, with
knowledge unknown now woven within my synaptic web.

T'was such synaptic sparks that stimulated this symbiotic research.

C-4

The knowledge, emerging rhizomally, still
wends between word and image,
gleaning and integrating kernels of truths
that sprouted upon various grounds and flowered in forms unexpected.

Rhythms in the research resound with repetition,
pulsing across pedagogical paradigms.
Motifs emerged, motivating integration of old knowledge with new.
Knowledge of change illustrates the role of knowledge in change.

C-5

While the space of sagasuation succeeded in
stimulating the surfacing of subliminal perceptions,
the emergent ideas equated with extrinsic events,
echoing evidence from eighty years earlier (Varendonck, 1921).

C-6

Change characterises this quest for questions, catalysing
new knowledge by identifying interconnections between
the intricacies of what and why.
Pedagogical progressions became apparent via alignments between
epistemological points
– knowledge dots.

C-7

But the links remain as lattice, rather than layer.
And though the thread tying any two dots may align, it is just a line,
it is not a plane of comprehensive coverage.
Such capacity, astray in both our social and scholarly structures, seem un-
imaginable in an isolated individual.

C-8

Issues of involving only one individual in the investigation induce difficulties distinguishing the differences between the creative and the creations, causing consternations.

Motivations within the researcher merged with motivations stemming from the emergent questions.

How can they not?

While creativity as motivator is common knowledge, both concept and craft emerge from the same neurological space, interlaced and entangled.

Is it nature or nurture that predisposed this researcher?

Self-selection situates studies, apparently far from the formality of the quantitative grail.

And so, phenomenology founders when forced into fixated formats that make one equal none.

But partial perceptions are not peculiar. All knowledge is nuanced, and not noticing admits an asphyxiating *authodoxy*.

C-9

This chapter is written for rhythm, intended to pulse, alluding to the beating, but arrhythmic heart of this lived research.

After all, life is learning, and learning, so often fun (Vygotsky, 1967), must be fun to forestall the failure of a pedagogy, shifted and shaped to suit training, not scholarship.

In such authorised spaces there is no safety from the structural syllogisms. No time for *Fox in Socks* (Seuss, 1965). Addiction to alliteration does not comply with conformity, which conflates convention with correctness. Such control is the contemporary mindset that correlates creativity with malady,

an atonal and atomising assessment of a ubiquitous characteristic capable of conducting the change that confronts the individual daily.

Within the individual is instilled a yearning, erased and expunged in adherence.

Set it free.

C-10

Appendix

Appendix XA -

Art and Knowledge convergence

“It has been demonstrated how art-making . . . engendered creative excitement and curiosity in such a way that new narratives and choices subtly emerged (Newell-Walker 2002:53). It is “creative excitement and curiosity” that this research seeks to employ, primarily as a catalyst for learning. Noted as a species advantage (Csikszentmihalyi 1997c), these motivators, when endowed to the most common experiences, generate an interesting life (Csikszentmihalyi 2006), becoming a positive reward for inventive engagement. But more than providing an interesting life, curiosity and creativity carry a circular and symbiotic relationship, each feeding the other.

XA-2

Within this circle, arts practice provides room, a space of dis/engaged concentration, where, this thesis argues, knowledge generated through curiosity congeals into other forms, and moves towards understanding. This is the space of *incubation* (Wallas 1926; see dot L68).

XA-3

This is a space within the processes of creativity, the key space in creativity. Of nineteenth Century French mathematician Henri Poincaré’s three stages of creativity (1913), the middle stage of ‘subliminal processing’, or what this paper refers to as *sagasuation* (see dot D), is this stage. It has also been identified in Wallas’ (1926) influential theory of creativity, enunciated as stage two - *incubation*, and while not displacing the importance of the other stages; *Preparation*, *Illumination* and *Verification*, it is this incubating sagasuation that is of primary value in this research, providing space for reflexive understanding. This “wild ranging of the mind” (Hobbs 1650:ChIII) is a space long identified within creativity studies, but seemingly avoided within a controlling productivity-focused perception of life and cognition.

XA-4

This is a heuristic learning in a phenomenological methodology where $n=1$. In this case, the one is me, making subjective observations and evaluations of the cognitive processes occurring in this space of art-making, a space lying somewhere between creativity and curiosity. This space of $n=1$ is the place all phenomenological knowledge resides, welling up into manifestations very different in form, congealing the unknown internal with the external.

XA-5

This thesis argues that knowledge -internal knowledge already embodied within my mind- and external knowledge, entering during the research project and normal life, will coalesce during the non-cognitively focused space provided for in the methodology, sagasuating into concepts that motivate further research and learning. That non-focused space in this case is art-making. In utilizing this space, this research seeks to integrate knowledge, learning, and being, by documenting the emotional, intellectual and theoretical responses evoked during the art-making process as a method of co-relating interdisciplinary concepts and research.

XA-6

This theory is based upon a number of concepts related to the operation of the brain, ranging from neurology, psychology of creativity, and even includes consideration of spiritual practices. It is a concept that resides in a space Claxton (1997, 2007) refers to as “underknowledge”, and where Christoff (2009) and her colleagues theorise the integrated mind operates, processing in a dream-like manner connections that may not have been apparent.

XA-7

Why use art to educate?

"The burden is shifting away from learning things by rote, by burdening our memories because the cyber-world is doing this for us, towards now asking the right questions" (Greenfields, 2003).

Pedagogical history is full of theorist who have identified creative arts as highly effective pedagogical tools. The early part of the twentieth century was a particularly rich period, with Maria Montessori's *Casa de Bambini* (1907), Rudolf Steiner's *Waldorf School* (1919), and Alexander Neill's *Sumerhill School* (1921) all advocating and establishing

pedagogical methods drawing upon intrinsic motivation – the “creative excitement and curiosity” (Newell–Walker 2002), characteristics noted by Csikszentmihalyi & Nakamura (2006) as the key aspect of lifelong creativity and learning - and contextualisations that manifest in artmaking. Later advocates (see dot L121) argue creativity can “enhance the disposition to think critically” (Lampert 2006:226), and provide pedagogical motivations. The circularity of anticipated skill transference, from other domains to art-practice, and from art to other fields is employed in this research as a symbiosis, where skills feed and are fed simultaneously. This symbiotic method builds upon motivations the processes of artmaking generate through the natural curiosity of human creativity.

XA-9

The cognitive skills in the arts develop cognitive competencies in "elaborative and creative thinking, fluency, originality, focused perception, and imagination" (Burton, Horowitz & Abeles 2000:252), skills which "demand the ability to take multiple perspectives, layer relationships, and construct meaning in unified forms of representation." (Burton, Horowitz & Abeles 2000:252). (See dot L142-156 for an expanded discussion of transference)

XA-10

This thesis does not propose to jettison established pedagogical methods such as Vygotsky's “zone of proximal development” (1978/1997) - learning in progressive stages, from and through the assistance of others. But pedagogical methods, argues Eric Fromm in the introduction to Alexander Neill's book on the school *Summerhill*, are appropriated by narrow interests, not to engender the skills to learn, but to “fit men into the economic system . . . [to become] the eternal suckling” (Fromm 1960:para9; interestingly, Fromm is not included in the Penguin editions of the book. See also Csikszentmihalyi 1997c). Rather, this thesis is grounded in zones of unpredictable development, informal, perhaps even accidental learnings that enrich and enhance proximal development. These “‘Accidental-Informal’ types tend to be less disciplined, often with the characteristics of dreaming, and through their exploratory and expansive nature, disturb values and lead towards value shifts” (Loveridge 2008:32). Value shifts are what Fromm argued is needed, and is a prime motivation driving this research.

XA-11

There is enough empirical evidence to question if these “informal” learning’s are ever “accidental”, or are cognition residing in the complex realm of ‘under-knowledge’ (Claxton, 1997; see dot L93). Rather, this perception of “accidental” maybe the result from reductionist perspectives failing to account for subtle and complex neurological processes. Gardner’s (1983/1999) comprehensive argument for multiple intelligences opened academia to the acceptance of knowledge beyond that measured in psychometric tests, (though criticism of psychometric tests occurred long before Gardner, see Burt 1962; Hudson 1966). Acceptance of this concept of non-accidental knowing lies at the base of this thesis.

XA-12

Having accepted the conceptual validity of creativity-based cognition and pedagogy, this research is founded in three related concepts/assumptions that manifest in art. Firstly, creativity is inherently convergent. Secondly, the near meditative space of creative play allows space for conceptual convergences; and finally, the metaphoric knowledge transfer methods utilised in art allow for the subtle and complex inter-relationships within those convergences to be expressed. These concepts are explored in the maroon dots.

XA-13

"...if the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent."

Csikszentmihalyi 1996:12

Creativity is Convergent

The art process, being as it is - a creative process - inherently converges objects and ideas, (Amabile 1985) categorised in the psychological literature as 'problem generation'¹ (Guilford 1959; Getzels & Csikszentmihalyi 1976; Vessey & Mumford 2012). It is important to note I am not alluding to ‘convergent thinking’, a term applied in authoritative psychological literature to thinking that aligns with the authorised outlook –converges with authority. As the father of modern psychological research into creativity, J.P. Guilford, wrote, “[i]n tests of convergent thinking there is almost always one conclusion or answer that is regarded as unique, and thinking is to be channeled or controlled in that direction of the answer. . . . In divergent thinking, on the other hand,

there is much searching about or going off in various directions. This is most easily seen where there is no unique conclusion. Divergent thinking [is] characterized as being less goal bound. There is freedom to go off in some different direction[s]. . . . Rejecting the old solution and striking out in some new direction is necessary, and the resourceful organisms will more probably succeed" (Guilford 1957, quoted in Getzels 1963:201; see also Burt 1962; Wallach & Krogan 1965; Torrance 1974, McCrae 1987). I disagree with this concept of convergent thinking as it fails to acknowledge inherent multiplicities, converging almost all facets of issues being considered. Quantum physics illustrates there is never just one 'answer or conclusion'. As such, 'convergent thinking' encourages and values diverging from complex *knowledge* into *paradigm*. (See dot L16-17 for further critique of 'divergent thinking').

Footnote 1; - Problem generation an inherently relational process as isolated elements themselves are not problematic, even Caesium 137.

XA-15

This thesis seeks to go the other way, converging atomised paradigm into knowledge by generating problems. To generate 'problems' requires the generation of possibilities, triggering connections and convergences between both evident and obscure facets of the issue at hand. Guilford (1957;1959), Getzels (1963;1968;1976), Csikszentmihalyi (1976), Amabile (1998) and Sternberg (1999) recognise this characteristic as elemental in creative acts. So did Poincaré, the nineteenth century French mathematician, who saw creativity as syllogisms – deductive reasoning from two unrelated understandings – "placed in a certain order", and guided by "sensibilities" (in Ghiselin 1952:35). To Mednick (1962) such sensibilities are the remote and loose association of ideas and are central to the processes known as creativity. Amabile extends this convergence concept, arguing "creativity will be enhanced further if [we] habitually turns problems upside down and combines knowledge from seemingly disparate fields" (Amabile 1998:79). These views of creativity show a process, rather than the individual characteristic historically (Galton 1862; Nietzsche 1872/1966:38), and still commonly assigned to 'creative genius', or divine intervention (Batey & Furnham 2006).

XA-16

Creating space for conceptual convergences

The wonderful point about creativity is that it cannot be contrived, because

it is not a specific trait, a set of beliefs, an operationally defined skill or a corpus of knowledge. We have seen that best we might be able to do is set up predisposing influences; the rest is up to the interaction in each case with the individual brain, the individual time and space co-ordinates."

Susan Greenfield 2008:289

XA-18

Immersion in creativity is a sub-liminal mental realm. It is this space, of both cognitive and time/space, that lies at the center of this research project through the methodological application of "predisposing influences". Of the possible predisposing influences this research proposes space to be the critical element, space incorporating its temporal component, allowing time to be, to make the connections (Sternberg & Williams 1996), to allow one key facet of creativity to arise - the moment of inspiration/insight (a sudden, unpredictable, and non-verbalizable solution discovery (e.g. Metcalfe & Weibe 1987; in Sio 2009:94). But this space is entirely undervalued in contemporary society and so we must present the space within an 'authorised' process.

"... people will be most creative when they feel motivated primarily by the interest, satisfaction, and challenge of the work itself-and not by external pressures."

Teresa Amabile 1998:79)

XA-19

The desire to create a space of cognitive play requires a sense of authorisation. In a society fixated upon instant productivity that belittles aspects of humanity that do not correspond with production schedules, allowing time is a key aspect needing resolution (see Greenfield 2008; Donald 2006 for discussion of the impact of constant productivity drives upon the neural functioning of the brain). This desire to provide permission bears similarities with previous creative cognition methods, such as *Brainstorming* (Osborne 1953), and de Bono's *Six Hats* (1985). What these processes offer at their foundation is that they provide authorised space for cognitive play, free from the worry of failure (Csikszentmihalyi 1997c), instant assessment, and responsibility. Awareness of the influence of authorisation on play is not new. 18th German intellectual Friedrich Schiller noted his imaginings "not functioning with the same freedom as it had done when no-one was looking over my shoulder" (in Wallas 1926:105). This space of play, Reilly argues "contains the answer to problems of biocultural adaptation ...[being] a natural modifier of

deprivation" (1974:10; see also review of play as learning in Pente 2004:95). It is this aspect that these methods share with this thesis.

XA-20

This space of play is one of exploration, immersion, and connection. It is a space that aligns with the widely accepted element of creativity "openness to new experiences" (Nelson 2005; see also Costa & McCrae 1997:842) which bears a level of "unself-consciousness" (Brown 2008). It is a space before the psychological/conceptual space Csikszentmihalyi's (1974) describes as 'flow'. "Flow is an almost effortless yet highly focused state of consciousness" (Csikszentmihalyi 1997b:8). 'Flow', as a psychological space, bears many similarities to the cognitive realm intended in this study, but there are key differences that need enunciating.

XA-21

While Csikszentmihalyi advocates the role and value of 'flow', it is a space of complete absorption in the action. That is not to argue that it is not an integrative space. There are many expressions of integrated knowledge occurring in this space - a meditative space foundational in Buddhist philosophy - but as a method to be applied in this research, such engrossed 'oneness' is inherently problematic. Once this space is entered "distractions are excluded from consciousness" (Csikszentmihalyi 1988; 1996; 1997c), and so, being in the space of 'flow' allows no ability to record. It is also unsuitable in this research as 'flow' is a space of production, rather than exploration, as 'very clear goals' muddy the openness to possibility this research seeks to employ (Irwin 2004).

XA-22

This research seeks that space before 'flow', before the absorption into action. A space that enables the wandering of the mind, rather than its focus. It seeks a space where the goals are not defined, but are an open exploration, where feedback reverberates free from instant valuation, where there is little challenge, little physical action to demand cognitive fixation. It is a space which "include[s] the 'fringe-conscious' psychological events which precede and accompany the 'flash of Illumination'" (Wallas 1926:11), a space Nobel laureate, Herb Simon knows as a "network of possible wanderings" (in Amabile 1998:79). A space Amabile herself sees as an "intellectual space that [is] use[d] to explore and solve problems. The larger this space, the better" (Amabile 1998:79).

*"The wisdom of a learned man cometh by opportunity of leisure;
and he that hath little business shall become wise."*

Ecclesiasticus, KJV 1769:38:24I

This space I call *sagasuation* (see dot D), Wallas (1926) identifies as *incubation*. This space has been progressively explored through spirituality, psychology, phenomenology, and is now in the realm of neurology, which is providing empirical evidence from technological explorations into the physical brain, chiefly through functional Magnetic Resonance Imaging –fMRI's.

XA-25

Neurological understanding of the operation of the brain has expanded exponentially over the past decade as technical advances have allowed the study of the brain without surgical interference. These advances have demonstrated neural plasticity (McGuire et al. 1996) – the ability of the brain to change its structural operation - providing renewed interest in the operation of the brain (eg; Doige 2007; Greenfield 2004; 2008; Claxton 1997; 2007; Zeki, 1998; 2005; Mithen 1996; Donald 2006; Ramachandran 2004; Robinson 2008. See Wallas 1926:50 for earlier discussion of neural plasticity). Neural plasticity facilitates new learnings through the creation of new neuronal dendrites, allowing greater synaptic inter-connection, connections being the foundation of cognition. The creation of new inter-connections are assisted by “enhanced environments” (Greenfields 2008:30), which in this study is the application of space for the wandering mind in the “holistic landscape of the brain” (Greenfield 2008:243).

XA-26

The work of Kalina Christoff (2009) and her team provides empirical support for the value of this non-cognitive knowledge – described in the report as ‘mind wandering’, but also noted as day-dreaming. Christoff’s team used fMRI technology to record active regions of the brain during mind-wandering events. These mind wandering events, established both by subjective self-reports and errors occurring in predetermined tasks, demonstrated that, unusually, both ‘default’ and ‘executive’ networks of the brain were active at the point of wandering. Neural ‘default’ functions occur in distinct regions of the brain -the medial prefrontal cortex (front),

posterior singulate cortex/precuneus region (rear), and the temporal junction (sides) - which control the basic operation of the mind. 'Executive' functions occur in the dorsal anterior cingulate cortex (base) which relays information between hemispheres of the brain and "becomes consistently activated when individual engage in demanding mental activity" (Christoff et al. 2009:8719).

XA-27

Christoff et al. argue that "[m]ind wandering may evoke a unique mental state that may allow opposing networks to work in cooperation" (Christoff et al. 2009:8719). This decidedly cautious proposal has been confirmed and expanded by Christoff and her team (Christoff et al. 2011), and by Jung et al. (2010), who stated "[t]he distribution of significant areas throughout the brain, . . . suggests that information flow among brain areas may be a key to creativity" (2010:404). Ansberg & Hill (2003:1148), had earlier demonstrated that the neurological operation of "[t]hose who make unusual connections allocate their attention more diffusely" throughout the brain.

XA-28

What Christoff's research undeniably demonstrates is the brain's ability to create connections, both physically, and ethereally, and most effectively in states of undetermined wandering. Thus, as "mind wandering is a complex mental activity that often interferes with cognitively demanding tasks, suggesting a processing overlap with the executive system of the brain" (Christoff et al. 2009:9819), daydreaming isn't the realm of the simpleton. As such, periods of non-focused, non-pressured thought – play for the mind if you like – allow extensive interconnections to occur between functional regions of the brain and are foundational to empirically acknowledging the value of such a space in concept generation.

XA-29

The recognised value of daydreaming has commonly been referred to as "insight" (Jung-Beeman 2004), or 'eureka moments' – the conjoining and comprehension of otherwise perceptually unrelated data- and reported as key to many historical scientific breakthroughs, from Archimedes in his bath, Kekule's 'benzene ring' dream, to Newton under the apple tree. In fact, science is peppered with 'eureka' moments that "*cometh by opportunity of leisure*" (Ecclesiasticus 38:24) in non-focused states. Findings such as these allude to 'eureka moment' insights occurring due to expansive inter-connectedness within the brain. So Newton wasn't just

lazing under the apple tree! (See Ramachandran 2005 for phenomenological accounts of two such events).

XA-30

This allocation of cognition to integral aspects of neural functioning, unvalued as it is, is the heart of this research. It is a space that has many titles (see dot L73). While the value of 'sleeping on it' has been culturally recognised for generations, the epistemological role of sagasuation is seldom acknowledged (Claxton 1998; Hunter et al. 2002), particularly when compared to its 'goal directed thinking' and 'creative thinking' cousins.

XA-31

"new ideas and conclusions will emerge in your consciousness anyway-and the less you try to direct the process the more creative they are likely to be"

Mihalyi Csikszentmihalyi 1996:354

This research into this cognitive space suggests its effectiveness is most applicable to complex considerations (Dijksterhuis et al. 2006) as the capacity for conscious thought is limited to a small number of variable factors (Lewicki et al. 1992; Dijksterhuis et al. 2004; 2006; 2006a). Effectiveness is also assisted by acceptance of the complexity and therefore a "willing[ness] to take risks, tolerate ambiguity, and persevere" (Hunter et al. 2002:397; see also Kounios & Beeman 2009:212; Christoff et al. 2011; McCrae & Costa 1997), three criteria commonly assigned to creativity (Amabile 1985; 1995; Hennessey & Amabile 2010; Sternberg 1999; Getzels, & Csikszentmihalyi 1976). Our capacity for spontaneous thought increases during highly practiced tasks (Smallwood et al. 2004; Teasdale et al. 1995 in Smith et al. 2006).

XA-33

It is this cognitive process, described by Ward, Smith and Fink (1999) as an oscillation between the generation and the exploratory processes, which allows what Gedo (1997 in Nelson 2005) proposes as unconscious association processes, that distinguishes this method from Osborne's 'Brainstorming', or de Bono's 'Six hats' creativity based question generating methods. This research utilises time for the exploration of information rather than focusing, as Osborne, deBono, and almost all psychological and neurological 'incubation' research does, on the generation of solutions to specific problems. This

process allows for the research of knowledge which in itself generates ideas. It is a reflexive, incorporating cognitive processes, recognised, but not understood.

XA-34

It becomes important to distinguish between day-dreaming, incubation and sagasuation. In this thesis 'incubation' is the distracting of the mind to allow subliminal process, which conveys a sense of fertilisation, nurturing and lineal progression, stemming from a fertilised concept. Incubation, as a term, fails to account for serendipity. 'Day-dreaming' is an intrinsic distracting of the mind, un-noticed and un-directed, and without specific outcome (see the discussion of Varendonck' (1921) phenomenological study of day-dreaming at dot L99), while "sagasuation", a neologism, refers to immersion, infusion, steeping, brewing, stewing and fermenting. It is the complex subliminal cognitive interactions, a soup of amalgamated knowings that, while undirected, congeal, rather than progress, to a comprehended outcome.

XA-35

It is also important to distinguish between non-conscious processes/'undermind' and 'intuition', similarly capable of syllogisms leading to problematic perceptions. 'Intuition', I would argue, resides deeper in the undermind, if not entirely genetic, with the work of Nobel Laureate Nico Tinbergen's *supernormal stimuli* research demonstrating how non-cognitive, instinctual responses may undermine self-preservation. The 'undermind' is subject to conscious review. (See dot R27 for elucidation of Tinbergen's theories).

XA-36

These cognitive states are applied here to allow for exploration, though it is noted that mind-wandering may bear negative psychological influence (eg. Killingsworth & Gilbert 2010; Gruis 2005). While recognising some validity in such arguments, a chicken or egg questions remain as the cognition may be a resulting symptom, rather than the cause of other mental issues. Such complexity in cognition complicates all interpretation of identifiable neural processes, and are ongoing issues with all phenomenological research (see Gilhooly et al. 2012; and Dijksterhuis & Meurs 2006 discussions of 'Selective Forgetting', which seems to assume lineal, rather than concurrent neural processes).

XA-37

The pedagogical effectiveness of metaphor as a means of knowledge transfer.

One of the key criteria for research to be considered research is the transference of the generated knowledge (e.g., Biggs 2003). This too is an act of convergence where the knowledge converges within the existing tome of recorded research. While I have demonstrated how the creative act converges knowledge, and how daydreaming/incubation allow room for that knowledge to converge, there is one other means of knowledge convergence - the connections between 'dots' - that this study ironically focuses upon - the converging contextual connections inherent in metaphor.

XA-39

"Ordinary words convey only what we know already; it is from metaphor that we can best get hold of something fresh" (Aristotle cited in Ricoeur a 1978:33-4).

Metaphors, and their subsets; synecdoche, similes and metonyms, use "figurative language to suggest a likeness to or analogy of an idea" (Burns & Grove 1995, in Hunter 2002:392), language which generates "a mental tunnel between two concepts or percepts that appear grossly dissimilar on the surface" (Ramachandran & Hirstein 1999:31). This purposeful shifting of contextual meaning (Lynch 2008) - the conjoining of apparently un-related knowledge or concepts - is a complex cognitive function that the brain appears incapable of applying until about ten years of age (Winner 1989). Aristotle even argued that metaphor can't be taught (Poetics 1459 a 3-8). "Understanding metaphor requires interpretation and investigation in context" (Scheffler 1989:49). Such contextualisation require integration of available knowledge, so to draw meaning "a connection has to be made" (Greenfield, 2008:81) - i.e. the joining of dots.

XA-41

"Metaphors can not be found in dictionaries" (Lynch 2008:2). "(A)s soon as one gets away from concrete physical experience and starts talking about abstractions or emotions, metaphorical understanding is the norm" (Lakoff 1993). "Literal language exists with in systems of containment and classification. Metaphors and metonyms permeate boundaries and open up new understandings" (Irwin 2005. See also Ricoeur

1978; Hunter 2002; Siegesmund & Cahnmann-Taylor 2008; Schiff 1978). As a means of knowledge transference this permeation opens a distinctive kind of knowledge not available in other domains.

XA-42

Lynch argues that “metaphors can be more than evocation and more than rhetoric, they can signify deep thinking and the creation of new knowledge” (2008:1), devised through the formulation of previously unconnected knowledge. And this new knowledge, according to Ricoeur’s (1978) very considered overview of metaphor, is “a strategy of discourse that, while preserving and developing the creative power of language, preserves and develops the *heuristic* power wielded by *fiction*” (Ricoeur 1978:6 emphasis in original). Such a strategy de-stabilises, and shifts perspectives, “Violat[ing] literalness”(Penguin Dictionary of Psychology 2009), generating new knowledge - “new dimensions of understanding” (Siegesmund & Cahnmann-Taylor, 2008:241) - by augmenting, but also troubling capacity for explanation (Siegesmund & Cahnmann-Taylor 2008:241).

XA-43

"Aristotle taught that ‘the greatest thing by far is to be a master of metaphor [literally: to be metaphorical, to metaphorikon einai]. It is the one thing that cannot be learnt from others; and it is also a sign of genius [euphuia], since a good metaphor [literally: to metaphorise well, eu metapherein] implies an intuitive perception of the similarity [to to homoion theorein] in dissimilars” (Poetics 1459 a 3-8; in Ricoeur 1978:23).

XA-44

Metaphor is at least as old as the upper-Palaeolithic cave paintings at Lascaux. Intricately carved tallow lamps in the cave/galleries of *Lascaux* and *La Vache* illustrate the metaphorical relationships between the represented animals and light and dark (Lewis-Williams 2004:222). Biblical parables too recognised that metaphors “provide a strong visual image, one that is powerful in communicating meaning” (Hunter 2002:392). The translation of concept to visual representation, including tropes such as “I see”, is a key ability of metaphor to simply convey complex multi-dimensional concepts. This visualisation process connects it with visual art.

XA-45

Artforms inherently communicate through metaphor's inter-related mode of understanding, as an image is always representation in unrelated media, and thus must be read in terms of relationship between existing knowledge and the shapes and forms of the image, rather than the existence of what is represented. (An interesting anthropological illustration is Anthony Forge's 1970 study of Papua New Guinea Highlander's inability to recognise people in the content of photographs (see also Segall et al. 1966; Deregowski 1973.¹). Alas, each of the researchers failed to recognise their own assumptions of what an image is. In Western culture the language of the souvenir - the "trace of authentic experience" (Springgay 2004:62) - becomes shorthand for that which is represented - ie. there is no face, only a 'souvenir' of a face. These assumptions are cultural and do not innately exist.

Footnote 1: Examples of cultural perspectives influencing knowledge, both the respondents and researchers;

Anthony Forge, (1970, 'Learning to See in New Guinea'. In P. Mayer *Socialization: the approach form social anthropology*. pp. 269-290, Travistock) showed photographs of people to Sepic Highlanders, who didn't see people.

Segall, Campbell & Herskovitz, (1966, *The Influence of Culture on Visual Perception*. New York: Bobbs) - found the Muller-Lyer arrow length test didn't work on non "carpentered world" people.

Deregowski, Jan. 1973. Illusion and Culture. In R.L.Gregory & E.H. Gombrick (Eds) *Illusion in nature and art*. Duckworth & Co.

Publication are presented here for further reading.

XA-46

Visual communications are founded in metaphor, being symbols, traces, or souvenirs of what is represented. Metaphor in art operates in two realms, metaphorical allusion to conceptual content, and metaphorical allusion of that concept's representation. The conceptual content is where the artist creates the metaphorical connection, for example, the use in my own works of a single drop of water to concurrently allude to the concept of 'the individual', 'time', and of 'significance'. The illustration of that drip, be it through projected light upon a screen, or as a glass lens, is a metaphorical representation of the concepts. It "is not a logical extension of what is . . . and . . .[physically] appears unrelated to what is" (Winner et al. 1989:52). Physically, the projected drip bears no resemblance to an actual drip, having no form, tangibility, or chemical structure. It is only a likeness in the visual sense. We look at the drip, but it is clearly not a drip.

XA-47

The metaphorical allusion of the concept's representation is that which is read by the viewer. The author/artist has no say on the viewers interpretations of the metaphors chosen by the artist, no matter how desired. (Even Victorian morality painters, whose image structures were designed and defined to elicit very specific responses cannot control the perceived metaphor in their work, which in contemporary society are now a metaphor for kitsch). The viewer interprets and identifies their own meaning, possibly new meaning, new insights unrecognised till the key is placed by the artwork

XA-48

"Metaphoric and metonymic relationships help us make sense of the world by making ideas accessibly through our senses" (Irwin 2005). "It is because of their descriptive power that metaphors are so often at the root of scientific theories and serve thus to reshape our knowledge (cf. Turbine 1970, in Winner et al. 1989:52). But metaphor's meanings may misrepresent, as they become self-contained expressions, literal clichés, freed from their origins as "bold metaphors" (Scheffler 1989:46). They can also shift into hallucinations, "where the subject moves from perception of 'vision' as metaphor to vision as 'reality'" (Lewis-Williams 2003), described by Siegel (1977) as a loss of metaphor. When art occupied the space of representation it did not have an academic role. But as art has moved into the realm of metaphor, it has co-incided with the opening of post-modern interstitial spaces, which are most suited to art's language.

XA-49

Being "metaphorical" (Brent & Watson 1980; in Csikszentmihalyi 1990) is a manner of the wise. "Wisdom is found in the interaction of the cognitive, affective and behavioural domains that allow this knowledge to form in the first place, and then the judgment about it to be evidenced" (Bassett 2006:298). To achieve this kind of judgment Kramer (1990) proposes using alternative modes of representation. "As Cook-Greuter (2000) and Pascual-Leone (1990) seem to suggest these modes can include imagery, art and metaphor, along with meditation and spiritual practice." Bassett, 2006:299
"(W)ise people manifest these three proficiencies with a deep understanding of causes, consequences and relationships" (Bassett 2006:294), proficiencies too often beyond Western mindsets.

XA-50

Appendix XE –

Appropriate appropriation? Boundaries and cultural borders in art and education.

Contemporary Australian awareness of Indigenous issues has shifted from the euphoric wave of sentiment expressed in the Reconciliation Marches (2000) and the National Apology (2008), but anxiety about relations between Indigenous culture and white Australia continue. One of the key implications of this anxiety is how to consider and learn from the societies and cultures that grew within this land without expanding the problems inherent in the 'appropriation' of Indigenous property and culture that has occurred in this country since 1788.

XE-2

It is impossible to review implications and consternations of intercultural learning without acknowledging the complex impacts of historical experiences. What initially appeared as successes to European colonial occupiers have had consequences far beyond the awareness of those actors of history (Anderson & Perrin 2007; Attwood 1992; Goldthorpe 1975). This consequential naivety is, in its own way, an example of the temporal atomization of knowledge inherent in our contemporary Western consumer culture - a theme implied in the early artworks of this thesis.

XE-3

It is possible to construe the entire contemporary Western consumer culture as originating from "culture collecting" (Clifford 1988, p. 231; see also Burns Coleman 2005), a culture built upon selected elements of many cultures, both historical and contemporary, physical and ethereal. Acting as a bower bird, my ancestral culture, had, and continues to have, a habit of selecting elements of 'other' cultures to utilise, based upon narrow and subjective criteria. For example, Kalantzis (2006) notes that appropriation is inherent in Eastern pedagogy.

XE-4

This is a form of atomized knowledge - the disconnection, or harvesting of knowledge from its field of understanding - to then be placed within our realm of consumption. It is this act of unauthorised use/dispossession of cultural elements, born in the politics of power, that has become part of Western 'habitus' (Bourdieu 1990), and is exemplified within the theories of contemporary art under the title of 'appropriation'.

XE-5

'Appropriation' in contemporary Western art has generated art world anxieties about authenticity and ownership for most of the past hundred years. Marcel Duchamp and the Dadaists of the early 1920s are often presented (see Evans 2009) as predecessors for what John Rajchman calls "theoretical cannibalism" (1987, p. 51), but in many ways the artists of the Renaissance were already mining the past for styles and techniques.

XE-6

This shouldn't be surprising. Creativity researchers Götz & Götz (1979) found no correlation between originality and 'eminent' creativity. Rather, creativity researchers propose, artists start with an "internalization or appropriation of cultural tools and social interactions. . . (which are) not just copying, but rather a transformation or reorganization of incoming information and mental structures based on the individual's characteristics and existing knowledge" (Moran & John-Steiner 2003, p. 63; see also Beghetto & Kaufman 2007, p.74; Garneau, D. 2009, p.132). Australian artist, Tim Johnson, whose career is built upon collaborations with many indigenous Australian artists, agrees, arguing that "appropriation is a form of regeneration", going on to describe it as a "form of imitation as flattery" (Johnson 1989, p. 12).

XE-7

But this 'flattery' has to be seen in the context of "over a century (of) Aboriginal imagery, and the artistic work of Aboriginal people (being) appropriated consistently as a 'marker of Australian identity" (Palmer 1999, p. 344; Langton 1997). Or, as Nicholas Rothwell (1996, p.1) stated, "to brand, sell and to define ourselves" (see also Attwood 1992, p. iv; Fourmile 1989, p. 8; Janke 1997, p. 19; Nicholls 2000, p. 7; Langton 1997, p.106).

XE-8

The highly regarded Australian artist of the mid twentieth century, Margaret Preston, herself criticised for appropriating Indigenous imagery, wrote " The attention of the Australian people must be drawn to the fact that [Indigenous Australian art] is great art and the foundation for a national culture for this country" (1941, p.46, parenthesis added). While Preston may have argued for a 'foundation', Christine Nicholls argues that what has occurred is an atomised cultural appropriation - "... those 'pioneers', engaging with the 'national' Indigenous art did not seem to be premised on engagement with Indigenous peoples themselves, but 'only' with Indigenous culture in disembodied,

abstracted, 'pure' artistic form" (Nicholls 2000, p. 5). Such imagery, for Algerian writer Malek Alloula, comes to represent the "pseudo-knowledge of the colony. . . the fertilizer of the colonial vision" (Alloula 1981, p. 129).

XE-9

There is validity in this concern about "pseudo-knowledge" as there are many examples of Indigenous imagery disconnected from cultural significance, or even worse. Elizabeth Durack's elaborately constructed indigenous alter-ego, Eddie Burrup, is one of the highest profile recent duplicitous occurrences, along with John O'Loughlin's Clifford Possum-Tjapaltjarri fakes, Pamela and Ivan Liberto's fake Rover Thomas', and Indian artist, Sakahi Anmatyerra's Mary McKillop Chapel in Sydney. Concern is not restricted to fraudulent 'appropriations'. Imants Tillers, Tim Johnson, and even Britain's Prince Harry (see bbc.co.uk/2/hi/entertainment/3162801.stm) have been criticised for their colonising of indigenous cultural imagery. And there is also concern about appropriation of Indigenous culture within Indigenous culture (see Fourmile 1989, p. 9; Ryan 1989, 1991).

XE-10

The legal status of Indigenous imagery is almost as atomised as the 67 legal definitions of Aboriginality in Australian Statutes (McCorquodale 1986), inducing waves of texts concerned with appropriation over the past forty years. Martin Hardie traces the development of case law in the protection of Indigenous artworks, initially through what are known colloquially as *The T-Shirt Case* (*Bulun Bulun & Nejlam, FCA 1998*) and *'The Ten Dollar Note Case'* (*Yumbulul v Reserve Bank of Australia [1991] FCA 332; (1991) 21 IPR 481.*), which established the 'original' works concept under the Copyright Act. He then describes the *'Carpet Case'* (*M & Ors v Indofurn Pty Ltd & Ors (1994) 54 FCR 240.*) as establishing the relevance of Aboriginal Law and Tradition. Federal Court Justice von Doussa's ruling in *John Bulun Bulun & Anor v R & T Textiles Pty Ltd. (FCA 3 September 1998)* found that protection under the Copyright Act (1968) has limitations, in that protection is extended to the artist, but the law has been unable to recognise community ownership of imagery (see Hardie 1998).

XE-11

Other issues arising under this act relate to its requirement for 'record', which bestows authorship upon those who record and present documentation. When applied to traditional cultures, it is the anthropological/ethnographic recorders who observed and recorded Indigenous epistemologies, such as Durkheim, Spencer & Gillen, and Strehlow,

assigned authorship, while any moral rights of the traditional custodians of the knowledge, as well as any unrecorded culture including performative cultural practices and materials (Janke 1997; 2000; see also Board of Studies 2006) are excised from legal status.

XE-12

Terri Janke's comprehensive report *Our Culture, Our Future* (1997), while identifying relevant Acts that effect indigenous art, developed a number of provision for protection, as well as legal and administrative methods to achieve them. These provisions were included in the Arts Council of Australia's *Protocols for producing Indigenous Australian visual art* (2006), and the publications of the Arts Law Council of Australia (2006, 2010). Burns Coleman, drawing upon Nelson Goodman's concept of *syntactic equivalence* argues that indigenous ceremonial design are effectively 'insignia', which constitute identity, and as such should be protected. She states "our legal mechanisms for the protection of insignias would satisfy most of the Aboriginal demands for their art to be protected" (Burns Coleman 2005, p. 13).

XE-13

The legal and cultural implications of what Firat (1995, p.116; in Howes 1996) describes as the 'marketization of culture' are not limited to Australian Indigenous cultures. Crain (1996) portrays the Quisam women of Nicaragua as having 'accommodated' their negotiated identity, subsequently exploiting it. While David Howes, in reviewing the Hopi Indian's attempt to withdraw their culture from commercial appropriation, finds legalistic limitation for protection in US law, noting that Disney Corporation was able to "use copyright law to stop the mockery of Mickey Mouse, then why should not the Hopi be able to use the same law to stop their deities from being turned into comic book characters" (Howes 1996, p. 149).

XE-14

Similar limitations in Australia result in what songwriter Paul Kelly (1996) referred to as "special treatment". This is amply illustrated in the contrast between Christine Nicholls lament of the "resurgence of [culture appropriation] in the deployment of Indigenous imagery by the spin doctors of the Sydney 2000 Olympic Games" (Nicholls 2000, p. 5; eg. the boomerangs in the logo), noting the legal protection covering of all Olympic motifs and imagery, in the *Sydney 2000 Games (Indicia and Images) Protection Act* (1996), (see also McCausland, 1999).

XE-15

Eric Michaels suggests some activists "claim that postmodern appropriation of Aboriginal imagery is doubly a crime. It is both a violation of Aboriginal traditional regulations . . . (and) an ethnocidal example of hegemonic and imperialistic attacks on authentic local traditions" (Michaels 1989, p. 26). The first of these arguments relates specifically to the use of Indigenous images and motifs. The second contains more complex post-colonial political undertones, issues embedded in the psychology of imagery that affect all aspects of indigenous art, both in Indigenous creative heritage, and its post-colonialist consumptions. (See Berger 1972; Lewis-Williams 2002; Levi-Strauss 1969; for examples of discussions of the psychology of imagery). The post-colonial issues involve concepts romanticisation of primitivism, possession, and of genius.

XE-16

Primitivism, and the idea of 'noble savage', has permeated Western culture since the first known use of the term in Dryden's 1672 *Conquest of Granada*. This projection is carried into the market for Indigenous art, with paintings becoming "regarded as exotica, . . . and so become fodder for postmodernism's consumerist appetite for the primitive " (Michaels 1989, p. 29). This is more overtly expressed as "Godessology" (Jackson 2010) - a desire to "access ... some exotic primitive world which the jaded modern gaze wishes to fantasize" (Michaels 1989, p. 30). A key part of Western fantasies projected upon Indigenous artworks reside in the assumption of an accompanying 'authentic' story.

XE-17

Many writers have maintained that Indigenous art conveys story, a narrative of Dreaming knowledge (eg. Biddle 2007; Strehlow 1971; Bardon 1979; Caruana 1993; Nicholls 2000; Ryan 1991), and it is access to that story, or even perceived access to that story through possession, that drives the Indigenous art market (see Nicholls 2000, p.13). Biddle laments that tourists addressed their questions to her, a white woman travelling with Indigenous women, rather than to the Indigenous artists themselves, when asking the inevitable question "What is the story behind the picture?" (Biddle 2007). This inlaid 'authentic' story is part of the purchase. As Michael Nelson Tjakamarra puts it "Without the story, the painting is nothing" (quoted in Nicholls 2000, p.8). (It is noted that Tjakamarra's comment may refer both to the 'market', and to the indigenous epistemological value of the story).

The marketing of 'authentic' indigenous art feeds a complex combination of what Levi-Strauss (1969) sees as an "outstanding original feature of Western civilization" - the "avid and ambitious desire to take possession". But, possession to the British Museum's David Wilson is protecting the "doctrine of world heritage" (Wilson 1985), although there is little to distinguish between paternalistic colonial motivations to protect, and paternalistic colonial motivations of occupy and possess. If, as Berger argues, possession of an image "outlasts what it represented" (Berger 1972, p. 10), the "doctrine of world heritage" inevitably carries baggage in the post-colonial environment.

The penchant for 'authenticity' extends to the third post-colonial issue, Western culture's long-standing romanticisation of the starving artistic genius (see Galton 1869: Gardner 1984), here manifesting as the 'pure' and 'untainted' native artists painting "enduring truths" (see Johnson, V. 1994, p.42). While relating to "Godessology", the concept of innate knowledge otherwise unavailable to modern society, and only being accessible through shamanic conduits, is clearly present in the phenomenon generated by Marlo Morgan's 1994 best-seller, *Mutant Message Down Under* – a proven fictional account of the author's supposed spiritual interlude with the Dumbartung peoples of Western Australia.

Beyond the projections of Western culture, the politics of image appropriation are very pronounced, and are not limited to Indigenous imagery. The 'situationist' concept of 'detournement' (DeBord & Wolman 1956) is a method of a political appropriation, or 'hijacking' of authoritative words and images to create rebellious, counter messages. This is illustrated in Robert Fisk's (1979/2005) reporting of the occupation of the US embassy in Tehran. Iranian revolutionary students appropriated Joe Rosenthal's 1945 iconic photo *Old Glory goes up on Mt. Suribachi, Iwo Jima*, of US marines 'nobly' raising the 'Stars and Stripes' on Iwo Jima, replacing the marines with revolutionary students and the Stars and Stripes with the green Islamic flag - a very potent political message on US network TV news.

Typically, under-cultures operate within the realm of all dominant cultures, and as De Certeau (1984) suggests, seek and find methods of self-determination within power

structures. De Certeau goes on to acknowledge that appropriation occurs at all levels of societies and cultures, creating terms to clarify the appropriative habits of both the subsumed individual and the dominant authority - 'space', and 'place'. These concepts may alleviate some of Burns-Coleman's concerns for an either-or dichotomy in the protection of Indigenous culture - undermine Western traditions of freedom of expression, or "destroy Aboriginal cultures" (Burns-Coleman 2005, p.12). But in acknowledging the power of those subject to the powerful, they allow for shifts within the oppressed, which assists in ensuring a living culture and avoid becoming "pot-bound" (W. Hilliard, cited in Fourmile 1989) in "Aboriginalism" (Attwood 1992, p. i).

XE-22

Other writers and theorists perceive a way out of "the dismal doctrine that no rapprochement is possible" (Johnson 1985, p.6). The dynamic nature of all cultures undermines any idea of *cultural in-confidence* preventing influence of, and on non-Indigenous culture (see Alston 2000, p.3). Such interactive exchanges between cultures, described as '*creolization*' (Enwezor 2002; see also Sanders 2006; Howes 1996) are complex, and perhaps "such interactions between Indigenous and non-Indigenous Australians ultimately provide the only real hope of reconciliation" (Nicholls 2000, p. 13).

XE-23

The dialogue from reconciliatory interaction may allow for a re-integration of Indigenous artefact with the complexity of their cultural role in the minds of non-Indigenous Australians, which in turn may assist in resolving the appropriation issues of what David Tacey described as "white Australian's identity uncertainty" (Tacey 1995). He proposed that as "this uncertainty grows, so the level of aboriginalisation increases in the psyche of non-Aboriginal Australians" (see also Thomas 1999). This may be what George Johnston described as "this dual image of ourselves, a schizophrenia of cities and land" (Johnston & Goodman 1972, p. 73).

XE-24

A re-integration of the conflicting needs and desires in Western culture may become possible. As Said noted, "it is often the case that you can be known by others in different ways than you know yourself, and that valuable insights might be generated accordingly" (Said 1978, p. 7).

XE-25

Maybe the result of dialogue is that non-Indigenous Australians will be "able to find the ritual in our own experience" (Johnston & Goodman 1972, p. 73), something made clear to artist Hossain Valamanesh, when asking permission from the Papunya communities to paint with dots, - "they said 'yeah, there's no problem. You can paint dots and lines. But as long as you paint your own story' " (Valamanesh 2010).

XE-26

Imagery is a key opening in the educative power of such dialogue. As Cecily Granite's artist statement beside her painting in the foyer of the Victoria University, School of Education states "this painting is also about the education of Kardiye (non-Indigenous) people and all the people from different nationalities that live in Australia now. We need . . . to learn from each other and especially learn from our elders" (Napangunga 2007).

XE-27

There can be no dispute of Western culture's negative impacts upon Indigenous communities, nor the inauthenticity of the methods employed in the colonisation of Indigenous cultural capital. Despite this, such knowledge cannot now be separated from the consuming nature of Western worldview, it cannot be un-known. The existence (not the content) of *The Dreaming* –Indigenous Australian's creation narrative, a complex transmission of Spirituality, social law, biology, title, health, among other facets – has been absorbed within the dominating Western culture, appropriated as an identity by non-Indigenous Australians, enunciated clearly by Qantas planes bedecked with Indigenous artworks, and the Indigenous imagery on Australian currency –both "ethnocidal example[s] of hegemonic and imperialistic attacks on authentic local traditions" (Michaels 1989:26). Neither of these manifestations carry with them any actual ideological or philosophical link with the concepts and knowledge the imagery expresses, they are atomised representations, as they do "not seem to be premised on engagement with Indigenous peoples themselves, but 'only' with Indigenous culture in disembodied, abstracted, 'pure' artistic form" (Nicholls 2000:5). Within that disembodied perception however, both art and education offer critical intersections in this "ongoing debate on this challenging topic" (Alston 2000, p. 3).

XE-28

Appendix XO –

Atomisation; Motivations to conduct research

What is it about dots? Can a dot be other than a circle? Is a dot a two dimensional symbol of the sphere? (Both a circle and) a sphere (are) the most efficient combination of mass and volume, (where a given mass occupies the least volume).

But as efficient as a circle actually is it cannot be, without reference to the space around it, as (circles)/spheres do not interlock, to exist they require negative space between them.

This space is existent, it is not void, it is valid. The sphere cannot exist without the space external to the sphere, the space between spheres is the space of the unknown, outside of the authorised known, but it is not the unknowable, it is the fact that we know of the existence of the non-space that illustrates that we know of the space, circular maybe, but it is not a Derridian trace, or supplement, it is not that un-authorised space of de Certeau, it is not the plane of Delueze, it is not the big-C creativity of Csikszentmihalyi, (but) it may be the relational aesthetics of Bourrieau."

Researcher's Journal entry 28/8/09.

XO-2

"Actually, in human affairs, it is often next to impossible to break things neatly up into "inside the system" and "outside the system": life is composed of so many interlocking and interwoven and often inconsistent "systems" that it seems simplistic to think of things in those terms. But it is often important to formulate simple ideas very clearly so that one can use them as models in thinking about more complex ideas."

Douglas Hofstadter (2000:38).

XO-3

Western epistemology has accumulated more knowledge than at any stage in history. Technologically, we can manipulate the genetic structures of life by 'shearing genes', and building atomic scale 'micro machines'. This epistemological method, founded within a Renaissance interpretation of dichotomic Greek philosophy, has generated excellent means for defining detail. But, because of the systemic failure to integrate and relate knowledge defined and extracted from the complex systems that envelope it, we are defining ourselves into an increasingly serious environmental predicament. This, I believe, stems from Western culture's highly developed habit of isolating information - 'compartmentalising' knowledge into 'dots' - discrete parts, separate and distinct.

X0-4

This habit both generates and feeds “a reductionistic, mechanistic worldview in which reality is divisible and knowable in of discreet things” (Morgan 2003:44). This “reductionistic, mechanistic worldview”, identified throughout this research as *atomisation* [the reduction of the whole “into a single irreducible unit . . . in a larger system” (New Oxford American Dictionary 2nd ed)], might be ideal for technological production, but it is also leading us towards fragmented perceptions of the highly integrated systems we are dependent upon.

X0-5

The problems inherent in, and consequences of this atomising habit, have been recognised and criticised from at least the 18th century industrial revolution. William Blake, poetically proposed a holistic view. Thomas Malthus (1826), while pilloried by those arguing for the scriptural morality of the dominating growth of humanity, clearly identified the outcome of the anthropocentric subject position (a sociological construct of the individual human as being both the key cosmic constituent, and concurrently isolated from the surrounds), and its inherent failure to place the individual within the whole. It is this atomising system, and its flawed predications that are at the heart of both the motivation, and the method of this study.

X0-6

The need for industrialised, anthropocentric societies to integrate knowledge is made apparent through the problems generated by their application of information extracted and isolated from the complex landscape that embodies it. The knowledge of environmental degradation is the parameter within which all positivistic knowledge resides. It encompasses economics, agriculture, manufacturing, in fact almost every single facet of modern human life. Clearly, much is known about the environment we live in but most often knowledge is applied to manipulate it for apparent gain.

X0-7

One atomised view of environmental manipulation, commonly referred to as agriculture, operates without acknowledgement of its requirements, or consequences. The concepts in agriculture extend throughout the Western empirical mindset, identified as ‘civilisation’, (Donald 2006; Mithen 1996; Anderson 2007; Sanderson 2002). Anderson, in considering the British motivations for the proclamation of *Terra Nullius* during White colonisation of Australia, proposed that as “‘the human’ was defined by its very

capacity to rise above and to improve upon nature, the manifest remarkability of the Aborigines' failure to cultivate the land acquires its full significance" (2007:23; see also Gale, 1986, Gammach, 2011 for arguments demonstrating pre-colonisation indigenous agricultural practices). As such, a society constructed upon this flawed premise of "rising above and improving nature" is inevitably headed towards conflict with the complexity of 'nature' itself, a form of self destruction which inherently questions the level of Western cultural intelligence (Tainter 2006). Knowledge of inter-relatedness and inter-dependence must be incorporate into societal perceptions to avoid the collapse of its structures. This sounds quite dramatic, because it is (see Brunk 2002, Brundtland 1987; Meadows et al. 1972; Keating 1975; Meadows 1999; Tainter 2006; Diamond 2006; Loveridge 2008; Beddoe 2009; Jones 1998; Weiss 2001; Stern 2006; Garnaut 2007; Hamilton 2010). Failing to connect knowledge with that outside its own distinct realm is clearly dangerous. Rachel Carson's exploration of the ill-considered consequences of agricultural chemicals in her seminal book, *Silent Spring* (1962) is one of countless examples that illustrate atomising environmental knowledge generates threats greater than those the actions sought to resolve.

X0-8

This process of atomisation occurs not just environmentally, but broadly across the psycho/sociological practices, which ironically, are integrated throughout Western culture. A quick example: to economists exponential growth is critical, arguing the economy will die *without* it. To doctors, exponential growth is critical, as it's likely to be cancer and we die *with* it. Ironically, "(u)nending physical growth of the economy is only possible within a system unconstrained by any biophysical limits" (Beddoe et al. 2009:34). The failure to integrate 'knowledges' of the complexities of the "growth fetish" (Hamilton 2004) with environmental knowledge begs consideration of the forces generating such atomisations. Given the availability of the knowledge of the need for integration, the role of atomisation takes on very political overtones. (See Tainter 2006 for discussion of political roles in historical overshoot and societal collapse). The complexity of these forces are beyond the realms of this study, and have been well enunciated by theorists such as Michel Foucault, and Eric Fromm (1957) before him.

X0-9

This research, rather than dissecting hegemonic atomisation methods, looks at a pedagogical method to allow individuals to learn to integrate knowledge for themselves. Pedagogical practices have long been noted for their role in disempowering hegemony

(see Taylor 2006; Denzin 2008, although Fromm (1960) , amongst others, would argue that pedagogical structures maintain hegemonic practices). The recognition of hegemonic forces is a motivation for this research, and may be seen within that paradigm.

XO-10

It is the integration of defined, atomised knowledge that will inspire new knowledge, enabling greater value from integrated complex knowledge, than the isolated, positivistic knowledge employed in the construction of the contemporary society. The integration of knowledge is consistently considered the key factor enabling the development and application of what is known as wisdom - “a fine tuned coordination of cognition, motivation, and emotion” (Baltes & Staudinger 1993:76), “when a person is able to move beyond individualistic concerns to a more collective or universal one” (Orwoll & Perlmutter 1990:12; see also Sternberg 1990; Taranto 1989; Thao & Leverson 2004; Bassett 2006; Csikszentmihalyi 1995).

XO-11

The integration of the 'I' with the 'dual' may even overcome the factious relationship of the contemporary individual. This word - 'indiv-I-dual' illustrates within it the inherent psychological and ontological complexity of humanity, and its simplified application in Western society.

XO-12

Epistemological atomisation; stepping beyond quantitative worldviews.

Having established a clear need for overcoming the limitations of atomised knowledge, it is now time to consider this situation in terms of the epistemic model that is generating much of that knowledge. Traditional research methods have arisen out of this atomising habit, which allows for an “understanding of ‘reality’ . . . based upon ontologies that are internally inconsistent” (Morgan 2003:42; see also Csikszentmihalyi, 1990:30). Quantitative knowledge, despite many years of review, remains the authorised and most legitimate basis for research, (Denzin & Lincoln 1994; Denzin 2008; Ellis & Bochner 1997; Marshall 1999; Wall 2006; 2008; Balkema 2004; Candlin 2000; Hannula 2004; Kamler & Thompson 2006;2007; Eisner 1997; 2002; 2008; Pakes 2006; Bindeman 1998; Irwin 2004; 2005; 2008; Biggs 2003; Borgdorf 2005; Sinner et al. 2006; Walker 2004; Eskow 1998; Law 2003; Martin 2004; 2006; Milech 2006; Dawson

2008; Gardner 1983; 1999; Haseman 2006; Loveridge 2008) with the method being highly formalized – set in stone- if you would.

XO-14

‘Set’ knowledge was founded in ‘set’, societies fixated upon genetically determined neural capabilities, such as Francis Galton’s (1869) hereditary views on creativity. Such concepts, so counter to modern understanding of ‘neural plasticity’ (see Wallas 1926; Hebb 1949; Mc Guire et al. 1996), were fixed within perceptions of racially hierarchical and rigid brains, caught in the belief of neural degeneration from late childhood (see Galton 1869). These beliefs generated epistemologies and pedagogical conceptual practices, such as rote learning, that focused upon crammed programming of fixed ‘fact’ while the brain was absorbent, “concepts the United States has demonstrated has no value” (Wallas, 1926:19).

XO-15

Fixed ‘facts’, the foundational assumption of the ‘static’ nature of the quantitative knowledge (Richardson 1997:87, in Loi 2006) bear inherent risks when extrapolated to other realms. Quantitative method’s definitions clearly demarcate borders and seek to precisely locate the knowledge within an already tightly defined knowledge base. Such specialised knowledge builds upon previously specialised knowledge, traditionally developing into disciplines. The more specialised the discipline, the narrower the body of knowledge it draws upon. While “(s)pecialisation enables us to exert powerful control on specific, limited aspects of reality . . . it does not help us to know what to do with the control thus achieved” (Csikszentmihalyi 1990: 29; see also Gergen 2007:364). These ‘myopic’ (Gergen 2007) epistemologies focusing on what ‘is,’ are effectively founded in retrospectivity, and so fail in an era requiring foresight (Loveridge 2008), and understanding (Csikszentmihalyi 1990; Greenfields 2008).

XO-16

This research seeks to consider one method of applying understanding, integrating (in both structured and unstructured manner) the management and comprehension of both quantitatively and qualitatively generated knowledge. It is about finding ways to build upon the strengths of specialised, tightly defined research by correlating it with knowledge from outside disciplines. The power of knowledge comes from the contextualising of data. After all, this is how our brain works - each neuron synaptically linked to other neurons. (See Greenfield 2008, for further comparison of neural

structure with individuals and society). The neurons are of critical importance, but the interconnectedness of the neurons through the synapses is the basis of cognition. So while the 'dots' of neurons are important, it is the links that are the basis of our intelligence (Christoff et al. 2009; Greenfield 2008; Ramachandran & Hirstein 1999; Valenzuela 2009; Kronborg 2009).

XO-17

The *Heisenberg Uncertainty Principle* is a useful analogy of the limitations inherent in the isolating habits of Western quantitative epistemology. Werner Heisenberg's 1927 theory, developed to clarify measurement conundrums within Quantum Physics, has a simple proposition. By isolating information we can only know part of the situation. If we are to determine the specific location of an element within space/time there is no means of knowing its trajectory or speed. If we determine its speed and trajectory, there is no means of knowing its precise location at any point in time. We can only attempt to predict its location by means of induction (see Cuttnell & Johnson 1998). Traditional post-enlightenment quantitative methodology is about locating knowledge, defining it within precise parameters to place the knowledge in a precise location within a flat, 2 dimensional (Morgan 2003; Balkema 2004b) epistemological terrain - a veritable 'dot' on the landscape. This "static" (Richardson 1997:87-8), "noemetic" (Bindeman 1998) knowledge is valuable, but as Heisenberg's theory states, knowledge of location is not complete knowledge. Knowledge's value lies in comprehending its dynamic relationship to the landscape rather than just its location within it. "All the ancient thinkers seemed to realise that without wisdom, ways of knowing are constrained by a tragic paradox: The clearer the view they provide, the more limited the slice of reality they reveal" (Csikszentmihalyi 1990:26). Co-relating the knowledge 'dot' with its environment allows an unfixed knowledge that passes through multiple locations. Like neural synapse, this allows a dynamic, "noetic" (Bindeman 1998) use of trajectory to connect and "enlarge human understanding" (Barone & Eisner 2012:9). These methods, while carrying their own complications of potential syllogisms, avoid the complicated consequences of knowledge being very precise in its location, but that location only.

XO-18

The awareness of the limitations of quantitative knowledge, which "evolved in settings structured to legitimise elite social scientists and exclude other forms of knowing" (Marshall & Rossman 1999:4), has been progressively addressed through periods of

'paradigm wars' (Gage 1989; Denzin 2008). Paradigm wars describe the fractious and challenging developments in qualitative methodologies, such as 'critical ethnography', 'action research', 'critical' and 'narrative analysis', 'feminist', 'queer', Post-structural', 'grounded', and 'system' theories – methods that "take place in the 'natural world'; use multiple methods that are interactive and humanistic; [are] emergent rather than tightly prefigured; [and are] fundamentally interpretive" (Marshall & Rossman 1999:3). These methods are exemplified by the phenomenological approach and "challenge assumptions of quantitative impartiality" (Denzin & Lincoln 1994:13), as they "operate from a fundamentally different worldview than the more traditional researcher's embrace" (Denzin 2008:317).

XO-19

"One person's belief is another person's delusion." Lazarus, 1982:232.

The worldview of what is knowledge is as inherently political as the atomizing process (Denzin 2008; Kalantzis 2006; Marshall & Rossman 1999). "The political and methodological right object to postmodernism's challenges to universal truth, as well as its emphasis on context, subjective meaning, process, discovery versus verification, the theory-and value-ladenness of facts, the interactive nature of inquiry and the impossibility of objectivity" (Denzin 2008; see Guba and Lincoln 1994:106–7). The 'objectivity' vested in the 'unseen hand' of the researcher (Lincoln 2009) resides in the political claims of impartiality and normativity- facets of epistemologies that are at the heart of critiques from Critical Race, and Whiteness studies (Roediger 1993; Frankenberg 1993; Dyer 1988; Morrison, 1992; Bander-Rasmussen 2001; Kinchello & Steinberg 1998).

XO-21

But another factor Heisenberg noted in Quantum physics is also a relevant analogy, debunking impartiality in both qualitative and qualitative methodologies. Heisenberg's realisation, that attempts to measure and record inherently influence what is being measured and recorded, can be related to the need for researchers to acknowledge the influences of their active role in the research they undertake. This can be as overt as advocative 'Action' and 'Critical Race' studies, or as subtle as subjective selection, as "what is selected as significant has been influenced by researcher subjectivity, and is hard to check" (Newell-Walker 2002:49). "We have to remember that what we observe

is not nature in itself but nature exposed to our method of questioning” (Heisenberg 1962:58 quoted in Taylor 2006; see also Gergen 1973;2007).

X0-22

As such, the difficulty in isolating complex factors so as to simplify identification and measurement, inherently affects what we have isolated, and thus changed. This undermines the validity of all knowledge recorded and further complicates simple extrapolation of such knowledge. Awareness of this complication inescapably presents the need for recognition of the inter-related environment from which the knowledge has been isolated.

X0-23

This inter-relationship is particularly relevant when the knowledge relates to the fluidity of human intentions, where knowledge isolation for simplicity of identifying desirable factors, severely undermines both the validity and understanding of outcomes. These habits unraveled the validity of much anthropological research (Clifford 1988). Langton notes the incomplete nature of extrapolated knowledge from Australian Indigenous epistemologies in her discussion of media influences upon White perceptions of Australian Indigenous culture. She argues the habits of applying knowledge from narrow sources generalises “without regard to cultural variation” (Langton 1993:27). She argues there are other ways of integrating such knowledge and uses as an example the Walpiri film of the 'Coniston Massacre', which presents the multiplicity of truths available. In all human interactions there is an inevitability of multiple knowings, due to the multiple subject positions, both of multiple subjects and the shifting position of the individual subject. The affecting interactions between these subject positions generate a fluidity of 'truth/fact' that are not as apparent within isolated quantitative knowledge.

X0-24

These limitations also apply to this research, as there is no escape from the tyranny of textual and temporal constraints. But art's distant perspectives can expand these constraints, its multi-layered, metaphorical format, "acting as a trajectory evolving through signs, objects, forms, gestures ..." (Bourriaud 2002:20) to open means of 're-visioning' humankind's relationship with the physical world (Hillman 1978). It is a perspective distanced from the confines of epistemological habits, that allow a step back

from tightly defined disciplines to see patterns and directions that will assist in developing the next level of knowing -understanding and wisdom.

XO-25

Appendix XP

APPROPRIATING THE DREAMING: Whiteness and 'temporality'

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Abstract

The appropriation of Aboriginal images has been an integral part of the development of a contemporary Australian identity for much of the 20th century. This paper contends that White societal actions, having already appropriated Aboriginal country and elements of Indigenous cultures, are now in the process of appropriating a role in the Dreamings. The marks on the landscape - the purposeful 'traces' - White society is currently making, be they canal housing developments, freeway cuttings, or durable ephemera, will remain for countless generations to interpret. These interpretations may be fashioned without knowledge of White society, or its cultural assumptions. Like all human societies, these future generations will search for meaning, generating narratives to explain the origins of the monumental, unique, and unusual 'traces' that will remain in their environment. Through a trend-based scenario, built upon a meta-analysis of interdisciplinary literature across Critical Race Studies, Anthropology, Systems Theory, Psychology, Sociology, Geology, and Neurology, this paper considers the anthropological processes of social memory and future formation of post-colonial myths. These disciplines are considered with regard to geological impacts, in geological timescales. It is proposed that the deliberate agency expressed through the 'traces' of White occupation will precipitate narratives that overshadow 'traces' created unintentionally by other forces, and through this process change aspects of the knowledge, and understandings in traditional Indigenous Dreamings.

XP-1

Introduction.

But what on earth is whiteness that it one should so desire it? Then always, somehow, some way, silently but clearly, I am given to understand that whiteness is the ownership of the earth for ever and ever, Amen!"

DuBois, W. 1920

Acknowledgement of traditional custodians

The Scenario

Bear with me if you would as we consider a scenario.

We are a long time ahead. So long that there is no direct knowledge of the contemporary White global society, only traces. Our electronic network of knowledge has had the power pulled from its processors. All the accumulated data, the knowledge of how, why, and who has disappeared as effectively as small shiny discs swept into black holes in the flaws of White logic. What remains is viewed in ways similar to our current queries of Egyptian ruins, or even the more recent Rapa Nui (Easter Island), queries bereft of the knowledge of construction, operation, and meaning. What remains is the terra-forming, impermeable surfaces, and extremely durable ephemera, carved, chewed, constructed and dumped upon Country. What remains are questions of how the world came to be.

XP-3

This paper interrogates long term White environmental impacts and their ramifications for future creation narratives through a scenario. Scenarios are “an account of a plausible future” (Peterson, *et al.*, 2003), and a proven method for testing ideas through envisioning the future effects of projected current trends. This particular scenario sprang from a heuristic and syllogistic experience flying into Melbourne. I looked down upon a golf course, upon its flowing fairways and burrowed bunkers, and was struck by the similarities of shapes between the 'landscaped' forms below, and my naïve perceptions of the patterns in the art of central Australian Indigenous people, our recently appropriated national branding, colloquially known as 'dot painting'. As I understood it from my naïve, 'stereotypical' (hooks, 1992) White perspective, those paintings narrate the Dreaming; which among other things, recount the 'creation' of all things, where the actions and behaviours of ancestor Spirits, as Judith Ryan put it,

"bring into being physical features, . . . scarring the landscape with 'traces' of their passing" (Ryan 1989:12). I looked down at the terra-forming occurring 10,000 ft below, at the objects of White 'creation', at the constructs of 'dream homes', and wondered what stories future generations will create to explain them. After two centuries of appropriating Aboriginal land, over a century of appropriating elements of Aboriginal culture as our White national identity, I asked myself, "Is what we are doing now - changing both landform and life-form - a claim of creator status? And are the creations going to change future interpretations of Dreamings, and thus appropriate its spiritual dimension? Is this the ultimate appropriation from Australian Indigenous culture?"

XP-4

To answer these questions I need to consider the validity of the scenario method and this scenario's three key aspects; the forces generating these changes, what changes will remain, and the likelihood of these changes influencing future generation's narratives explaining how the world came to be. Then we can relate the scenario to the Dreaming.

XP-5

Background Literature

The scenario method applied in this paper draws upon broad interdisciplinary knowledge to present a metaphoric space, enabling reflection upon the present without the distractions of the familiar. As Schoemaker simply states, scenarios are "aimed at challenging the prevailing mindset" (Schoemaker 1995:27; see also Wack 1985; Loveridge 1995, 2009; Peterson *et al.* 2003). We may "challenge the prevailing mindset" by tracking the traces that have been drawn upon Country – "one's land of origin and inter-related connections with it", as Moreton-Robinson defined it (2003:32).

XP-6

We can track the traces, these geoscars through the development of the ideology that generated them. Kincheloe and Steinberg (1998), Bonnett (1997) and Foucault (2003), for example, trace the origins of White ideological practices to the European Enlightenment. The 'Age of Enlightenment' fostered both the concept of control - a key characteristic of Whiteness- and the subsequent industrialized scale of environmental impacts. It is from this period that White society became a "significant geological force" (Crutzen & Stoermer 2000), which has led to the current geological epoch being labelled the 'Anthropocene'.

While the 'anthropocene' speaks of humanity, the causes reside in the doctrines driving the myths and practices of European White culture. These are exposed by behavioural characteristics identified by theorists, and by interrogating the marks on the landscape. Predictably, there is a strong correlation between the ideologies and their impacts.

Machiavelli (1632/2006) advised the Medicis they could establish and increase their domain by employing shifting contextual power relationships, and sustain stability through establishing and maintaining social practices and institutions. Those methods have been constantly refined by White powers, and correlate with practices identified as being; dominant and privileged (Frankenberg 1993:236), shifting, multifaceted, situationally specific (Bander-Rasmussen 2001; Dyer 1988; Kincheloe & Steinberg 1998; Shome 2000; and DuBois 1920), and residing within societal "structures, practices and institutions", as Foucault (2003) termed them.

These are political characteristics, their manifestation on the landscape illustrates Whiteness' penchant for 'othering' (Bonnett 1997; McWhorter 2005; Kincheloe & Steinberg 1998), so prevalent in colonial oppression, also applies to the environment. The environmental oppression hides within White universality and normativity (Moon 1999; Green *et al.* 2007; Mc Whorter 2005) under the terms 'development' and 'progress', terms intended to isolate and control. (see Mansell & Carey 2009).

Control is the facet of Whiteness that is relevant to this paper, particularly the White perception of the ability to control time and the environment. Douglas Morgan (2003) explores a fundamental paradox in White ideologies through the methods Whiteness employs to control time. Briefly the paradox draws upon ontological equalities in Einstein's General Relativity to argue the laws of physics apply equally to the past and the future. The past can't be changed from what it is, neither can the future, effectively resulting in fatalism - an anathema to White perceptions of individual control. To distract from the lack of control illustrated by the paradox, Whiteness defines time in increasingly small units, currently operating in milli-seconds, in an environment spanning millennia. Morgan, among others (eg. Kincheloe & Sreinberg 1998), argues, that "central to [Whiteness] is the belief that any . . . system[s] can be reduced to causally significant parts which can be isolated, manipulated, altered and reconfigured, and that as long as the output is consistent with what is expected then the whole remains unaffected" (2003:38). This atomising of wholes into small, almost microscopic units allows a definition of 'reality' as "only those factors deemed causal to an outcome. All else is irrelevant" (Morgan 2003:38). Whiteness applies this technique to

present the illusion of controlling time, which, like the illusion of normative universality (Moon 1999; Green *et al* 2007), only works from within (Ratele 2007).

Thus environmentally, Whiteness can isolate the contemporary actions from the future consequences and maintain the delusion of control. It is this delusion that is referred to in the title of this paper -‘temporeality’- which refers both to the sense of lineal time, and the ecclesiastical concept of lands to support the ecclesiastical elite (Coredon 2007).

XP-9

This atomizing technique, employed throughout colonization, is currently applied in the contemporary environmental debates on the ‘reality’ of climate change, isolating one limited aspect of a highly integrated system (Lovelock, 1974, 2006). Isolation and manipulation to maintain power, creates rigidity in the 'structure, practices and institutions', and rigidity is what political sociologist Gregory Brunk (2002), among others, argues increases the risk of what he refers to as a 'large cascade', in other words, societal collapse.

XP-10

Knowing what is powering the changes in this paper’s scenario, we can now review what traces might be left to be interpreted.

XP-11

Scenario Discussion

We know that ‘earthworks’, for example the parallel freeway cuttings between Sydney and Newcastle, N.S.W., that slice through several hills, will likely last many thousands of years, depending upon floral permeation, and water, wind, and temperature erosion. Tunnels and excavations through hard rock, such as granite, will last even longer. Roman examples of concrete survive. Volcanic glass and archaeological finds (Amstock 1997), suggest that a ‘Coke’ bottle may well be iconic ten thousand years hence. Ceramics and metal alloys have also survived intact for almost ten thousand years. Plastic’s more volatile chemicals, however, are unlikely to last to the epoch of this scenario. Entropy research into modern composite materials, such as carbon fibre, focus upon the ‘product lifecycle’, rather than the material’s longevity - reflecting a contemporary habit of an inverse correlation between product’s lifecycle, and its material’s ‘lifetime’, noted by Loveridge (2009).

XP-12

The longevity of the terra-forming and ephemera is particularly relevant in Australia's geomorphic stability. In lands of greater tectonic movement, and lands of greater rainfall, the traces of contemporary society may be eroded, and/or subsumed within the folds of the earth.

XP-13

These middens of the modern will be used in meaning making ways, and, in a future society, bereft of knowledge of White culture, it is the markings and scorings that display intentionality that has, and will, influence interpretation of them.

XP-14

All societies use similar methods to make meaning of the world around them - the generation of narratives (Merlin, 2006). Narratives create a sense of communal knowledge, and are, according to Jan Assmann, "the connective structure of societies" (Olick & Robbins 1998:105; see also Levis-Strauss 1979). They engender a sense of identity, constructed to meet, what Weltzer (2010:15) describes as the needs of the interpreter's own 'frames of meaning'. As such, cultural perspectives, now and in the future, will strongly influence interpretations of White traces.

These narratives, generated in human brains, biologically stable for tens of thousands of years (Wynn 1979; Merlin 1991; Mithen 1996; Greenfield 2008; Onians 2007; Lewis-Williams 2002), often draw inspiration from unique, unusual and monumental structures (Wilson & David 2002: Zerubavel 1995; Lowenthal 1985; Nora 1984; Wood 1994), such as mountains (Mt Fuji) and rivers (Ganges), structures in which we recognise patterns (Ramachandran & Hirstein 1999) and interpret significance. Scarre (2002:155) notes the 'Attribution of Significance' to prominent features is a common ethnographic behaviour.

XP-15

The rigidity of line, form, and materials of White marks in the landscape, distinguish them from those generated by environmental forces, and these distinguishing features may well be interpreted as deliberate actions of, to quote Grayling (2010), an "agent bigger and stronger than they are". Wilson and David recognize that "[e]ven after the 'original' meaning(s) of an inscription is forgotten, the marks -fixed in the landscape- participate in people's construction of their worlds" (Wilson & David 2002:6). This paper thus assumes the deliberateness of White markings will influence future interpretations of creation.

XP-16

There is no possible way of determining the identities or social structures of the human's interpreting White traces. Societies with sustainability skills will be best placed. Unless, in the meantime, they've been dispossessed of land, over-run by noxious weeds, deprived of potable water, or reliant upon an acidified ocean corroding marine creatures' eggs. But humanity's resilience suggests some will survive. Having considered the elements within the scenario, how do they apply to appropriation and the Dreaming?

XP-17

It has been commonly noted that White social actions have long been structured upon appropriating (the taking and using without permission) resources and roles. But White societal actions are also appropriating both resources and roles from the future (see Flannery 1994). In ways similar to the 18th century European colonial expansion, White customs are colonizing the future, claiming resources and subjugating future peoples beneath White will and desires. This is effectively a forced subjugation, not by weapons, but by structures and parameters, while resources are commandeered and transported to the 'homeland'. White society is appropriating future resources, but is it also appropriating future roles?

XP-18

Can these colonisations appropriate the Dreaming?

Whiteness began affecting aspects of Dreamings from first settlement. The destruction of communities through violence, dispossession and assimilation created disjunctures in the transmission of the knowledge, affecting health, social, and spiritual knowledge within Dreaming narratives. However, these may be peripheral as the Dreaming is complex and inter-related, appearing unfathomable from a White perspective intent on atomising complexity.

XP-19

Moreton-Robinson (2003) states my White subject position prevents understanding of Indigenous ontological relationships to the land (2003:32). That said, Indigenous scholars, such as Langton (2000), Caruana (1993), and Morton-Robinson (2003) herself, working within the inherent over-simplification of translations, have sought to express the complexity of the Dreaming with White language.

The aspect of the Dreaming most commonly presented, is that of ancestral spirits creating animals, plants, humans and the physiographical features of country (see Moreton-Robinson, 2003). It is not difficult to construct an argument relating White genetic and eugenics manipulations, and White terra-formings, such as mining, agriculture and housing 'developments', to this aspect of the Dreaming. These impacts are actions of 'creator', an agent of power, using power built upon billions of other lives, and virtually incomprehensible to any society of the past, and possibly of the future as well. Thus, over time, the results of 'White' environmental destruction of a fabled 'Garden of Eden' may well be assigned to the 'actions' of dysfunctional 'gods' in similar anthropomorphic ways to a great number of creation narratives, eg. the egotistical/violent god of the Old Testament bible. As such, White society may appropriate a role in future creation narratives.

XP-20

But not being 'of the Dreaming', I can't know if changing the land changes the story that inhabits it. The author of Kakadu Man wrote, (paraphrased) "You can't change Dreaming places, no matter who you are" (1985). Academic, Stephen Muecke (2011:3) expresses it as "exist[ing] absolutely, and beyond human intervention. . . as it is not centered on the people reiterating it in ceremonies and texts." Interestingly enough, these concepts correspond in many ways with the Morgan's temporal paradox we considered earlier.

Accepting the non-temporal nature of the Dreaming, the "Everywhen" as Stanner (1979) described it, allows some understanding of the Dreaming's immutability. But, Moreton-Robinson suggests "there is scope for interpretation and change by individuals through dreams and their lived experience. (2003:32). With this in mind, I remain unsettled when I recognise the actions impacting upon the life-forms, landforms, and sacred sites in Country. If the peoples of the future are unable to know the Dreaming in the land, as is the case for White people, then the immutability of the Dreaming may be left simply mute. So while Whiteness may not appropriate the Dreaming, it is clear that White behaviour will influence future perceptions of creation, if only by over-writing the canvas from which the narratives are drawn. By inscribing White actions upon the canvas that is the landscape, White society is appropriating a role in the creator realm.

XP-21

Conclusion

This paper is a scenario of a hypothesis, and therefore nebulous, undisciplined, uncontrolled. In presenting the knowledge of narrative generation, the materials available for interpretation, and the habits and practices likely to contribute to White social collapse, it has sought to cast light upon, and challenge otherwise invisible aspect of Whiteness - the future appropriation of creator realm. This appropriation is impacting upon both the environment and interpretative materials for the Dreaming. It is a scenario responding to Gergen's (2007:365), challenge "to construct scenarios that could support a common desire to pursue viable futures."

XP-22

To pursue viable futures alternative epistemologies need to challenge the universal normativity disguised within the White ideology of 'development'. Post-modern interrogation, including Whiteness Studies, has open gaps in White perceptions of White logics. Whiteness Studies may be able to illustrate more gaps within the assumed authority of Whiteness, especially within the realm of integrated environmental and spiritual understanding and present viable alternatives (noting the desire to avoid appropriation). Despite Morgan's fatalist paradox these alternatives are needed, as Matsebula et. al. (2007:440) advocate, to "confront [White] privilege in the present moment" if Whiteness is not to "own . . . the earth forever and ever, Amen! " (DuBois 1920).

XP-23

Appendix XT

Privileging and the ‘Supremacy’ of Text; assumptions of textual superiority

“what is word knowledge but a shadow of wordless knowledge”

Gibran (2008: 14)

Qualitative research methods have allowed an expansion in understanding of inherent complexities within epistemological knowledge, and challenged the ‘privileged’ position of the supposedly impartial quantitative, ‘science based model’ (Denzin 2008).

Nevertheless, as qualitative methods themselves become ‘authorised methods’, and thus subsumed within institutional practices, they are, as Brown suggests of *Action Research*, also “more likely to conceal the complexities, irrationalities and the absurdities” (Brown 2000: 2). These absurdities lie within assumptions that dismiss as irrelevant elements outside of the point of interest, assumptions inherently encompassed within the habits of all Western methodological practices.

XT-3

One absurdity concealed within the traditions of academia is the almost exclusive validation requirement for reporting of research to be textual. Even otherwise ‘radical’ qualitative methodologies retain the convention of precluding knowledge, and knowledge transmission, outside of textual semiotics. As such, the academic format bestows privileges upon the text, subverting and subjugating the value of knowledge outside of the textual language of academia (Claxton 1997; Gardner 1999; Robinson 2008), including Indigenous knowledge, and non-textual semiotics such as images. As a result of this textual focus, Western epistemologies fail to employ the capabilities within non-textual based knowledge and transmission methods, jettisoning human cognitive processes and skills, and dismissing methods which have demonstrated their effectiveness for countless millennia.

XT-4

As a consequence of its authorised power, textual reporting of research transfers validity from the knowledge generated within the research practice's investigation, to the reporting of that knowledge. This "heresy of paraphrase" (Wollheim 1980, in Biggs 2003; see dot AT10) subjugates the research to a 'supplement' beneath the textual signifier, ironically itself a supplement to speech (see Derrida 1997). As such, an excellent research project can be dismissed because of 'un-academic' presentation.

XT-5

A quick example of the subjugation of research under the textual reporting requirement is *Photo 51*, Rosalind Franklin's x-ray crystallographic image of DNA that Maurice Wilkins showed to James Watson, without Franklin's knowledge or consent (Schils 2012). It is an image of immense technical development and skill (Glynn 2008) that provided the key information on DNA's double helix structure, rather than the single/triple helix theory Linus Pauling, and Crick and Watson themselves were developing. When combined with the paired C-G, A-T protein balance information, established by Erwin Chargaff in 1950, the image enabled Watson and Crick to quickly produce their model and claim the Nobel prize. Franklin knew the knowledge expressed in her image of an 'X', as did Wilkins and Watson, but the knowledge wasn't valid until presented in the authorised form.

XT-6

James Watson's response to the visual knowledge expressed by Franklin's *photo 51* illustrates two other considerations explored in this thesis. The first relates to assignments of "Big C" creativity (see dot L27) being domain changing. Gotz & Gotz's (1979) fascinating study of German professional artists failed to identify any link between originality and their professional success – draw your own analogy. The second consideration is Arnheim's (1947, 1969, 1980) concept that the visual processes are the basis of interpretive cognitions, being effectively the key cognition, over and above other sensory perceptions, a concept still bearing levels of validity. The understanding of the double helix occurred, by Watson's own account, when he saw Franklin's visual knowledge, overcoming his own theoretical perceptions.

XT-7

Text is thus 'the' semiotic form that bears the authority of correctness. The method was developed over hundreds of years to standardise meanings and generate shorthand

forms of concepts and descriptions of occurrences. Through political influences and normalising habits textual transmission has become socially expected and validated. However, while "[s]poken and written language is. . . a pragmatic tool, not a prerequisite of validity" (Mc Niff 2007: 35), this epistemological habit claims the power of legitimacy. It is in many ways a means of colonising other epistemologies through precluding knowledge not of the authorised semiotic structure until it is 'translated' into 'legitimate' information (see related discussion in Appropriation and Pedagogy essay dot AP13).

XT-8

"Words are only the blind divers looting the sea bottom, they're not the treasure they bring up" (Plutok 2011).

XT-9

It is often argued that "only the written research . . . can adequately clarify . . . factors and provide a basis for judgement" (Candlin 2000:1; see also Biggs & Büchler 2007, 2008; Dawson 2008; de Vries 2004; Eisner 1997; Hannula 2004). This argument, especially relevant to qualitative research, fails to acknowledge the definitional dialogues (Klausen 2010) that occur within academic journals and juridical proceedings. If words performed this function as effectively as claimed, then statutes, published reports, and papers would be complete, instantly and precisely interpreted, and require no further reviewing of the knowledge. As this is clearly not the case, the evidence for textual capacities fail to support the claims of validity assigned to text.

XT-10

The 'preciseness of text' argument also suffers from the 'theorist's glasses' syndrome (Slife & Williams 1995: 6) - where theorist's habitual views through traditional epistemological lenses renders the influences and effects of the glasses invisible. Unable to see the 'space between the 'dots'', the supporters of the text argument claim complete authority for the capabilities of textual semiotics, without incorporating within their claim, knowledge that written texts cannot identify, express and convey all facets of knowledge adequately.

XT-11

Put another way, all "languages select, and in selecting they leave out what they do not select" (Hayakawa 1969: 8). Doctorates, both quantitative and qualitative, requiring

textual knowledge transmission, effectively select, and thus limit the conveyance of the information they contain, in exactly the same way as the rejected non-textual knowledge transmission methods. This exclusion is more complex than the simple desire to limit potential interpretations proposed by Biggs (2003), or as Eisner suggest, to avoid the *Rorschach syndrome* (Eisner 1997: 9). The exclusions expunge complexities in the research that undoubtedly influenced and affected its development and execution.

XT-12

One such example of the expunging of relevant data occurs in the practice in traditional 'academic languages' of defining away even the presence of the author/researcher, "a negation that denies itself" (Derrida 1989, in Lawler, 2011:3 para 6). As Roland Barthes expressed "... writing is the destruction of every voice, of every point of origin. Writing is that neutral, composite, oblique space where our subject slips away, the negative where all identity is lost, starting with the very identity of the body writing" (Barthes 1967/1994:166).

XT-13

That is not, however, to say that the flaws totally illegitimate the method. "Nobody denies that language helps thinking" (Arnheim 1969: 228). That would be the simplistic response of dichotomic 'true/false' methods.

XT-14

Linguist Kate Burridge argues that "(t)he remarkable thing about human language is its ability to make infinite use out of a finite means" (Burridge 2004: 9). This 'combination and re-combination', linguistically known as *recursion*, is built in English upon 26 key symbols which allow for complex and evolving communications. Greenfield describes complex language construction as a "Trojan Horse", "via which a host of other very powerful benefits are unleashed" (Greenfield 2000: 71), releasing humans from the present, and enabling abstracted stories.

XT-15

While it is true that text can allow for complex communications, its evolutionary habits challenge notions that academic language is built upon a form of communication that has stable foundations and meanings. It is a semiotic that cannot be precise, due to the constantly diminishing specificity of meaning - the simplification inherent in language (Burridge, 2004). Ironically, while simplifying words, structures, and punctuation, language conversely increases specificity of meaning through the development of

discipline specific language - forms of dialectic jargon – with definitions running counter to the meanings generally interpreted by the general community. For example, reading nineteenth century knowledge, such as Darwin’s presentation to the Linnean Society, in which he refers to “beings . . . becoming . . . plastic”(Darwin 1858, para 3; in Darwin & Wallace 1858; see also Moody 1971 discussing of the lack of response to the presentations), may now be completely mis-interpreted and require translation into contemporary understanding.

XT-16

The shifting meanings of words respond to contemporary events and attitudes, and most importantly, as Deconstructionalists demonstrated, to the perceptions of the reader. Sa na ilstrutaoitn fo txet’s rieelnce uopn pretpcueal pwoer, ti si psoslibe ot raed non txet by rogecnnisig pertntas fo cnetoxautl ratoinelhisp whiitn the parhse. Tuhs ti si not teh wdros taht caitonnn teh pwoer, but teh rialtoianl kwolngede etxedend yb teh raeeedr. Nnoe-the-lses, txet si esen sa teh mhteod fo acaructe klnodwege tsafner (Kepes 1944).

XT-17

In working on the ideas of structural communication through visual images I have been struck by the instability of the word 'Subject'.

Photographically it is the point of interest of the image.

Philosophically/psychologically it is the viewer of the image,

Legally it is a subordinate of the Crown, the 'authodoxy' (See dot D)

Educationally, it is the delineation of knowledge into fields.

What is the root of these meanings for the same word? How can they be so diametrically opposed? especially in regards to the image/photograph?

Subjecta materia is supposedly a translation of Aristotle, meaning "that which lies beneath" Journal entry 21/7/09

XT-18

Recognising the relational importance in text requires their classification as ideograms, which illustrates fictional hierarchical distinctions generated by the *authodoxy* (see dot L17). While the Latin based letters are a series of abstracted symbols, their application in English fails to carry within them any surety of phonetic relationship to the root speech. This phonetic relationship is argued to be a key criteria separating ideograms from alphabets (Matthews 2007), and thus, the phonetic inconsistencies in English relegates the symbols stature to that of ideogram, rather than a traditional alphabet. G.B. Shaw used the spelling of 'fish' as being 'ghoti' to spell this issue out.

Footnote 1; Ideogram; "A character in writing seen as representing an idea in abstraction from words.

E.g., in '15', the number itself is represented independently of the relevant word in English (*fifteen*)" -*The Oxford Concise Dictionary of Linguistics* (2 ed.) P. H. Matthews Oxford University Press 2007.

Alphabet; a set of letters or symbols in a fixed order used to represent the basic set of speech sounds of a language, especially the set of letters from A-Z; the basic elements in a system which combine to form complex entities; *DNA's 4-letter alphabet. Oxford Dictionary of English* (3 ed.) Oxford.

XT-19

Within the ideograms that are alpha based semiotics, the symbols struggle to represent complex concepts. Such concepts, being imprecise by nature, require many iterations to convey meaning. The complexity of philosophical texts have long been criticised for 'obscurantism' through their use of convoluted language, as they attempt to clarify the complex concepts being explored (see Cambridge Professor Barry Smith's letter to the London Times, 16/5/1992, dismissing Derrida). There can be no argument theorists such as Heidegger, Derrida and de Certeau, and their translators, use ethereal language to describe ethereal concepts. Put another way, they apply imprecise language in an attempt to describe complex and shifting concepts. Put another way, they attempt to describe the hole in the donut by describing the donut, i.e., describing the ethereal by presenting shifting tangential arguments to attempt to corral the concept. However, being as imprecise as poets, these scholars, while counter to the desires of the *authodoxy* (see dot D), must be acknowledged to have expanded and communicated social comprehensions of complex cultural habits. But this has not occurred through textual specificity, rather it is through the exploratory journeys of potential misunderstanding that the readers have embarked upon, that has allowed transfer of such awareness.

Text and Pedagogical Criteria

It is important to acknowledge that written communication authorised for the academic thesis serves two apparent purposes. The presentation in the standardised form of knowledge learned through research conveys interpretable meaning to those familiar with the concepts embedded within the textual symbols. This similar, standardised form enables those practiced in the process to edit 'extraneous' content, reading only the elements deemed immediately relevant (possibly just research abstracts) that focus upon their specialty. In a time poor environment, such devices can prove useful.

XT-21

Academic presentation also allows new knowledge's placement within the formal landscape of existing academic disciplinary epistemology. Knowledge becomes standardised in form, and thus can be compared to existing knowledge, apple to apple so-to-speak, and establish similarities and differences.

XT-22

One aspect of text that has traditionally borne real advantage has been its transmissibility. The knowledge generated from research is able to be replicated multiple times through publication without technical diminution, or effective loss of data. Once the knowledge is abstracted and translated into the narrowed confines of the textual medium, it retains its capacity to convey the contained knowledge through countless duplications, which contrasted directly with losses in duplication of chemically-based photographs, for example. This aspect of text has been difficult to emulate in other transference methods until the emergence of digital transmission, technology that academic publishing methods have failed to effectively utilise.

XT-23

Text, due to its inherent symbolic abstractions and secondary data role, has advantage in allowing abstraction of the source of the data, and thus protecting ethically sensitive information. For example, confidential data collected from respondents, and the subsequent analysis and discussion of that data, can be presented and conveyed textually without disclosing details and personal characteristics that may identify respondents. Such issues are more complex, and potentially less secure when

respondent data is presented visually, (a primary data), as in the case of video interviews with whistle-blowers. Visual anonymity for respondents requires inserted distortions of features and characteristics that may distract from, or even change the data's value. Ironically, this example also illustrates the effectiveness and extra knowledge that is conveyed in the visual method.

XT-24

One complexity in textual academic communication is the way it instills barriers between academic disciplines, and between the knowledge and the general public. The use of highly specialised words and phrases results in almost all research lacking broad influence (this research included). If we were to assess this limitation through creativity theorist's concept of "eminent" (Runco & Richards 1997) / "Big 'C'" (Csikszentmihalyi 1996) creativity -which require creative acts to have broad influence across a field to be assessed as 'creative'¹- it could be argued that most research would not meet classification as research. If the criteria is further applied to the creative aspects within research, most research would not be seen as creative, which ironically challenges claims of new knowledge. Under these criteria academic knowledge is heavily reliant upon non-academic translation to effect a broader knowledge transfer.

Footnote 1; It is noted that the concept of eminent/Big C creativity requires a paradigm shifting influence in a field of experts, rather than the entire society. This classification, however, requires hierarchical definition of the validity of fields. For example, those with expert knowledge of the cult within which they reside may recognise their messianic leader's paradigm shifting 'revelations', however, this paradigmatic shift in the 'field of experts' may not meet more generalised criteria for creativity.

XT-25

So text is not a knowledge transfer mechanism, complete and capable. It is a limiting system, a "way of worldmaking" (Goodman, 1978), that has defined what we know to "that which we have named" (Vico, 1744, in Said 1978: 5; see also Kuhn's 1962 discussion of paradigms). It is an authorised alpha based semiotics which inherently defines knowledge in terms of itself, and struggles to identify means to express new, non-textual knowledge, let alone the relationship of the new knowledge with established knowledge. It is important, though, to note that this limitation, as

Hawakawa stated, applies to all languages –English, Pintupi, visual languages, audible languages including music, and tactile languages. Each of these languages are ‘written’ in their own paradigmatic manner, and, like mathematics, have generated their own language to deal with the specificities and capabilities of their discipline. As such, text is but one method of writing.

XT-26

But recognition of these limitations does present grounds for exploration of alternative and expansive methods, even if those methods use text. In opening academic discourse to imagery, there is no jettisoning of discourse of interpretational variance, in exactly the same manner as that which already occurs textually. What such a move would do, is open broader dialogues, as it is within the dialogue of multiple perspectives that knowledge lies.

XT-27

After all, it was the inability of the existing quantitative methodologies to adequately express all knowledge that has forced methodological developments away from the empirical/quantitative model (Denzin & Lincoln 1994; Haseman 2006). The conveyance of societal knowledge, however, occurs outside the academic environment, which therefore begs the question; “Is the academic model the best means of communicating knowledge?”

XT-28

Appendix X - (non-academic overview)

dreamtime uncapitalised, -joining our own dots .

MY POINT IS THIS! Dots. Dots make an interesting point. They are wholly, and sharply defined in their focus, carrying detail only within their specified domain. They talk only of their locus, their interest, their focus. Content in their isolation, they never seek to go beyond their boundaries. They are, in effect, so self-contained they may be psychologically classified as more than just slightly dotty, they are dysfunctional psychotic, or even narcissistically schizoid (DSM-IV) in their self absorption. And while they are complete in, and of themselves, they perform a limited and limiting role in the multi-dimensional space that they occupy.

X-1

In Western ways of knowing, the 'dot' is the delving down to the tightest definition, which can assist in isolating 'extraneous influences', and is employed in the hope of identifying core knowledge, kernels of truth, and defined 'facts'.

X-2

The trouble is the point, as a metaphoric dot, has an isolated perspective which can mislead, dis-connecting the inter-relationships of information, actions from consequences, and the individual from their wellbeing. It causes side effects outside of its sphere of interest.

X-3

That space outside is the influence of my sphere. That space is the domain of my thesis, which explores a method for connecting these dots, these metaphorical points, these defined 'facts'. It is researching a means of creating a personally experienced way of learning within the broad knowledge space, a culturally critical way of de-atomising, or reconnecting the delineated knowledge of tightly define points, points that have been separated from their surrounds by their distinct edge - the border between what is, and what is not included.

X-4

Other peoples have understood the inter-relationship between 'dots'. In fact, it was indigenous knowledge, or at least my very limited understanding of indigenous knowledge, that enabled me to connect some dots in our culture, and catalyse a PhD.

X-5

It was early 2007 on a flight into Melbourne, like so many others on the plane, I looked out the window. Surrounded by seats, and isolated in my own little window, I surveyed the terrain of my old home town. The terrain of my childhood. Familiar turf.

X-6

I spied some less familiar turf - a new golf course, with its flowing fairways, and excavated bunkers and ponds. In a moment of apparently random neural connection, I saw a direct relationship between the golf course and my limited knowledge of what is commonly referred to as 'dot paintings' - those Indigenous artworks from our Central Desert, who's artists use dots to both convey and conceal knowledge. Their 'Dreaming' knowledge, is knowledge of the intangible inter-relatedness, a concept that can seem similar to 'Gaia' - the 'living' planet.

X-7

From this aerial perspective, - the perspective of Western Desert 'dot paintings' - the shapes of the landform reformed into the wending lines of dots in those paintings. I titled this observation "silly idea" in my notebook and prepared for landing.

X-8

This observed relationship - the overlaying of our suburban culture with Western Desert *Dreaming* Stories - played in my mind subconsciously, brewing other relationships and ideas that subsequently generated the development of a series of artworks, shifted my knowledge and perception, and, in many ways, changed my life. It has instilled an awareness of my, and our culture's impact on the planet. It has challenged my view of the way we view time, and raised questions of how our culture's sophisticated knowledge structure has led us to a point of pending environmental disaster.

X-9

(Climate sceptics who may be reeling at this point may wish to join some other dots, perhaps between those of population growth and exponential consumption, between production and landfill, or perhaps the revealing relationship between two familiar dots that show how disconnected some knowledge becomes – the dots of price per litre of petrol and the price per litre of *Coke*. Simply put, petrol take more than a million years to be made, is mined, refined and shipped from some of the world's most inhospitable places, is entirely finite, but still cost substantially less per litre than local water and sugar! Which one's more valuable?)

X-10

So, growing from these realisations, I decided to seek methods to integrate our knowledge - to find ways to build upon the strengths of specialised, tightly defined research by correlating it with knowledge from outside of its field. The power of knowledge comes from contextualising it. After all, this is how our brain works - each neuron synaptically linked to other neurons. The neurons are important. but it is the links that are the basis of our intelligence.

X-11

Where to start? As it was through art-making that I recognised these thoughts and ideas, it was through art-making that I thought to study them and see what I could learn. As these thoughts generated from my creative practice I started investigating creativity.

X-12

The research into creativity that has occurred over the past sixty years argues that 'problem generation' (eg. Guilford 1959) is of particular importance to being creative, which obviously includes visual art. Getzels and Csikszentmihalyi's (1976) conducted an important long-running study of art students and found a direct link between the students that spent the most time during the research arranging the objects to draw their 'best image', and their long term success as a creative artist. This is known as 'problem generation', which seems reasonable, cause artists have been known to cause problems!

X-13

To generate 'problems' requires the generation of possibilities, and the triggering of connections between both obvious and obscure aspects of the issue at hand. In many ways, this practice is what comedians do, join and converge distant, but oddly related knowledge. Mind you, creativity researchers see this as *divergent thinking* (see Dot-D),

cause it ‘diverges’ from standardised answers, which may say more about the mindset of the researchers than it does about creativity. But I diverge.

X-14

But simply generating ‘problems’ that arise from seeing possibilities alone doesn’t make art. Art making requires other important bits that have been identified by creativity researchers, such as the way it motivates, opens broad interests, and encourages the ability to accommodate contradictions, each of which contribute to the ‘generation of problems’, and contribute to this broad learning method.

X-15

One important point regarding learning and the art making process is that once the research has been conducted, the results are co-ordinated and placed in a suitable order as artworks, which are published and reviewed by peers, may be in a gallery, maybe a book. At this point, there is a whole new series problems from possibilities being generated, this time in the mind of the viewers, where converging streams of conscious and sub-conscious thought, generate new questions and new knowledge.

X-16

There is one more really important aspect of art-making - the constant review of those possibilities and ideas, and working out how to best apply them. It is this broad combined learning and the constant review that is the basis of one method of study - A/R/Tography (Artist/Researcher/Teacher). A/r/tography is a deliberately broad learning practice, and has been described as a “fluid form of inquiry creating its rigour through continuous reflexivity and analysis” (Irwin 2005). It is an art-based method of inquiry that entwines “theory, practice and *poesis* (making), woven through each other to create additional and/or enhanced meanings” (Irwin, 2005). The method has a focus in the dynamics of process, a process that may generate more questions than answers. That is its role – to “permeate boundaries and open up new understandings”. But back to creativity.

X-17

Numerous psychological tests have been developed over the years to establish why these skills occur so often in the crazy ‘creative genius’, but it could simply be that ‘the creative’ people are less concerned with social habits, or have somehow managed to keep some of the curiosity and enthusiasm of young children.

X-18

These thoughts opened new questions. Is it the brain habits of the 'creative' individual that generates 'problems', or is it that they give themselves permission to use time to play with possibilities?

X-19

While deep in my 'playing with possibilities' - my artistic exploration of dots - the questions kept arising, emerging almost organically from the 'time out', distracted mental space my mind occupied during my making. They became linked to abstracted metaphors, which opened awareness of even broader relationships, both clear and vague, and illuminated possibilities and connections I had previously not seen.

X-20

This is not an uncommon scenario, and as it turns out became an important part of this research. It has a fine pedigree. For example, Isaac Newton, apparently deep in his 'time out' under the apple tree, reportedly related his bruising from a plummeting apple with a force no-one else had noticed –gravity- which inspired a foundation for scientific understanding, changed Newton's life, and the understanding of the world for all of us.

X-21

How is it that random and apparently insignificant notions can so significantly affect awareness and behaviour? Can this method be harnessed? Is it a valid way of thinking and learning? Is this the basis of conceptual art, and if it is, can this method contribute to the body of general knowledge?

X-22

As questions arose, the search continued, this time into the brain-space where these thoughts appeared. Scientifically, this brain-space is labelled 'incubation', which some people have described as the source of 'eureka' moments, but my research quickly illustrated this phrase suggested a simple product-focused outcome, and as my research has no intended product, no known destination, a new word was born – *sagasuation*. This word talks of undirected and infusive thoughts which can emerge as deeply comprehended knowledge, sometimes identified as understanding.

X-23

As a self-diagnosed 'creative', I am finding the key to generating possibilities, is happily allocating time to creatively play, happily allowing time to explore, allowing out ideas

and questions. And I'm not alone. Professor Guy Claxton, argues that the mind needs this space to operate effectively. Effectively, it needs permission to pause and wander - to sagasuate - simply because our brains are not machines, which seems how current education structures think of it, because they remove permission to play by focusing on test results which encourage standardised answers. These tests assess a "learned industriousness" - which is trying to please those in charge, those with "social capital". Mind you, this method of learning has been rejected numerous times over the past hundred years because people end up being trained to pass tests rather than learning how to learn. But I've wandered off, so back to sagasuation.

X-24

A study from the same Canadian university that developed A/r/tography, *University of British Columbia*, shone some light on this mental practice. Christoff, and her team (2009) conducted an fMRI study of the wandering mind and demonstrated the remarkable energy and activity occurring in our brains while our minds wander. In fact, they argue that their results illustrate that while 'wandering', the brain employs both executive (conscious thinking) and default networks (the automatic 'at rest' thinking) - two parts of the brain previously thought to work in competition. This research supports some current neurological theories that argue this ability to generate connections, both physically in our brains and metaphorically as understanding, is the basis of human minds. (Mithen, 1996; Greenfield, 2003, 2008).

X-25

So it seems that creativity can assist in generating 'problems', which often come from a sagasuation space. And that's what happened in this research project - the dawns of possibilities emerging from my meandering, metaphorical connections, progressed during creatively making artworks and invited me to research the concepts through findings across academic disciplines.

X-26

As the project progressed, the questions and ideas emerging from sagasuative art-making were written in a journal, and used to prepare more research. Sometimes the questions or ideas emerged when doing other things, but not nearly as often. What was apparent though, was that the thoughts could be traced to things that happened around me, something a researcher found in 1924. That researcher, Julian Varendonck, noticing his 'train of thoughts', became practiced at following back his thinking trail to trace

where his thought began, most often from seeing, or occasionally hearing, something that triggered a specific memory. The triggering of chains of thoughts makes sense when we know that the wandering mind is a highly connected mind.

X-27

The questions that came out of this research developed into 3 exhibitions of artworks, essays, conference presentation, and this exegesis, all metaphorical academic 'dots' that generated mainly from the art making process. The search of literature stemming from the arising questions linked the notions, through topics ranging from anthropology, sociology, economics, environmental science, philosophy, spirituality, history, psychology, the nature of being, and education. The resulting texts have been incorporated into this image as 'dots' on this 'touchscreen' artwork, each element of the writings presented as a pop up window, containing a section of relevant text, with relationships between the knowledge in the 'dots'. The relationship is emphasised by the use of colour and proximity to show patterns, and draw upon mental habits identified by the neurological and gestalt theories of pattern recognition skills, a sort of visual language.

X-28

The whole method of doing research in the thesis is itself integrated into the theory, as it uses patterns to generate meanings from academic 'dots' of concepts and knowledge. Each 'dot' is isolated inside its own realm, but each bearing relationship with, and drawing relevance from, other knowledge. It is a technologically, textual joining of 'dots', which allows for a non-linear reading and sharing of knowledge, that may itself present new patterns.

X-29

This research does however bears risks. There are risks from deducing false ideas from the possibilities generated, there are technological risks, and there is likely to be criticism of what DeCerteau refers to as the "obscenity of indeterminacy" (De Certeau, 1984:202) though a lack of clear focus and assessable goals. These criticisms may be valid in the university environment, but how do we overcome the flaws in the atomised cultural knowledge, using the authorised method that has made these flaws in the first place? In that regard, it's the exploration of these techniques that is one of my contribution to new knowledge.

X-30

The outcome and success of this research can only be assessed by each of us, subjectively. In some ways this research isn't any different to other research, as even the most scientifically based research relies upon the subjective personal motivations and definitions of the author, and increasingly, the funder of the research? (Cooper, 2010). Can this model be used more generally in education, or is it just one persons learning journey? Certainly, I can see how much the method has encouraged me to learn, but such recognition of complex interactions can only work in our society if we can move away from our 'McDonaldised' desire for pre-digested, habitual, simple constructions of sameness?

X-31

While our existing educational structures have progressed the body of knowledge to the point of great focus, we live in a whole. The problems from not recognising the complexity of our world's relationships are even generating anxiety in the halls of Treasury, eg. Stern et al. (2006); Garnaut et al. (2008). Our society is well past the 'Age of Reason' and must now look for means of moving into the 'Age of Understanding'. The recognition and acceptance of complexity is one aspect of art's distant perspectives that can help, its multi-layered, metaphorical format opening a means of 're-visioning' humankind's relationship with the physical world, allowing us to step back from tightly defined disciplines, to see patterns and directions that will assist in developing the next level of knowing - understanding and wisdom.

X-32

Default network: "a set of regions characterized by decreased neural activity during goal-oriented tasks" (Fair et al. 2008).

Executive network: "consistently activated when individuals engage in demanding cognitions" (Fair et al. 2008).

Daily Journal notes for links;

Dot 1

Note; Silly idea

from altitude a golf course with its eaten patches from the trees,, looked like an aboriginal shape. How many other shapes look 'primitive' from the air.

Check out Google Earth for patterns and motifs that can be incorporated into photographs. Are the shapes put into the landscape because of some understanding? or is nature as efficient in its use of material/landscape as a golf course designer?

z-1

2

15/4/09 devalued sorrow thoughts

Today I made a discovery about the dots, that they were used to cover up the meaning.

In sharing this concept with My Beloved, I was squashed and dismissed as unknowing.

But in the sadness that swept over me, I found solace in the misery, in its validity, affirming my hard-done-by-ness. While she tried to make amends I couldn't let go of my squashedness and sadness.

This thought grew and I found myself, while painting thousands of dots, wondering if my use of dots and the ideas behind these works are actually challenging to my indigenous inspirations. Could it be that my espousing of the wisdom and knowledge of our Koori compatriots that I might be trying to make things better, and as such, apparently devaluing the sorrow of their losses.

Could there be an element of this thought in the concerns of some 'nyungars' about my 'appropriating' aboriginal property.

z-2

3

7/6/09 pathology of leadership

Pathology of 'Leaders'

It would be interesting to consider leaders of the world, either business or more particularly government, and look at the psychological requirements to claim that position of power.

In many ways the altruistic model appears as one of 'It is in your interest to be like me!' where the leader believes making the population clones will resolve the human crisis in them.

This is a much preferable situation from the patriarchal, "I know what needs to be done and I will tell you and you shall do it." This is the model of the tough leader, no need to

consult, bearer of all requirements to achieve the desired goal.

The business leader has affected the government model, with the idea that "If I were in your shoes, I would do this..... Therefore you are, if you have any brains, planning to do that to me and so I need to do it to you before you get the resources/timing/desire to carry it out.

There is little need for review in these scenarios as the 'leader is the bearer of all that is truth.'

There is one more point that I have forgotten while I have been writing

Wisdom

z-3

4

2/7/09 *Focus on Locus*

The requirement of academia to place knowledge in relation to other, existing knowledge bears advantages well known to the structure. However there are inherent dangers in this practice that have been difficult to identify, and as such have been dismissed by the power brokers.

The placement of knowledge in formalised structure informs possible meaning, and is illustrated by the phrase "in light of," the relationship of knowledge to its surrounds influences perceptual interpretation. But to focus upon this relationship devalues much potential understanding.

It is the tradition of academic knowledge to place itself in a lineage, claiming power by right of descent from kings of earlier age. "This is true because it stems from Plato, Newton, Hargreaves, or whomever." It can be presented as a means of appropriation of the authority of the ancient king. New blood has been summarily dismissed.

The prime example of this are the three most important perceptions presented in the past two hundred years, but the list could go on. I say perceptions because the ideas enunciate the existing, they were not 'discovered' as the foundations of the perceptions were not hidden. They were patterns that were always present, it was that our society was oblivious to them. I am talking of Galileo, Darwin (see Moodie, 1971 for account of Darwin & Wallace's 1858 presentation to the Linnean Society) and, *in secondary education terms, Einstein*. The three kings of scientific theories. All were dismissed by the authorised, and undoubtedly, direct descendants of the philosophy gods,- the Greek gods. They were the children of reason that somehow reasoned these arguments to be wrong, irrelevant, heretical.

The concepts that stemmed from those perceptions did not fit into the locus of existing authorised knowledge. They were indeed outside of the pedagogical foundations, the ancestor worship.

This phenomenon is not unlike that facing the artist. John Onians, in his book *Neuro-arthistory* proposes that such dismissal of demonstrates, our habits encourage us to see

what we already know, what we are aware of, what is familiar. But these habits, based in routine, have been explored by Mc Guire et.al. (1997), which Greenfields (2003/2008) suggests that the synaptic/neural connections in our brain grow in areas of most use, allowing greater proficiency in those area of brain function. This is useful to theorist such as Taylor, suggesting productivity gains in the machine of the workplace. Diamond suggests the Easter Islanders became very efficient at felling trees to make statues.

But given the signs being flashed before our eyes, we need to see new ways

z-4

5

30/7/09 *Journey*

I am interested in the similarity of feeling I ma experiencing regarding time and value. Somehow, while writing the candidature proposal I noticed a sense of folly, of inconsequence in spending time at the library researching, getting books. "I should be doing something useful/important rather than sitting round reading!!

Where this foolish and naive thought stems from I have no idea. But it seems a related state of anxiety to that experienced when making art.

Do these sub-emotions stem from a cultural anxiety to produce? Last night the BBC interviewed a woman who took a class of blind Nepalese kids mountain climbing, using American climbers as guides. For the kids the reward was the journey, the learning and experiencing of life outside of their restricted environment. To the American climbers the journey was problematic as the view from the top was the purpose.

It is impossible to ask "How can you see the view from the top without journeying through preceding landscapes?" Both the art making and the research journeys traverse through unacclaimed terrain.

z-5

6

15/9/09 *Northern Rock god*

It is interesting reading Mountford's perspectival collections of Dreaming mythology of the similarities between the social rituals of encouragement for future welfare. The story that specifically engendered this concept was the Parrot-fish man Yambirika at Bickerton Island in the Gulf of Carpentaria.

Mountford suggests that each year the local tribe gathers at a circular rock formation gathering handfuls of sand which are cast "in all directions" to encourage the quantity of parrot fish.

If I was to take handfuls of notes, taking them each period as offerings to the great Nab, in the hope that future searches for food and shelter will be provided for, would I be naive? these offerings to the god Nab, aimed at encouraging its continued life are an attempt to garner good faith with the god Nab so that future hunts will be bountiful.

The great god Lehman was offered all sorts of sacrifices and each new season promised a bountiful harvest. the Scots gathered at Northern Rock, assembling their offerings, their sacrifices,

After all gods as great as the Northern Rock don't just disappear.

Unbeknown to the tribe of Scotland, other men were gathering the sacrifice to feather their own nests, sometimes taking sacrificial offerings to other tribes as signs of Northern Rocks magnificence and power. The faith in the great god reaffirmed, the sacrifices continued.

z-6

7

14/9/09 *Curates*

While reading *The Dreamtime Book*, by Roberts and Mountford I was fascinated by the titling of the works to their purchaser. Each work, about a Dreaming story and painted by an Anglo, is subtitled to the buyer. The Parrot-fish Rock story is titled *Mrs. John S.T. Cox*. The preface discussed the commercial success of the three series of paintings Roberts completed between 1965 and 1973. Somehow, the purchaser is more important than the source of the Dreaming story, which is only given cursory import in the text. The purchaser is even more important than the title of the work.

How and why do we ascribe importance to the buyer? Is this the precursor to the art markets need for authenticity, the creation of the great mediators of wisdom, - The Curators? is it a symbol of the status of the buyer as one of wisdom and knowing? Funny how a curate is the assistant to the knowledge bearer, the one that ministers to the flock, the vicar.

Now the curate is the leader of the artworld, appropriating their might and form from those they engaged with to assist.

The Modernists, and many other social groups have assigned a spiritual element to art and the mediating nature of the artist. Interesting that the curates have donned the gown of cardinal, sanctimoniously bestowing the authority of legitimacy upon their selected shaman.

Any criticism of them is a cry in the wilderness, as they are following the tried and tested paths of the clergy. I hope they do not kill the spirit in art as the clergy have managed to kill the spirit in religion.

This appropriation is also signified in the copyright of the stories to Mountford and Roberts. Similar in appropriation to the appropriation of Quakers in Quaker Oats and Fiji in Fiji Water!

z-7

8

23/9/09 *Creativity*

creativity last week became an opening of possibilities.

This concept affects the studies of creativity that are focused upon the production phase of the art work. The experience of production will be influenced by a sense of empowerment, acceptance and authority, where the validity of the expression influences the egotistic responses of the recipients of studies.

Is this then the creative process, or the sense of validity that empowers the artists? This is a pretty heavy argument and requires a good grounding in psychology. I need to establish the epistemological basis for the presentation of this concept.

Nelson's questionnaire needs to be de-constructed to identify how many questions are production based, how many are inspiration bases and how many probe the reflexivity of the process.

The value of the pre-production creativity concepts lie in the knowledge that is occurring pre-cognition that expresses knowledge that is undervalued because it is difficult to identify, quantify and use for the production process.

z-8

9

12/2/10 *Divergent Thinking*

Divergent thinking illustrates the mindset of the researchers, set in the orthodoxy, that proper space. Divergent thinking can only be classified as divergent because it diverges from the 'party line'

In reality, this neural method could equally be classified as 'convergent thinking', a convergence of related elements that upon explanation are often generally accepted as bearing connection. Ask Mr Copernicus. He converged the dots of knowledge that the movements of some of the stars, the ones that moved without apparent relationship to the great body of stars, suggested that the Earth went around the sun. The only aspect of that convergence of knowledge was with the hegemony, the power elite. There was no divergence from human pattern recognition.

Deconstruction of the term would suggest the originator of the phrase saw the hegemony as the authorised seat of truth. Oh that's right, his research was funded by the military, Guilford proposed "convergent production" as moving towards one solution, single and correct. This in itself is an illustration of the flawed and naive perspective of the Orthodoxy, as any single problem will yield numerous answers, each suited to resolving part of the problem. The idea of grand unified answers can only be conceived by excluding aspects of the varied solutions that are perceived less relevant.

"divergent production" has at its root an acceptance of complication, of inter-related strands that can never be resolved as 'THE' answer.

Authodox my way of spelling authority and orthodox

Authority Latin, *auctoritas* whose root 'autho'r - *autor* f. *augere auct-* (increase, originate, promote.)

Orthodox Latin *orthodoxus* f Greek, *orthodoxos* f. *doxa* opinion, *ortho* Greek - straight. Concise Collins Dictionary 1990 edition 1991 reprint.

z-9

10

13/2/10 *Etymol Bloodlines*

Etymologies and other blood lines

In reviewing the words 'orthodox' and 'authorise' I have been made aware that they are from different roots, one Greek and one Latin.

This is an interesting example of de Certeau's 'place'. While these words were used in Athens and Rome about 2-2.5 thousand years ago, they have not been in continuous use, and have been changed and manipulated by the speakers of the languages.

In English, these words have been drawn from sources seen as authentic, drawn during the enlightenment the renaissance, but mostly in the late renaissance and early industrial age.

They are words that claim heritage, belonging in Burke's Peerage.

The meaning and relevance of words changes, their meaning, their spelling, their usage. These words changed from Old French.

Changed by who? was it the peasants in Neimes that started to research etymological root and authorise their 'proper place'? The barra boys in London's East End were known for their creation of phraseology, but they did not draw it from the ancient languages.

No. These words were inducted into English by educated people, those in the Church or the aristocracy. The same people Dr Johnson knew when collecting for his Dictionary. These were the words of the hegemony and to have words of good blood was important to claim the authority.

Words change.

These are not used in the space of the ancients. they are used and applied now.

The quality to claim authority. There are two gods that have anointed this one concept.

z-10

11

9/3/10 *indiv-ii-dual*

The innate contradiction of the word indiv-i-dual.

While its etymological roots may lie in the concept of indivisibility, the words as applied in contemporary language relates to the person, the concept of individuality rather than indivisibility.

Can it represent an understanding, a knowledge of the innate conflict inherent in a socially structured animal that we are, entirely dependant upon the society for our continued existence, while struggling to disconnect ourselves from the whole, like adolescent children seeking to establish their lives separate from their parental influence. Separate from family but bearing the knowledge of

It is impossible for this society to operate as individuals, as each member is dependant upon the whole to survive, dependant upon the suppliers of nutrition, the purveyors of water. The society is structured and an interdependant whole, where each element is dependant upon the continued operation of the other elements for its own survival.

The concept of individualism may be able to be construed as a manifestation of psycho/pathological behaviour. Von Neuman's 'prisoner's dilemma' example of game theory does not work if the prisoners are Quakers, for example.

This may be the conflicting space of the politician that proclaim Bonhoeffer as a key role model. Bonhoeffer would have spoiled Von Neuman's game by volunteering through altruism. There is no room for altruism in Adam's, Taylor's or Friedman's theories of social interaction. Such long sighted motivations are outside the timeframe of 'Return on Investment', or at least they are for psychologically inadequate perceptions.

One of the key problems with the current society is the elevation of psychologically inadequate individuals to 'higher office'. Those that believe they have the power to change the world are unable to account for the complexity of influences that need to be overcome. (Note: at this point it is important to note that somewhere, deep inside this study is the hope that it may provide an influence assisting in the re-alignment of social outlooks beyond the current paradigm of instantaneous results. It is fair to then criticise these concepts as being innately flawed. Obama's enormous capabilities may only result in one social change, the understanding of "The Audacity of Hope".)

z-11

12

10/3/10 *My Tree of Knowledge*

It seems that this organic research method is itself a metaphor. If I can trace back all the thoughts and research, it would have to stem from the one pattern recognition event of the noticing of the "dot painting golf course". All the reading has stemmed from this point, much of it for interest in knowledge exploration, but some of it out of a need to justify what I am doing as valid.

This structure has generated itself into a tree of knowledge with the root question the stem. Methodological foundations are the roots that grow down to ground the research in a suitably firm and nourishing base. The non-methodological directions are the

branches, heading off from the seed question with questions stemming from established research and fresh questions branching off of those.

The key criteria is the mapping, the logging of the thoughts and the readings as this allows for the epistemological basis to be traced back, it also requires the reflective consideration of where the thought stems from and what relationship it bears with the surrounding branches of knowledge.

So for example, the seed idea was the Koori golf course observation. From that stemmed environmental thoughts, readings in anthropological papers on Koori culture, the plan view- distant and godlike, the role of dots- the application of dots through atomisation.

Other branches have been creativity research, neurological research, spiritual research. and it is ongoing.

And what feeds this tree? The space gained from the practice, time free of expectation, where there is value in the doodle and the scrawl, non-productive artworks that may feed productive outcomes, but are intended to allow space for the concept to congeal. This 'doodle time' provides a point of interest, ensuring freedom from boredom, and also a record of the emotional and subliminal responses to the inspiration. There must be psychological papers on the interpretation of doodles, that can be incorporated to feed the understanding and development of questions in the participants.

But inside the doodling, the mind should be starting by thinking about the seed question and noting the responses amongst the doodle. Key words, texture paintings of emotions, new questions. All these form the start of the growth and allow for other branches to stem out after the fact.

This is different to brain storming because it allows for the reflexive generation of concepts over a period of time, drawing upon the individual (failure of group brainstorm). How does it relate to mind mapping? Mind maps are intended for note taking, the incorporation of data from a feed rather than the generation of nourishment.

z-12

13

27/4/10 Shared Language

It is interesting the power of the image. In all the discussion about appropriation in visual art over the past 100 years there seems no discussion of the visual language, its phrases and 'words'.

In no other language is the argument so pronounced. The language of linguistics, never contains arguments that it is problematic to use words that have been used before - plagiarism - the uncredited copying - being the extreme, while stylizations are labeled such as Kafkaesque without concern. There is no argument that words such as 'bungalow', 'Verandah' or other words 'appropriated' from other languages be pronounced sacrosanct

Mathematical language uses the same symbols, carrying the same meanings without furore.

Music too is a language that uses stylistic interpretations of limited group of symbols, often in referential style.

It is in the visual realm that territory is marked, like a dog spraying its territory, each spray marking a district rather than a specific tree.

z-13

14

1/5/10 *Land of the gods*

We are living now in the land of the gods. We are converging all the past and all the future into the now, in that all that has been generated as resources throughout the past to be used now, and all resources of the future should also be used now.

z-14

15

3/5/10 *Understanding Spaces*

Understanding is a personal space, occupied through the comprehension of relationships in perceptions. It is the internalised correlation of information presented to the mind in which detail, form and character are seen as integrated and relational. IT is the comprehension of the relational interactions between the elements being considered that allows for extrapolation of possibilities within the potentials of the elements.

Outside of those potentials is fantasy, which may draw from understanding but is an element of imagination, rather than understanding.

As such, *Animal Farm* could be construed as a novel of understanding of human responses to power, rather than as an act of imagination. Likewise, 'Dreamings', in their exploration of the motivations and foibles of the Ancestor Spirits can be seen as accounts of human condition that express understanding.

Both examples are understandings, but are expressed imaginarily.

z-15

16

4/5/10 *Metaphor*

IT is interesting trying to review a title that is comprised of multiple metaphoric meanings. The magic of which resides in shifting perspectives and proportions, where the waves of implication wash over the concept, depositing meaning, and leaving accumulated layers of interpretation, unstable and shifting for the reader/viewer to build upon.

It is in this interconnectedness that understanding lies. To dismiss other potentials is to fail to assess the terrain upon which to base our assumptions.

17

6/5/10 *Chrystalised fact*

When Creation narratives become 'fact' - sacrosanct reality - they lose the ability to relate the the current. The metaphorical nature of Genesis is destroyed when the knowledge instilled inside the narrative is chrystalised as fact. This moves the knowledge away from any potential interpretation for the present, destroying the validity of applying the knowledge inside the contemporary.

"Adam and Eve ate the apple from the Tree of Knowledge. That's their problem!! They were the ones kicked out of the Garden of Eden, not me. I can't even get into the Garden of Eden, I don't even know where it is!! If I ever did, however, get into the Garden of Eden I will know not to eat the apple from the Tree of Knowledge. The bugger is that I don't know what the Tree of Knowledge looks like, so I figure its best just to not eat apples!

Seems a reasonable interpretation of chrystalised fact.

z-17

18

6/6/10 *Me the Indigene*

I am interested in the reason for my consideration of Indogenous knowledge. It is not a result of great in depth knowledge of either Dreamings or social structures. It is tough, stemming from the knowledge that we share a common humanity, a common set of genes, emotions needs and desires for comfort.

I wonder, what is it that led to the establishment of the sustainability culture that is what we perceive as 'traditional' indigenous culture? being similar to me, demonstrated by any indigenous individual that has been educated, both by experiential and academic education in contemporary western culture has similar desires to my own. Mr Maslow rides again.

But the ancestors of such contemporary indigenes , though being of similar construction, had developed a very different outlook to life and the individuals relationship with their environment, both social and physical.

There is little doubt that there are aspects of indigenous life that I would now object to - polygamy, tooth knocking for beauty (in the same way as I object to many western beauty requirements, such as anorexia), but there has been a development of social and spiritual structure in indigenous communities over at least 50,000 years. This period is important as stability is quite critical to knowledge transmission, especially prior to textual communications, which could not have developed in areas lack materials for transmission of text. (Stone was the only real alternative for inscribing semiotics amd inscribing in sandstone requires a harder material to carve with)

It is this idea of 'other' that seems to prevent us from identifying similarities, both in behaviour and social structures. Seeing the similarities may present a method of understanding what influences pushed the development of the traditional societies, and what is happening in contemporary societies that we can learn from.

z-18

19

16/6/10 *Joined dots*

Two relevant thoughts

Firstly is that I am studying 'creativity as a method for inter-relating knowledge.' Since creativity is the convergence of knowledge, concepts or even possibilities there is a possibility that it will be able to be employed as a means of integrating the knowledge generated through research, living.

Secondly that as an illustration of visual art as an expression of integrated knowledge the Western Desert dot painting is an excellent example.

z-19

20

2/7/10 *Mirror Neurons*

Appropriation

One of the factors that must be considered when reviewing the appropriation of Indigenous art is the physical manifestation of the habit through Mirror Neurons.

These are key learning tools, genetically manifesting in the normal development of neurological functioning and learning in general.

But this genetic method does not operate in isolation as we are able to reflect upon what we are seeing and do in fact adjust our behaviour from that which we see.

There is also an underlying sense of the artifice of our social structures, where the cladding and adornment of ourselves is illustrated by the societal obsession with the hero-actors, the ultimate appropriators.

z-20

21

2/7/10 *Civilisation*

What is civilisation if not an inter-connected set of relationships structured to support an idealised outcome. Technological civilisation is but one form of civilisation where the foundation of the thought lies in technological solutions to perceived problems, such as warmth or hunger, but is extrapolated out to perceived problems such as unfulfilled desires. It is about taking an object or concept from one location and applying it to another, about linking individuals, productions and ideologies into a conglomerate form.

Some civilisations are fleeting in human terms. Almost all civilisations are fleeting in cosmic terms, and are dependant upon resources for their continuance, with the civilisations valuing frugality being the longitudinally successful ones.

Can a civilisation destroy itself and still be a civilisation?

z-21

22

9/7/10 *Leonardo*

While sitting and thinking about how to present the three minute thesis, I pondered one of the greatest inter-disciplinary minds of the past 500 years, that of Leonardo. Sister Wendy introduced him as Engineer, surgeon, Mathematician, architect, Inventor, and did a bit of painting on the side.

This led me to ponder the relationship between Leonardo's acts of painting and the development of his ideas in other fields. Could he have utilised the under-mind space during his painting to develop contextual relationships between the other concepts that he thought about?

To try and establish this, I will need to establish a chronology of Leonardo. relating time, location and atmosphere of his activities. If there is evidence of his painting interspersing the other cognitive acts of his creativity, it may well be possible to propose that he did utilise the under-mind of 'flow'

z-22

23

14/7/10 *Gruen insecurity*

Todd Sampson Creative Director Leo Burnett

The Gruen transfer Series 3 Episode 4 ABC.

<http://www.abc.net.au/oview/#/view?596964>

"Linx is about confidence and attraction and all of those things. It has nothing to do with the functional things of sweat. We know that. And it's about young guys with low self esteem cause the lower your self esteem the higher the materialism in purchasing. In this case, it's saying this guy got low self esteem if he sprays this he will feel confident therefore will attract more women towards him." 10.13 seconds into the programme

Accessed 14/7/10

z-23

24

31/7/10 *Irony in the project*

There is an inherent irony in this project as I become more socially isolated and more focussed upon a study of integration!!

This is a recognition of the value of focus though in itself seems to argue against the value of the study. Leonardo da Vinci might disagree.

25

26/10/10 *Glimpsing enlightenment*

I sit here seeking enlightenment. Hurry up.

The thought of the child comes to mind. It is the thought of the naive understanding, the wisdom that emanates from their ignorance. I wonder if that is what enlightenment is, that fleeting interest and understanding, flashing before us as a spark of insight. We use the terms quite regularly.

I think of those beefier me that have sought enlightenment. those that are held up as beacons on the journey. When I look closely they have the budders too. They fall prey to the inability to hold the truth. Thomas Merton, such wisdom, such pain, to then go and hide in his hermitage.

I keep hearing the child. The one who flits disconsolantly from thought to thought. Is that wisdom,, Is that enlightenment? The idea that complete understanding is incapable of being held seems reasonable enough. But the fleeting glimpses are but succulent appetisers for the mains. When will it be served?

The child plays, aware of the now, but immersed in the matter at hand, changing with the wind. Is that why we need to jettison our child? the inability to focus is condemned in our society. Childish. "Grow up, will you!" "It's time you matured and focused on your goals."

Why is the child not focused? Why is their determination at their play so problematic? In many ways focus is the jettisoning of apparent irrelevancies. Who makes that decision? When?

Accepting that the water we seek drips though our pours hands is a wisdom. How can it not be? Maybe that is the enlightenment that we seek? - the understanding that the understandings we glimpse are the reflection of the waters dripping from our fingers.

After all, the things we describe as rich are the elements of complexity. Can a sunset inspire with one colour? Is this a new series of artworks?

I described concentrated focus to Peter, the spiritual guidance person on this retreat as waling through a pine plantation, brevet of diversity and the richness of the natural environment. Which one nourishes the soul, a mono-culture or a varied forest? Is the difference between the adult and the child the desire to produce something of worth, timber for tissues? Is that what maturity and focus are- the gift to others who then don't have to make the journey themselves? Is that why we see childish adults as problematic, as they do not contribute to the growth of the whole towards comfort and surety? Nourishment of the heart is not enough for value to be assigned.

Before I wander off this post I think it wise to reiterate the originating thoughts, that wisdom is knowing that one cannot attain wisdom, only glimpse its incredible diversity.

26

18/1/11 *Drawing*

I am sitting here drawing for the sake of drawing.

The thoughts arise almost subliminally, around the concentration on the movement of the hand, elbow and shoulder. The thoughts seems unrelated. Thoughts of walking through the streets of Torquay as a child. Conversations about the

How do I best track these thoughts? Should I record an audio record of the thoughts, knowing that the act of expressing the thoughts changes their very weight and excludes others from generating. Can I express subliminal thoughts without changing their very being? Can they influence the way the image develops? Images that are being corralled within the physical as a means of creating space. Should I ignore these thoughts and allow an extended period of output with out interruption?

z-26

27

19/1/11 *1st perspective*

The role of the dot as individual.

Found my self wondering during the drawing period about the role of the dot as a psycho/ social metaphor for the individual within the Western Consumer society. The free marketeers certainly have argued for and of the individual, amply demonstrated by Margaret Thatcher's famous dictum that "there is no such thing as society".

The view of the individual is very western and challenges the tribal and social structures that existed in pre-industrial societies.

The view from the individual is one that is not often explored and may be a path for the creation of art works. The first person perspective is a literary tool and can be some what staccato statements. Will the same occur if the tool is used visually?

In fact, the first person is the basis of Brunelleschi's rules for vanishing points. As this is so different from the omni-present perspective of Central Desert art, is there a way to consider this first person perspective's role in the development of the concept of 'individual'?

I am not arguing that the idea of individual is invalid, more that the dis-association within that perspective may be one of the social destructors that lies at the root of the environmental issues brought about by the atomisation of outcomes from behaviours.

z-27

28

16/1/11 *Separation*

A difficulty I am experiencing in conducting the research is that the space created for

thought to generate, unfortunately leaves room for the rising thoughts of my recently deceased 'Beloved'.

The absence of her presence is very difficult to ignore and leaving space allows for the sense of loss to arise regularly, in ways that is very different when I can construct with demanding externalities. But this is known as the value of the silent space I am allowing, and is the basis of many religious structures, from Quakers to Bhuddists.

z-28

29

26/1/11 *Harmonics*

The lines in the space test images are creating dynamics through proximity. As the lines follow the nearest line they are beginning to amplify the linear changes, as though a visual harmonic.

z-29

30

27/1/11 *Appropriation/respect*

In reviewing the MoMA exhibition of "Primitivism in 20th c art" the interesting dualism of appropriation and acknowledgement of value reside in the same space, which brews complexities in motivations.

TO express what had been seen as "despised "Tribal" fetishes" (Clifford 1984 p195) as bearing validity of great art is an undoubted expression of respect.

Appropriation inherently requires and un-stated respect, as the 'system of might and power' (De Certeau) dresses itself in the robes of the powerless. The respect is washed of its power by the appropriation/ theft of identity and the claim of lineage.

The theft of identity is the complete disconnection of the 'knowledge' from its source, while the claim of lineage acknowledges the source, but claims status from the integrity of the originating knowledge. This is a de Certeauan 'Strategy', converting otherwise subversive material suggesting theft by the power elite into rightful heirs of the knowledge.

z-30

31

28/1/11 *Exponential points*

While working on 28/1/11 drawing I have been pondering the harmonic idea of a couple of days ago, noting that in the contour line drawings the pattern changes taking into account the adjacent line. That line may well have included a minor deviation from the intended path. Subsequent lines incorporate and expand upon this deviation from the intended path, appearing as a harmonic growth of the initial deviation.

It has lead me to ponder the role of harmonics in outcomes, exponential change from one intended point. Can there be an exponential point? Existential points are another matter, but the metaphor suggested by these harmonic/exponential shifts and their

influence upon the space in the rest of the drawing is an interesting illustration of the unexpected outcomes from pre-determined objectives.

z-31

32

31/1/11 *Discipline*

Is the scholarly specialist a means of delineating self? How much of ego is about the delineation between self and other and is this manifest in the desire to delineate other as a means of re-inforcing the 'natural order'?

This thought has arisen through the consideration of the schools of philosophy and the vehemence of territorial claim. I met a woman at a BBQ on Saturday that taught philosophy and labelled herself an 'existentialist', and had little time for 'post-modernist' thinkers.

This is interesting because these 'others' are in the same field as Sartre etc, but were not entertained to enrich her concepts and understandings of existence. How it is then that other academic disciplines have their own subjects (I use the word in its spiritual overtone of sect, as they align themselves not based on open investigation as much as territorial one 'truth'). In fact this woman argued that there is 'core knowledge' but that it was

In some ways the discipline has its disciples, which inherently carries an understanding of an adherence to 'the truth'. The term is not "academic specialties".

The word is discipline and it is loaded with authorised learning.

discipline (n) ;control
;Area of speciality, subject (which in itself is a subjugation to
object as well as meaning self)
discipline (v) ;Punish

z-32

33

3/2/11 *Sociopathy of Western Art*

Sociopaths and the conscription of art

One of the key correlations in Western art and the development of Western psychological perspectives is the appropriation of art into the sociological hegemony.

The development of the optical illusion inherent specifically in Western art, even from the Greeks onwards, as Berger suggests, is a form of ownership, of possession, its symbolism being eroded to make the meaning didactic and unambiguous.

Sociopathy finds ambiguity a difficult circumstance to manage. The roles of Spirit, of metaphor and allusion are swept aside in the desire for illusion, a specific constellation of relationships intended to present a desired visual reality - the *Discus Thrower* could be seen as a warrior training in waiting, in a similar way to the Chinese Terracotta soldiers.

Those soldiers were apparently for the afterlife use of the Emperor. (Is there evidence for this, or could they represent those who died along the Emperor's campaigns, a sort of a war cemetery, after the fact -like all war cemeteries)

In contrast to the role of art in other non-western cultures, where symbolism over-rode the desire for optical illusion, western art has resided in a political space of visual proof for millennia. Jesus was blond, God sits alongside those who rule and judge. (The idea of divine rule is not at all exclusively Western) It is not the co-opting of the divine that is Western, it is the physical optical representations that speak in a didactic manner, diffusing of interpretation deferring instead to the 'obvious' correctness to 'natural law'.

In here are two concepts to be explored. Firstly that the arts became the tool of the power elite representing truth and 'knowers' of truth, and secondly, that the power elite may have found complex emotional, spiritual and metaphorical meanings that art is capable of, too much of a challenge to their sense of self as well as their power.

Art is interpretable by anyone drawing upon their own perspective and experience. But it requires a self valuation that "my" perspective" is valid, and 'Subjects' views are required to be subjugated to the King's.

z-33

34

11/2/11 *de Bono flaw*

Whilst reading de Bono's Six Hats, I wondered about the delineation of types of information. Verifiable information is given greater credence. The concept seems to be a method of control. The key problem that arises from this controlled information is that it is again isolated, the focus groups are self selected from a certain demographic. While this may be the 'target' demographic, the participants are still self selected, and thus cannot be representative of the whole.

Marketers, be they sales or entertainment, seek the surest route, based upon the research that they gather. But the isolation of the information results in the final decision being based upon the intuitive go ahead of the principle players. There is never enough information to make a 'certainty'. "Barring un-foreseen circumstances ..." is the absolute best judgement, but inherently recognises the flawed assessment criteria, even if we pretend that it is not flawed.

So, even with de Bono's six hats of rational thinking, the red hat is always the last hat worn, by necessity. We are human, and all the theoretical justifications of rational thought do not provide the complex knowledge claimed. Our human sociological structures are always unpredictable because we are unpredictable in an unpredictable environment. (He notes this on page 78, although not specifically) (He specifically notes it in the last paragraph of the book!)

"The six hats method deals with possibilities and likelihood. ... Action has to be taken on 'likelihood'." p81

" We set out to do something because it is worth doing.P94

Maybe the key problem with allowing and accepting judgements based on intuition or emotion is that we are not attuned to hear the motivating factors behind our emotional responses. So we are not aware of the motivation, and therefore not aware of what other factors might be influencing the response. Is awareness of these motivations enough? (Is this concept a form of controlling? If we hear our emotions, is it a form of CBT that then plays)

z-34

35

17/2/11 *Western Control Reflex*

I am pondering if Western consumer culture is about possession and ownership, along the lines of Berger or Said and the desire for ownership and appropriation.

This could either be a simple manifestation of base human desire and greed or it could be something more complex. The thought occurred that it may not have generated out of what Foucault, Bordeiu etc may argue as

It may have generated out of the continuous crisis of life in the middle East in the period before CE, the period of foundational social development of our society.

The development of 'civilisations' in the Middle East occurred during prolonged periods of instability and violence - inter-tribal violence, oligarch violence and violence from both neighbouring and distant 'governments'. Looking specifically at Judeah and the lands of Abrahamic documented history, life was precarious. At any moment either the peoples could suffer either being sold by siblings into slavery, suffer a coup, an invasion, and be carried off into slavery in foreign lands.

There was very good reason to feel anxious. (I will explore periods of stability in Middle Eastern history) There are a number of tactics developed by individuals to deal with such insecurity; each of which is likely to be nowadays diagnosed as a mental illness; paranoia,

So I have been wondering if Western culture is not so much about the hierarchy of needs, as much as, seeking to control their lives in an uncontrollable environment. Seeking to secure stores, seeking to eliminate potential threats and enemies, seeking to have the resources to provide a sense of control of self.

In an environment where life and existence was so precarious, and the threat came from other human beings it seems sensible to hoard and be proactive in the destruction of other.

It would be interesting to compare the social outlook of cultures where the threat emanated from non-human events, but where life was equally precarious.

Inherent in this concept lies the lack of value in sustainable living in an environment where the neighbour is likely to come one night and kill you for your resources.

Interestingly, this is a challenge to the criticism by Said in *Orientalism*, but not particularly challenging to criticism outside of the roots of western culture, such as indigenous Australians.

z-35

36

18/2/11 *Relational vision*

It is evident that what we see is set within the knowledge that we already have. Our optical reception is dictated by the interpretations of the mind rather than the eyes. To the extent that when we see vision that contradicts our knowledge our brain adjusts the apparent reality.

Our vision is contextual. We see what our understanding expects. So in optical illusions our eyes suggest what should be rather than what is empirically there. Our senses work on correlating information, both the information streaming in, and the information already held. It is this correlation that is apparently argued as one of our key survival success systems. We live effectively due to the shorthand responses to the inputs we are experiencing and our ability to discern what requires our immediate attention and what can be dismissed. (Source)

But the key I am arguing is that the mind takes the inputs (facts) and gains useful knowledge from the correlation of the inputs with its surrounding information. We do not see or experience isolated 'fact'. It is always interpreted by the surrounding knowledge.

All our vision is relational. Things make sense and are sensed in relation to the surrounding information and eye perception changes what we believe lies inside of empirical reality of the world

z-36

37

1/3/11 *rediscovering intuition ideas*

One of the feelings that are generating out of Claxton 2008 is that intuition generates out of the space of inside. It is an *in*-tuition rather than an *ex*-tuition.

Another aspect that generates out of the reading is that the insights of intuition can wash past. This has been evidenced for me through the daily journal notes. Concepts and understandings seem to be eroded and washed out of awareness and as such, I am left with the need to discover understanding again.

In reviewing this aspect of my study, I am noticing that such 'great ideas' seem to generate themselves more than once, as if my sub-conscious is shouting "How many times do I have to tell you!!!"

And while this feeling is disconcerting, it can in fact be a revelation, both that there is so much that I know that I am not aware of, even though there is written evidence that I

had been aware of such things in the past, and the confidence that comes from ideas that bear great value that have been laid, idle and awaiting their rediscovery.

One example of this is an architectural idea that I generated seven years ago that uses the compressive strength of cable to suspend a tower. The ideas were applied to a cathedral concept, but is now generating into a self supporting sculpture.

z-37

38

4/3/11 *Creating culture for space*

Much of the research into constructed creativity spaces extoll the value of space, psychologically mindful space. My initial response has been agreement with that premise.

But, in reviewing how the project is progressing and correlating that perception with the knowledge of previous creative periods. I am beginning to wonder if the space should be as empty as proposed by Claxton.

Counter to the quiet space is the space of immersion. Immersion is an occupying space of energy and fatigue. It is the space of deadline, and involves the mind operating under the stress of time constraint.

Immersion could possibly be the result of the time constraint, or it could be, among other things, the permission to occupy that space. This is interesting because one of the key factors in the empty space creativity is the space for hearing. And to hear in that space it is inherent to be allowed to be in that space.

Given that both Claxton and de Bono's creative methods involve creating the space for permission to be in that space where one can hear the insides.

this somehow involves a shift of cultural personality, and may not be the reason, nor the method, of creative idea generation. rather it is a method of shifting perceptions away from our externally derived cultural space.

z-38

39

4/3/11 *Haphazard culture*

The word haphazard is ringing this morning. Interesting pejorative contain the word hazard as an enclosed entity. The difference in perceptual responses between haptic, happenstance and haphazard illustrates in some ways the cultural orientation for order.

Interestingly the concept of accidental contained within the hap... does not take into account time. The concept that something is haphazard often is based upon shorter temporal assessments and is inherently product-outcome based.

Interestingly evolution is haphazard. This suggests the haptic method is entirely valid, because the haptic method is trial and response, filling the space rather than define the

criteria that is required to be filled. The definition inherently reduces the complexity of the matrix and thus fails to account for the unexpected outcomes.

The concept draws images of "God, the intelligent designer" pondering "I wonder what happens if I"

z-39

40

8/3/11 *Microsaccades*

Micro saccades are the micro movements of the eye that are critical to the perception of visual information. Without the micro movements, the rods and cones in the retina fail to respond to light stimulus and stop sending information to the brain. It is theorised (??) that what is effectively stationary is visually unimportant as it is likely not to present any threat, and so can be ignored. The same can occur in other senses such as touch, where new sensations such as fabric are transmitted to the conscious, but soon fall away from conscious perceptions as they do not warrant attention.

Microsaccades can be demonstrated by looking at a dot on the centre of a page. If we stare at the dot for long enough, about a minute, the information surrounding the dot that is also on the page effectively disappears and becomes blank. Thus all we can then see is the dot, that very focused aspect of what we choose to see.

Academically, the focus on the dot is critical in establishing the fine and detailed information in the dot. Alas, in the process of generating the focus, a similar response is generated inside our cognitive mind and we become effectively blind to the surrounding information.

z-40

41

6/4/11 *Gardner and Creativity*

In reading Gardner 1999, his support for Big C creativity made me ponder about Gotz and Gotz 1979 and the idea that originality is negatively correlated to success as an artist.

This information renders the idea of Big C creativity more the interpretational/communication skill than the source of a novelty. It also falls for the conundrum of successful 'creatives' providing what is digestible in the comprehension of the domain.

Does this mean that Big C creativity is the translator's role, the curator that arranges exhibits in digestible relationships. In fact translators have often been viewed as creatives, which has subsequently been criticised as appropriation.

This again becomes the proposition that creative assessment illustrates more about those that assess it than the actual creativity. ie

this is especially of interest, or should be to Gardner because he is writing about

intelligence and creativity can effect a domain in a destructive manner and therefore, it would be hard to propose that that is an intelligence. So the artists who started moving towards 'primitive' art, such as Margaret Preston (not a good example- need to find someone who didn't interpret as strongly as Preston

This becomes a point of identifying the temporal aspect of creativity. Does it reside in the 'creation' of the concept or in the interpretation of the 'creation'

Both aspects are valid as creativity, as the interpretation of any creative work is in itself creative/ novel as interpretation is a means of resolving problems. But the foundation of Big C creativity resides in the interpretation, which it seems is not in itself Big C creativity, because the act of interpreting is not changing of a domain, it is the act of transmitting that interpretation that changes the domain.

The trouble with Big C creativity is that it preferences the authorised method and transmitter and dis-empowers the non - authorised methods employed in generating novel perspectives.

Gardner gives a brief overview of the psychology of the 'creative' -"By the time they [creatives] are capable of carrying out work that will be judged as creative, they already differ from their peers in ambition, self-confidence, passion about their work, toughness, and to put it bluntly, the desire to be creative, to leave a mark on the world." p120

z-41

42

24/4/11 *Methodological Note*

I have been anxious that I haven't been generating thoughts, but it was exciting this morning having come in and expanded my cellular awareness concept,/ I had questioned the concept of intelligence, especially the ability to use intelligence to undermine intelligence.

I found myself thinking "here I am, after a few days off over Easter, and back into allowing the space, rather than having the space taken up with somewhat superficially important things.

Back in 'process mode' or at least trying to be in 'process mode'. In this case things have generated ideas whereas previously I just seemed lost.

It does appear that the method has allowed for concepts to generate and for ideas to be questioned.

z-42

43

29/7/11 *Agricontrol*

Interesting that agriculture is the basis of many definitions of civilisation. Some criteria could base a civilisation upon art, as expressions of art are examples of 'higher thought

processes, and has been used in anthro/paleontology as representing cognitive development.

Agriculture is a branch of development that may not be as advanced as the understanding of the biological relationships comprehended by non-agrarian societies. Agriculture is expressed as civilisation by those societies that are based upon agriculture, and manifest in psycho/social concepts as 'development'. The question of whether this is actually development can only really be assessed over a period of time that is not in the conceptual awareness of those that value control of environment as a fundamental of civilisation.

Even the word civilisation stems from Latin, which expressed its own value by its own criteria

The issue is that the economists and western leaders can't see another model for being and that is the threat. control is required. it is the foundation and the 'only way'; without being able to identify other means of civilisation, we are destined to follow the control path to the destruction of the civilisation. That begs the question, Is that civilised or naive?

z-43

44

28/4/11 *art text conflict*

sitting here making tests on Dreaming #46 and I am finding myself preferring to work on the appropriation paper, which is interesting, because it is the art that I value.

Part of the complexity that I am feeling, seems to stem from the more apparent end point of the paper than the artwork. I can also see that the paper is more simply structured within the format of academia.

With the artwork, I am recognising complexity at every step. Each stage is experimental and of unknown value. Can the same be said for the paper. Wouldn't it be that I don't really know the value of the paper until I pass a point of recognition of its value? Is it just that the reading carries a higher cultural worth than making art that few will see?

I do know that the reading certainly helps in clarifying my argument and I feel assist in bolstering the epistemological foundation of my writing. This is interesting as the university has placed restrictions upon my artwork's reference to Australian Indigenous knowledge transmission methods, or more simply put, my overlay of lines of dots upon images of urban 'development'. It seems more acceptable academically to cite academic papers than to cite traditional transmission methods.

This opens serious questions about knowledge transfer outside of western semiotics.

But, as I write these thoughts, generated whilst making artworks, I am aware of the conundrum of writing about my perceived challenge of comfort within the defined structures of papers is coming at the expense of than making artworks.

In writing the citations become foundational to the argument. But in art, citations become plagerism, appropriation, due to the difficulty is citing the work within the work itself. The only option is the use of citation in the title.

z-44

45

19/4/11 *Mithen and Isolation*

Thinking about Steven Mithen's Cathedral of the mind and pondered if it is an explanation for atomisation.

But the thoughts progressed onto the ability to maintain conflict beliefs in the mind concurrently.

As such, I pondered if the development of words such as rendition' have been developed because of the awareness of its reality and he need to atomise that reality from the 'beliefs' inside the mind of perpetrators of such actions.

This incongruity illustrates the conflicting concepts argued by Western leaders of the importance of freedom, the rights of the individual and the abhorance of kidnapping. The fact that they had to create a word to delineate the practice of 'rendition' from the practice of kidnapping illustrates the awareness of the similarities.

z-45

46

23/6/11 *Disjuncture*

Thinking about Steven Mithen's Cathedral of the mind and pondered if it is an explanation for atomisation.

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This incongruity illustrates the conflicting concepts argued by Western leaders of the importance of freedom, the rights of the individual and the abhorance of kidnapping. The fact that they had to create a word to delineate the practice of 'rendition' from the practice of kidnapping illustrates the awareness of the similarities.

z-46

47

29/8/11 *Functional disfunction*

I found myself, whilst getting breakfast , wondering if disfunction can ever be functional?

I have been increasingly aware of the societal focus on disfunction. The system was designed by dysfunctional obsessive egos, even if British democracy was intended to broaden the power base from one dysfunctional individual, to a system for dysfunctional individuals.

The question of disfunction resides in the combination of ego and obsessive action. Of which the excessive action is the catalytic element.

But watching a nature doco last week, watching the hippos fight led me to ponder if what I define as human disfunction is actually fundamentally functional. Is it important to a society to have obnoxious and violent adolescents, and obsessive and self focused adult males intent of controlling everything they can, and if not controlling it, preventing someone else controlling. This is a poor precise, but suitable as a mnemonic.

Two quick thoughts, if you are up against a psycho, it is handy to have a psycho confront them. The Orang Utans and the tuberculosis tip might be a relevant example.

But outside of that, the expression of power and violence disrupts the otherwise growing life of the human, with all the capabilities that we have. Is the disfunction like a tumour, cells that once performed a critical task, but replicating way beyond need, generates the death of the 'host'

z-47

48

26/9/11 *Desti/ation/y*

Whilst considering this Whiteness paper I went for a ride on the bike. Riding along the path I noticed the different level of engagement with the surrounds between bike and walking. While the bike is more connected to the surrounds than a car, it is noisier and quicker than walking. As such I saw little wildlife, and no wildflowers.

A key conflict in 'White' outlooks became apparent. The path was cut through the bush allowing access to the town. It, like all roads are destination based. The Swiss Alps are beautiful, but they needed to build a mega bridge to see them on the way to somewhere else.

The irony within this destination based outlook, is that 'White' society has seldom looked at where it wants to go. The desired future is always ethereal, seldom enunciated.

This is a place that is seldom defined. Strange really considering a key facet of whiteness resides in the assumed power to define!

z-48

49

3/11/11 *Non-journal knowledge*

It is apparent that the internet is effecting the relationship of academics with data. Traditionally, the means of knowledge dissemination required submission of the

document to an authorised journal for review and publication. While the structure of funding still requires publication in authorised journals, the internet allows for publication of papers outside of the authorised journal. and even though a paper may never have been published in an authorised journal it will be available to researchers, and may thus be quoted and included within the authorised body of knowledge.

Universities may well provide a forum for papers to be published that circumvents the controlling commercial interests by publishing papers and allowing either links or even directly hosted forums to critique the papers.

This would not overcome the desire by lazy, or time stressed academics for pre-digested papers, nor the requirement for externally assessed credibility.

But it does overcome some of the issues faced by those wishing to critique disciplines controlled by those wishing to protect the turf.

My method of paper searching regularly turns up unpublished paper available free online. In this circumstance the abstract becomes an even more critical part of the paper as it will be the defining feature of relevance.

z-49

50

9/11/11 *Beating Method tracks*

One of the things that I have noticed in method is relevant to both my art making and my writing.

Knowing where we are going is incredibly comfortable. Following a trail is much less emotionally demanding than traipsing off through the scrub.

So in relation to this current artwork, I have been very contented spending time putting out the coded message. Working how its going to develop visually is substantially more difficult.

I realised also that I have been in the exegesis aspect. I have stepped back into the research as my doubts about my capability of structure and how to go about the exegesis is contributing to my aversion to it. Knowing this is a good thing a hard day today as I am going to move into those spaces

z-50

51

18/11/11 *Method Flaw number 4*

the difficulty in transfer.

One of the facets of learning that I have marvelled at during my study is the availability of knowledge, garnered through the reams of academic papers. I have been able to go online with a search phrase and locate thousands of relevant research papers. Each of those papers is structured in a manner that assists in sorting

Art as a knowledge transfer method, being experiential requires physical presence and active discourse to learn. The student must be in the presence of the work for the more complex ways of knowing to occur. It is a more visceral knowledge, residing both the cognitive and non cognitive parts of being.

But I can't learn all that it has to express over the internet, the reproduction methods change the very basis of the knowledge. The simplification of colours inherent in the Jpeg compression system, the change in scale and the influence of the surrounding environs all change the breadth of knowledge contained within art. I can search for Mark Rothko paintings on the net, or in books, but nothing can replicated the experiential knowledge encapsulated within the colours of his paintings. Similarly for Bill Viola with his video installations. Relevantly, both these artists explore metaphysical and ontological concepts.

My works are also experiential, being installations or image requiring scale. the installational works immerse the viewer/learner within a space, which by its very nature occupies four dimensions. The loss of one of the dimensions retards the pedagogical capacity of the other three in ways greater than its constructed part. The only method of expanding the pedagogical transfer rate is to reproduce the installation and have it available in multiple locations.

Scale, similarly, while having only two dimensions presents the eye with the third dimension of time, the time to wander across the image, gleaning detail to build a narrative. It is this time component that allows for the complexity of knowing within a still image. For example, In viewing Holbein's *The Ambassadors* in a printed or screen version reduces the ability of the eye to discern the objects that express the characters of the two subjects standing to the fore. To see the objects requires a separate printed image, or the ability to zoom digitally in towards the objects, both of which separate the images within the mind in ways that the eye doesn't. This work also has an optical illusion that does not translate to small scale reproductions.

With regard to my works, the scale allows for layered reading as, like Holbein, the details reveal knowledge that, unlike Holbein, is not there to express and clarify, as much as to generate uncertainty and questions. For example, the overall perception of the Google images reference western perceptions of indigenous knowing, but the images clearly are of contemporary urban structures and object such as bulldozers.

The exhibiting of these works has clearly demonstrated the interest and ability of the viewers to discern the relevance of the detail.

z-51

52

29/10/11 *Oppressive Reigns*

In reading Moreton Robinson and preparing for Whiteness paper, I have realised that the only norm between race/cultures is humanity. Oppression is like the rain. It stems from the same place but its effects are relevant to the intensity, duration and geomorphic

environemnt (prevailing atmospheric conditions). ie Heavy Rain / light drizzle.
Centuries/ moments.

This is relevant to hierarchy as the higher up the scale the less frequently and briefer the effect. -Unless and until total collapse through coups

A drizzels is not the same result as a tropical deluge. Heavy rain in frigid conditions is different again, which is what impacted upon Australian Indigenous peoples.

z-52

53

3/3/10 *Neuromodel*

Modelled upon the operation of the brain -- the creation of intelligence

The minds natural state. -Creativity may be being measured from the negative. ie Creatives might not learn to be vreative. They may be less receptive to the ocial trining. This would relate to Eysenck and Mc Croy etal -psychotocism

Maybe the min(d)s natural state is connective/ creative and it is only the aberant mind that is linear. The whole Judeo/psychology in one of lineation> Could this be because of its ;eaders were all neurotic, recognising their own threat and extrapolating that as normal? "If you're not with us you're against us" is ultimately a psych concept. If all our leaders through our cultural history have been nuts, has our structure deveoloped to suit that, rather than normality?

z-53

54

31/1/12 *Creativity vs Ego*

I am faced with a conundrum. I was thinking about a public letter I had written celebrating the kindness of Walter, a friend who accommodated the retreats on Bruny Island, where I was after Anne died. This letter is very touching and I felt proud of it. I found myself 'experiencing' responses from others and promptly corrected myself, recognising that I was massaging my ego, and I shouldn't be focused upon ego.

Previously, I had been wondering why my brain isn't working to allow me to write this methodology chapter and I realised that it requires me to work in such a pedestrian way, to identify each of the intuitive steps that are relevant in creativity, but not academia. I constructed a study method that is now requiring a pedestrian illustration of the 'intuitive leaps within creativity. These leaps are not unfounded, but may be the instantaneous connection of knowledge that processes through the related factors to arrive as a suitable conclusion in a manner that is not temporally identifiable. These leaps, unvalued in academia have been referred to as a Eureka moment and as such, are not invalid, just instantaneous.

Anyway, while buttering my toast I responded negatively to my ego response. "That is not the way to 'enlightenment'.

Into my mind wandered the Buddha sitting under the Bodhi Tree. I don't recall ever hearing that he was being creative. Which led me to consider do you need ego to be creative? Is this project aimed at replicating a space that is not conducive to creativity. Now this therefore argues that creativity has within it ego driven by external responses. IF it is driven by external factors, then creativity becomes an externalised force and thus aligns with Csikszentmihalyi's Big 'C', something I had previously disagreed with.

Inherently creativity doesn't need to be assessed externally. I know people who are driven to make without ever shown. But that in itself is complex as I know artists who do not exhibit because of fear of rejection, and the rejection by a fickle art market can be debilitating. But there are smaller ego massages to be had in showing them to smaller, more intimate audiences, such as family and friends. So the fact that they don't exhibit doesn't mean they are not influenced by ego.

So, I'm back to the question of whether creativity requires ego. It is relevant that there is a value judgement made by the artist to that it is worthwhile to create the work, even for themselves. And applying this conundrum to this study, I pondered if I had attempted to create an environment that was counter-productive to my form of creativity, one that allowed the space for connections but then also demanded that each of the steps inherent within the Eureka /creative moment is identified and enunciated. It is this stage that is so difficult and may be running counter to the value of the method.

z-54

55

23/2/12 Holistic methodology

one of the factors of ABR in western epistemology is that it carries to possibility of holistics. It is this holistic approach that generates new knowledge, within western epistemology. Within a more holistic society, the knowledge generated in arts practice may not be new. It is this holistic nature of the world we live that is what is critical western epistemology can contribute to the required world view.

This is similar to arts shift from representational imagery of what we see to exploratory journeys across what we know. Conceptual art is not about seeing

This is the critical pedagogical aspect

z-55

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