Embodied Reflective Practice:

The Embodied Nature of Reflection-in-Action

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ABSTRACT

The purpose of this thesis is to examine the applicability of aspects of Schön's (1983) theories of reflection-in-action in relation to visual art practice. Schön's (1983) theories demonstrate that whilst they are written with design disciplines in mind, they do not extend to consider the appropriateness of its use in visual art practice. Scrivener (2000: 10) draws the distinction that whilst Schön's (1983) use of scientific language in reflection-in-action is considered applicable for problem-solving projects in design, aspects of it are problematic for creative production research projects and recommends focusing reflection on the underlying experience of creative production. This thesis proposes that this and other issues, such as the emphasis on problem solving, and particularly, a reliance on a conversational metaphor, is likewise problematic for visual art practice. This thesis therefore moves to examine what is distinct about the application of reflective methods in visual art practice, in relation to design and research in the arts, through a series of text-based and documentary case studies. Analysis of the case studies suggest that there is an emphasis on embodiment essential to visual art processes, which is experiential in nature rather than problem-solving. A thorough examination of recent theories of embodied mind, which provide empirical evidence from a broad range of knowledge fields for the pervasive role of embodiment in shaping human experience, is presented. The primary research method is a review of two existing sets of theories and a synthesis of aspects of them in an original context, a process offered as an original contribution to knowledge. The context in question is the assessment of the applicability of the resulting synthesis to visual art practice, a domain for which neither theory was written. Knowing-in-action (Schön, 1983) describes the tacit knowing implicit in skillful performance when practice is going well, reflection-in-action (Schön, 1983) takes over, and describes the processes cycled through, only when problems are encountered in practice. Through an analysis of theories of embodied mind, and the documentary cases studies, the conclusion is drawn that in addition to these descriptions there is a rich layer of non-verbal embodied experience shaping action, conceptual meaning and verbal articulations of practice. This thesis therefore suggests modifications to theories of reflective practice in the visual arts, by incorporating theories of embodied mind in the development of additional reflective methods to supplement Schön's theories (1983). Two methods are proposed as worthy of further study. The first researches Mark Johnson's (1987) theory of metaphorical projection, which is presented as a means of mapping aspects of visual arts practitioners' verbal articulations of practice, back onto source domains in their embodied experiences of practice. The second explores a recommendation from within theories of embodied mind (Varela, Thompson and Rosch, 1993: 27) that mindfulness training could help develop a mindful, open-ended reflection. Taken together, this thesis proposes that an Embodied Reflective Practice could be developed to the benefit of visual art practitioners.

ACKNOWLEDGEMENTS

LIST OF CONTENTS

List of Figures

CHAPTER 1: INTRODUCTION: THE PROBLEM, THE CONTEXT, THE METHOD, AND CONCLUSIONS

1.1 The Problem

Donald Schön's theory of reflection-in-action, detailed in 'The Reflective Practitioner' (1983), is presented as a means both for describing how professionals think in action, and as a reflective method that brings beneficial structure and understanding to the development of professional practice. The influence of the American Pragmatist John Dewey, who in 1933 emphasized the need for structured reflection as the foundation for deep learning, is clearly evident in Schön's epistemological interests. Schön's (1987) 'Educating the Reflective Practitioner' further extended the implementation of reflection-in-action as an influential method of reflective practice in the domain of education.

Since the early nineteen nineties in the UK, when art and design institutions became transformed by the Higher Education Funding Council into Universities, the competition for academic grants required applicants from art and design to give greater attention to the conventions of academic research (Scrivener, 2002: 2). As an established reflective method in education Schön's (1983) theories of reflective practice are widely cited in art and design. Over the last twenty years Schön's (1983) theories of reflective practice have been applied to a wider range of practices than originally designed, including visual art practice.

Whilst Schön's (1983) theories of reflective practice were written with design disciplines in mind, they do not explicitly consider the appropriateness of its use in visual art practice. Professor Stephen Scrivener, whose contribution to investigations into the applicability of Schön's (1983) theories, in relation to technology, design and creative production research projects, has been significant, has outlined a number of distinctions that have helped to isolate the problem investigated in this thesis.

The first distinction relates to creative production research projects and visual art practice, which must be clarified in relation to this thesis. Due to the additional requirements for academic rigour and the need to evidence reflective and critical inquiry, Scrivener (2000: 19) considers creative production research projects are distinct from everyday art making, referred to in this thesis as visual art practice. These distinctions are acknowledged, however, I propose that critical investigation into the applicability of aspects of Schön's (1983) theory of reflective practice has implications for both creative production research and visual art practice.

Scrivener (2000: 10) writes that the use of scientific language, such as, theory of action, logic, experimentation, hypothesis and experimental rigour, in Schön's (1983) theory of practice, whilst considered applicable for technology and problem solving research projects in design, is at odds with his sense of creative production. Whilst not having adequate alternatives to put in their place, Scrivener (2000: 10) considers the processes and characteristics of this language still possess the potential to capture much of what he observed, as an experienced supervisor and examiner, in his creative production research students. However, the suggestion that this central aspect of Schön's (1983) theory of reflection-in-action involves a compromise when applied to creative production requires further investigation, both in the context of creative production research projects and visual art practice.

Whilst Scrivener (2000: 18) considers that Schön's (1983) theory of reflective practice provides ways of thinking about the nature of the creative-production process, he concludes that this in itself is insufficient. For Scrivener (2000: 18), the relationship between the issues, concerns and interests explored by his creative production research students, and the artefacts they produce, is inextricable tied to the act of making. Consequently Scrivener (2000: 18) considers that the only way to reveal the complex relationship between theory and practice in creative production is through description and reflection on the underlying creative-production process.

This thesis takes the position that Scrivener's (2000: 19) recommendation is well founded, and proposes that further examination of the underlying experience of practice can supplement aspects of Schön's (1983) theory of reflective practice with methods more applicable to visual art practice.

The 'problem' taken as the point of departure for this investigation therefore, is the perceived inapplicability of certain aspects of Schön's (1983) model of reflective practice in relation to visual art practice. Whilst the use of scientific language has been raised as problematic, other issues concern the emphasis on problem solving in Schön's (1983) work, in contrast to experiential processes in visual art practice. It is Schön's (1983: 76, Bamberger & Schön, 1983: 68) reliance on a conversational metaphor however, which requires particular attention.

In this thesis I propose that the key to addressing the three issues outlined above and investigating the underlying experience of visual art practice, is by taking account of recent theories explicating the role of the embodied mind.

1.2 The Context:

The investigations into reflective methods and practices in this thesis are firmly grounded in an epistemology of reflection. This establishes a context of reflection as

an inherent and distinctive cognitive function, which has been integral to the evolution of human consciousness (Donald, 2011). The second chapter therefore reviews the ways in which reflection has developed as a concept throughout history, how it has been employed in philosophy and how it came to be established as a reflective method aimed at improving professional practices.

Specifically the context of this thesis surrounds Donald Schön's (1983) theory of reflective practice and the influence it has had in art and design research and practice. The context expands to encompass the implications recent developments in theories of embodied mind could have for further understanding, and development of, reflective practices.

In the third chapter the development of Schön's epistemological interests are explored. This commences with Schön's PhD thesis, which dealt with John Dewey's theory of inquiry and educational philosophy. Attention is given to Schön's innovative work on 'Generative Metaphor' (Schön, 1963), through to the development twenty years later of his theories of reflection-in-action (Schön, 1983). In the professions that embraced Schön's theories, such as education, architecture, psychology and town planning, problem setting and –solving, the use of scientific experimentation and hypothesis testing, and the central role of the conversational metaphor was widely accepted and successfully implemented. The conversational metaphor is a useful simplification of a complex cognitive process. In professions where an emphasis on the underlying experience of practice is of little practical benefit it makes sense to frame the practice situation as a 'reflective conversation' with the situation 'talking back' to the practitioner. Whilst Schön's interest in the underlying cognitive functions of reflection are evident in his work on generative metaphor (Schön, 1978), it might be said that the method of reflection-in-action, for practical reasons, is not interested in how reflection occurs cognitively, but rather in what it says linguistically. Schön's (1983) theories of reflective practice marginally predate developments in cognitive science that were so influential on theories of embodied mind. Two years after Schön published his work on generative metaphor (Schön, 1978) Mark Johnson and George Lakoff published their first collaborative work 'Metaphors We Live By' (Johnson & Lakoff, 1980). In a conversation with Mark Johnson he referred to Schön's work on generative metaphor but confessed he was unfamiliar with Schön's later theories on reflective practice (Gray, 2007). Despite following different lines of inquiry both Schön (1983) and Johnson et. al., (1980) share common interests set in the philosophical background of Dewey and American Pragmatism.

'The embodied nature of reflection-in-action' therefore, alludes to the two dominant sets of theories I am reviewing and synthesizing in this thesis, namely theories of reflective practice, largely through the work of Schön (1983) and theories of

embodied mind including Johnson (1987). The following schematic, set out early in the development of this research in collaboration with my supervisory team, illustrates the selection bias on the range of knowledge fields considered relevant to this thesis.

Figure 1: Early thesis schematic showing the interrelation of the knowledge fields forming the proposed selection bias for this research.

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Thesis structure

Neuroscience

Damasio & others

Background Theory: Case to investigate theories of reflective practice specific to the visual arts.

Philosophy

Dewey, Bachelard & others

Professional/Social

Schön & others
Ethnomethodology

Cognition

Linguistics

Johnson, Turner & others

Experiential Knowing

Reflective Practice

Scrivener, practice-based doctorates

Art theory

Examples of schematic modeling

Debate about documentation

Analysis of Schön's theory of reflection-in-action

Model of Reflective Practice

Schön's theories of Reflection-in and on-action and practice are examined for their applicability specific to the domain of visual art practice. New research, from the above domains, is applied to the process of refining a model of Reflective Practice in the following way:

The contextual development of reflective practice and the potential to supplement aspects of existing theories with methods of more applicability to visual art practice has required significant background reading.

Following on from an examination of Schön's theories (1983), Chapter 4 examines how they were applied, analysed and modified by Scrivener (2000) in relation to art and design research projects. As detailed in the 'problem' section, this has helped outline how issues with the applicability of Schön's (1983) theories might be modified in relation to visual art practice. Scrivener's (2000: 2-4) focus on the norms of production in art and design has also helped isolate distinctions between the way reflective methods are applied in technology and problem solving research projects in design on one hand, and creative production research projects on the other. This distinction forms the basis of the first two cases studies. As will be addressed more thoroughly in the methodology section, these case studies are text-based and reference peer reviewed academic research projects. Despite examining what is distinct about the reflective methods employed in examples from design and visual art, given the way in which the reflective methods in each have been constructed to embody academic rigour the term Constructed Reflective Methods (CRM) has been

applied to these case studies. This helps to help distinguish the first two case studies from case studies 3&4, which are framed under the term Naturalistic Reflective Methods (NRM). The context of NRM focuses upon the second distinction Scrivener (2000) draws between creative production research projects and everyday art and design making, as stated in the 'problem' section, this is referred to as visual art practice. In visual art practice when the need to construct and apply reflective methods is not a necessity, reflection still occurs, however it appear unremarkable to, and unmarked by the practitioner (Scrivener, 2000: 12). As Scrivener (2000: 12) suggests, however, practitioners may benefit if reflection was recorded and then reported more systematically. Placing the emphasis on the underlying experience of practice (Scrivener, 2000: 18-19) would be a significant development in making that possible. The issue of how to report on and document visual art practice has been hotly debated in recent years (Fortnum, & Smith, 2007). An important contextual issue concerns how the qualitative, tacit, embodied experience of making can be attended to, and what meaning can be extracted from it.

> All thought in every subject begins with just such an unanalysed whole. When the subject matter is reasonably familiar, relevant distinctions speedily offer themselves, and sheer qualitativeness may not remain long enough to be readily recalled (Dewey 1934/1987: 249).

Johnson (2007: 75) considers that experiences come whole, pervaded by unifying qualities that demarcate them within the flux of our lives.

> If we want to find meaning, or the basis of meaning, we must therefore start with the qualitative unity that Dewey describes. The demarcating pervasive quality is, at first, unanalysed, but it is the basis for subsequent analysis, thought, and development. Thought starts from this experienced whole, and only then does it introduce distinctions that carry it forward as inquiry. (Johnson, 2007: 75)

Dewey's notion that qualitative unity may not remain long enough to be recalled essentially describes the problem of reflective practice in visual art. The issue is the need to recall rather than be mindful and aware of qualitative experience as it is being experienced.

In summary, the aim of the reviewing of the selected literature is as follows:

- To review and establish an epistemology of reflection that contextualises how both the term and the practice is understood and employed by the range of theories selected for this thesis, the selection bias for which will be discussed in the methodology. Particular emphasis is placed on how reflection will be understood in relation to the model of reflective practice presented in the conclusion [Chapter 2]

- To review Schön's (1983) theory of reflection-in-action and examine the limits of it in relation to creative practice. [Chapter 3]
- To review Scrivener's (2000) examination of the applicability of Schön's (1983) model of reflective practice in relation to design and creative production. This chapter introduces the first two case studies and introduces the concept of 'Constructed Reflection', which refers to reflective methods that have been designed to be academically rigorous. [Chapter 4] This also applies to the case studies examining Naturalistic Reflection [Chapter 5]
- To review recent theories attending to the embodied mind. This section of the literature review is necessarily dense as theories of the embodied mind are being developed across the following knowledge fields: neuroscience, artificial intelligence, linguistics, cognitive psychology, and philosophy. The selection bias here has purposely prioritised certain knowledge fields over others for their relevance to the domain of art and design. Varela (1992) in 'The Embodied Mind', examines the role of reflection in the analysis of experience and considers that in the interaction between cognitive science, phenomenological reflection, and mindfulness/awareness meditation, embodiment refers to a view of reflection which is not *on* experience but *is* experience. [Chapter 6]
- To review the theories and methods emerging out of Mindful-Based Approaches (MBA). Psychological studies examining the psychometric properties of the dispositional Mindful Attention Awareness Scale (MAAS), Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) are reviewed. The techniques involved in developing mindfulness are explored, which introduces qualitative data from interviews with instructor/practitioners. [Chapter 7]
- To examine the implications theories of embodied mind, Mindfulness-Based Approaches and phenomenological reflection have for building upon and extending Schön's model of reflective practice. [Chapter 7]

1.3 The Method:

The methodology and the methods in this thesis have employed two interdependent strategies. The choice to use two methods was taken due to the investigative nature of reviewing and synthesizing existing theories and the phenomenological nature of the documentary case studies.

The first method, which takes the form reviewing and synthesizes existing knowledge, is extensive due of the range of knowledge fields involved in both theories of Reflective Practice and theories of Embodied Mind. A form of Narrative review has been chosen over a Systematic review, on the grounds that the texts

have been chosen by author selection. The selection bias for the texts used in this thesis stems directly from the hypothesis that specific theories of Embodied Mind can help advance a specific method of reflection in relation to the domain of visual art practice. The selection bias has been chosen to represent peer-reviewed studies of high methodological quality. Where possible the author has collected primary sources in the form of direct interviews with the theorists whose work is being reviewed and synthesized. The choice to carry out these interviews developed from the investigative nature of reviewing theories where the theme of reflection in visual art practice was not explored directly in the theorist's published work.

The research philosophy in this thesis follows a Phenomenological rather than a Positivistic approach. The Phenomenological perspective allows for the collection of holistic, qualitative, units of analysis under naturalistic conditions (Frey, Botan, Friedman, & Kreps, 1991). Subjectivity in the participants frames of reference, which is clearly evidenced through the case studies and interviews needed to be accommodated.

The research method developed and employed in this thesis uses an ethnographic approach toward the collection of holistic, qualitative data for analysis. The naturalistic conditions characteristic of a Phenomenological perspective, (Frey, Botan, Friedman, & Kreps, 1991) corresponds in this context, to the participants of the case studies working in their studio environments.

The following schematic illustrates the early development of the research method.
Figure 2: Development of the research method
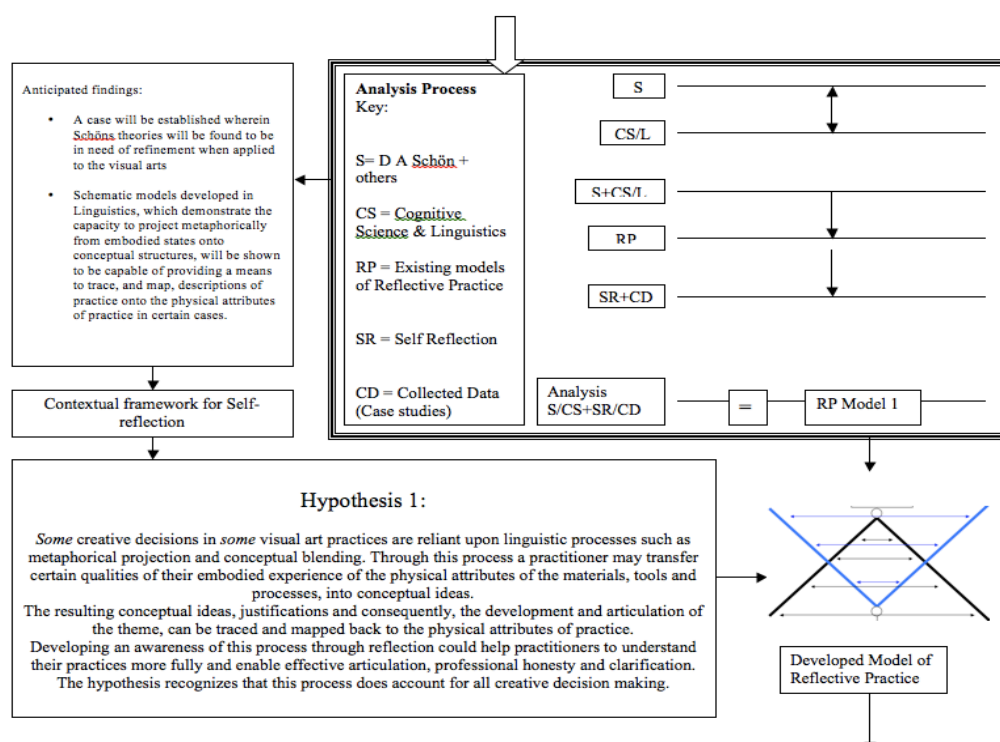
The second method involved the collection and analysis of qualitative data from interviews and documentary sources. The following schematics illustrate the early development of this research method. Figure 3, shows the triangulation between Self Reflective Methods (SRM), Naturalistic Reflective Methods (NRM) and Constructed Reflective Methods (CRM).

Figure 3: Triangulation of proposed stage 1 case study/studio documentary structure
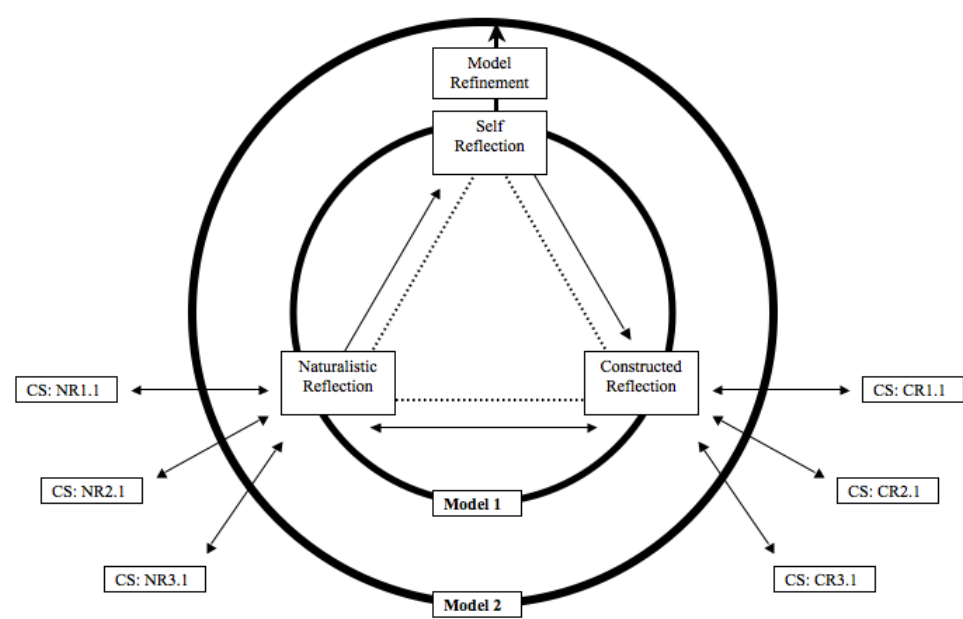
Figure 4: Development of second round of interviews to review stage 1
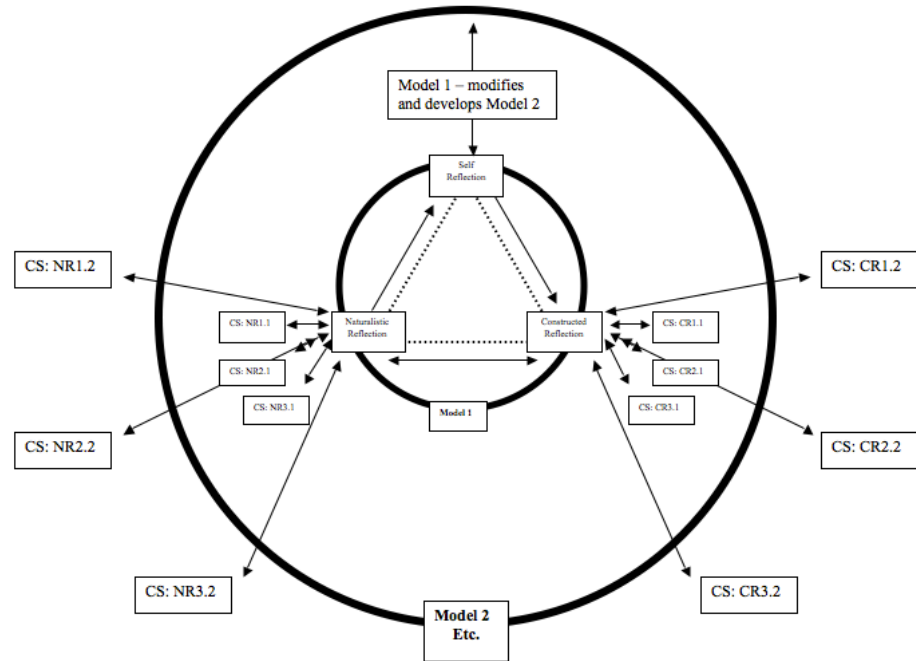
Based on SRM and the schematics outlined above the interviews and case studies are divided into the following three categories:

1. Constructed Reflective Methods (CRM): Case studies exploring the reflective methods employed by creative practitioners operating within an academic context.

    The concept of 'Constructed Reflection' is introduced in this section. The purpose of conducting and including these case studies was to explore the distinctions first implied by Scrivener (2000) between the 'problem solving' nature of reflective methods in design, and the need to develop reflective methods in relation to creative production that focus on the underlying experience of practice. These case studies have been drawn from existing textual sources and are included in Chapter 3. These include:

    1.1. Owain Pedgley: 'Capturing and analysing own design activity', was the title of Pedgley's doctoral thesis in 1999, in which he explores the use of diary entries to document and reflect upon his design processes.

    1.2. Beth Harland: Zone 15, 2006, was Harland's contribution to the VIRP (Visual Intelligences Research Project), which features the development of a range of reflective methods. Particular emphasis is placed on the participant Beth Harland. This case study makes use of interview transcriptions conducted as a part of the VIRP, not by the author, in which Harland answers questions specifically relating to her reflective methods.

2. Naturalistic Reflective Methods (NRM): The documentary research method was initially developed through SRM. The results of these early stages of filming, reviewing, and reviewing the reviewing process can be referenced in 'file 6 Studio Documentary 1 - development of research method.mov' on the external hard drive accompanying this thesis. Interviews with visual arts practitioners operating independently from academic institutions. The purpose for conducting these case studies and interviews was to analyse the qualitative data to look for examples of embodied experience, phenomenological reflection, and mindfulness in practitioners who operated independently from an academic context. This introduces the concept of 'Naturalistic Reflection'. The development and introduction of the concepts of Naturalistic and Constructed reflection, which examines what is distinct about reflective practices developed for the purpose of academic research or those which develop naturally and largely unconsciously by independent practitioners, and differentiates between them, may be considered a secondary claim to an original contribution to knowledge in this thesis.

2.1. Case study and Interviews with Andreas Reichlin. This case study involves three separate documentary sections.

 2.1.1 An interview recorded outside of his studio/gallery in 2009 using video documentary techniques. It addresses his reflections-on-practice.

 2.1.2 The artist was filmed working in his studio in 2009 using non-invasive video documentary techniques, multiple cameras over several hours were used.

 2.1.3 An interview recorded at the artist's studio using video documentary techniques recording the artist from two angles as he watched himself at work. This interview focuses on the artist's reflections –in and –on –action and -practice

2.2 Case study and Interview with Laurence Karasek. This case study involves filming the artist in his studio in Switzerland during the initial development of a new painting. The documentary footage was then edited and the artist was interviewed using video documentary techniques whilst he watched himself at work. The interview has been transcribed and analysed. The analysis of the interview involves Narrative Research and focused on his references to embodied experience and phenomenological reflection. It deals with both the artist's reflections-in and –on –action.

2.3 Interview with Patrick Sims: This interview was recorded in the artist's studio in Barcelona in 2007 immediately prior to the opening of his show the 'Armature of the Absolute' at the L'Antic theatre. Consequently when the interview took place all of the studio practice had been completed. As a result the interview took the form of a reflection on the making of the show. It is a semi-guided interview involving non-structured questions that respond to the interviewee and deal with development of his conceptual ideas. As an interview rather than an exemplar of the research employed in the previous two case studies, the transcript is presented in the Appendix.

3. Interviews with academic theorists and professional practitioners operating outside of the field of art and design (with the exception of Professor Rodrigeuz, who is a visual artist), whose work is significant in relation to this thesis.

The purpose of conducting and including these interviews was to address their theories/practice in relation to reflective methods in visual art practice, a thenot

explored directly in their publications. Some aspects of the interviews feature directly in the main body of the thesis, the full transcriptions of the interviews can be located in the Appendix. These include:

3.1. Interview with Prof Mark Johnson addressing his theories of metaphorical projection in relation to visual art practice, conducted with Professor Mark Johnson, at the Experiential Knowledge Conference, University of Hertfordshire, England – 29th June 2007. It is included in this chapter on the methodological grounds that 1, it is presented as a primary source of qualitative research and 2, Johnson's theories of CMT had not dealt overtly with the consequences of the theory within visual art practice, a theme this interview attempts to address. This is included in Chapter 6.

3.2. Interview with Prof Anthony Grayling addressing the contextual role of theories of embodied mind in relation to humanism. Extracts from this interview feature in Chapter 6

3.3. Interview with Dr Linda Lehrhaupt, Managing Director of the IMA (Institute for Mindfulness-Based Approaches) addressing the distinctions between concentration and mindfulness in visual art practice. Extracts from this interview are included in Chapter 7

3.4. Interview with Prof Michael Rodriguez currently Chair of the Humanities Department addressing mindfulness in visual art practice. This interview can be read in the Appendix.

The Conclusions:

Chapter 8 offers a thorough reflection on the development of the research, my development as a researcher and the main conclusions drawn from this research. The following is a brief overview of the main conclusions, which will be of most contextual value at the end of this thesis.

In this thesis I argue for the potential to advance aspects of Schön's theory of reflection-in-action (1983), in relation to visual art practice, by incorporating recent theories of embodied mind. The process of bringing these peer reviewed theories of high methodological value, together in an original context is offered as an original contribution to knowledge.

I make explicit in this thesis, that the potential to advance aspects of Schön's (1983) notions of reflection-in-action and knowing-in-action is presented as supplementary to the main work in 'The Reflective Practitioner'. The specific ways in which aspects

of Schön's (1983) theories can be supplemented are detailed in the main conclusions in section 8.8. It involves however the development of an Embodied Reflective Practice that can be used in practice in addition to the rigorous application of reflection-in- and -on -action and -practice. This thesis therefore supports Scrivener's (2000: 18) recommendation that Schön's (1983) theory of reflection-in-action can provide structure and rigour to reflective methods employed by doctoral students, who are engaged in creative production research projects, with the recommendation that the further development an Embodied Reflective Practice could be beneficial in the domain of visual art practice.

This thesis concludes that for reflections-on-action and –practice, Schön's (1983) model is presented as beneficial for framing and reframing practice situations, reflecting on habits of practice, past experience, conceptual agendas, and the background theories shaping practice. Reflection-in-action (Schön, 1983) is presented as being capable of describing the cyclic process of framing and reframing situations when obstacles to practice are encountered. However, this process has been written specifically for projects of a problem solving nature. Schön's (1983) use of scientific language to describe the process of reflection-in-action in terms of problems and solutions is shown to be problematic when applied to experiential processes in visual art practice. Knowing-in-action (Schön, 1983) is likewise presented as capable of describing the tacit knowledge a practitioner employs and displays when practice is going well in some circumstances. In this thesis however, I argue that Schön's (1983) notion of 'knowing-in-action' and consequently the capacity to report on 'surfaced tacit knowledge' (Scrivener, 2000: 13), can be enriched by theories of embodied mind.

Schön's (1983) conversational metaphor, which frames reflection-in-action, is presented as a useful simplification of a complex cognitive process, which can be a relevant metaphor for the visual arts practitioner at certain points of the creative process, however, I argue that it cannot be considered relevant in every visual art practice situation. The conversational metaphor (Schön, 1983) presented under the headings 'design as a reflective conversation with a situation' (Schön, 1983: 76-104) and 'learning as a reflective conversation with materials' (Bamberger and Schön, 1983: 68-73), is aimed at practices where the embodied aspects of practice are not of central importance. Based on the qualitative data collected through the case studies, the conclusion is drawn that by taking into account embodied aspects of practice the need to reduce aspects of the process of creative making to a conversational metaphor is removed, and richer accounts of embodied practice can be generated. In conclusion, in visual art practice where embodied aspects of practice such as the qualitative engagement with the materials and the generation of non-verbal, pre-linguistic meaning, are of critical importance the simplification to a conversational metaphor is unnecessary and inappropriate.

I propose that the development of an adequate alternative to Schön's (1983) conversational metaphor can be achieved through the process Scrivener (2000: 18-19) recommends, of focusing attention on the underlying experience of practice. I offer examples of how this can be aided by taking into account recent theories of embodied mind. Particularly I argue that connections between the physical act of visual art practice, and the conceptual ideas that grow out of reflections-in and –on –action and –practice can be examined using metaphorical projection (Johnson, 1987). In the main conclusion section 8.8, schematics are presented that explore this process. This is the key point at which the theories reviewed in this thesis, Schön's (1983) theories of reflective practice and theories of embodied mind (Johnson, 1987) become synthesized.

In the conclusion I reflect upon how as a researcher I saw potential in the theories of embodied mind to focus on pre-linguistic meaning in relation to visual art practice. I consider whether visual arts practitioners, engaged in the midst of action with visual and mental images, qualities of tools, materials and relations, patterns of action and the felt experience of making, could be considered to be developing meaning on a pre-linguistic level. I take this forward to consider how the experience of making might shape and structure the way in which the practice situation is understood and reflected upon.

In considering ways in which embodied aspects of practice can be attended to in practice, this thesis moves to speculate on whether mindfulness/awareness training can be considered beneficial in modifying reflective methods. This thesis has consequently presented clinically proven cases (Chapter 7) where mindfulness training has been beneficial across a wide range of professions in developing the inherent human capacity to be attendant to moment-by-moment perceptions and perform reflectively.

The following schematic therefore illustrates the main synthesis of Schön's reflective methods and theories of Embodied Mind vertically. It also illustrates horizontally the practices of mindfulness and phenomenological reflection, proposed as being a methodologically compatible means of bringing theories of embodied mind to bear upon theories of reflective practice:

Figure 5: Proposed synthesis between the main contextual domains explored in this research

Reflective Methods:
Reflections-in and –on –action and –practice

Mindfulness/Awareness:
Being mindful of moment-by-moment perception/ Awareness of unconstructive habitual action

Embodied Reflective Practice:

Metaphorical Projection:
Mapping concrete qualities of matter metaphorically onto abstract conceptual ideas

Theories of Embodied Mind:
Cognitive Science/ Linguistics/ /Cognitive Psychology/Philosophy

Figure 6: Schematic illustrating the core role of Embodied Reflective Practice

This figure presents a working schematic as an initial attempt to illustrate the core role of Embodied Reflective Practice in relation to reflection-in-action and –practice, reflections-on-action and – practice. This thesis presents research, which leads toward the development of an Embodied Reflective Practice, through an investigation of the embodied nature of reflection-in-action.

Reflections-on-action and -practice

Reflections-in-action and -practice

Embodied Reflective Practice

Mindfulness|Awareness

Theories of Embodied Mind – Phenomenological reflection – linguistic analysis
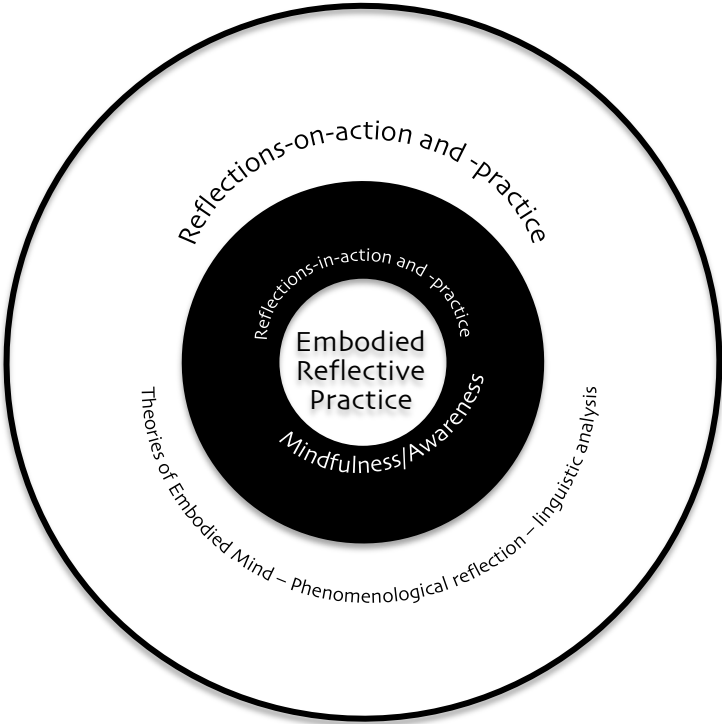
CHAPTER 2. THE EPISTEMOLOGY OF REFLECTION

> Detractors of Schön's notion of "reflection in action" often point out that there is seldom time for reflection when a person is engaged in work. Such comments indicate an overly narrow conception of what reflection is. [...] Though there is a diversity of forms of reflection in practice, it is argued that Schön's notion of "conversation" or "dialogue" can be developed so as to exhibit a structural similarity to various reflective practices. Reflection in action emerges, then, as a form of knowledge in action, as fallible as any other form of empirical knowledge. (Molander, 2008: 4)

Given the extent to which the word 'reflection' will be referenced in the following chapters, it is clearly essential to eliminate any ambiguity with regard to how it is to be employed in this thesis, and, in relation to reflection-in-action, understood. As Brengt Molander (2008: 4) points out, it is important to avoid using an overly narrow view of reflection. However, it is likewise important to avoid employing the term too liberally. Throughout history many specific accounts can be viewed and for the purpose of this thesis it is necessary to be clear to which is referred in what context. As Jennifer Moon (1999: 20) points out, most recent writers on reflection have begun their articles by referring to one or two of the following four writers; John Dewey, Jürgen Habermas, Donald Schön and David Kolb. I agree with Moon (1999: 20) when she writes that the choice as to which of these theorists will be focused on is dependant largely on the angle the writer is taking. I shall outline which of these writers I shall be focusing on and why in section 2.3. The first task in this chapter however, is to identify a need for an epistemology of reflection by considering the range of reflective theories and methods, on a continuum of human developments. I therefore chose during the early stage of this research, to explore the etymology and epistemology of reflection, into order to arrive at a concise and appropriate use of both the term and the practice of reflection in relation to this thesis.

2.1 Identifying a Need for an Epistemology of Reflection

Developments in reflective practice over the last 50 years ought not be viewed in isolation. The work of Dewey (1933), Habermas (1971), Schön (1983), Kolb (1984) and Moon (1999) must be seen on a continuum of developments in human cognition and human culture that preceded them. The institutional drive to nurture the development of reflective practitioners across a range of disciplines in recent years, including visual art practice, is likewise one advance in reflective methods amongst many advances throughout human history. In this respect the theories of reflection which emerged in the Twentieth Century, can be seen as a critical investigation into making explicit, something human beings have been engaged in, even unconsciously, for millennia.

The result of generations of human development is evidenced in the sophistication of present day practices, technologies, tool design and use, which are generally superior to those existing in the past. Practices have been evolving gradually generation through generation, through practitioners carefully considering their actions, and improving them. Can one assume that the cognitive functions responsible for what we now call reflection were as integral to their development as it is to ours?

What is the relationship of reflection to the continual development of human practices? Reflection is considered a cognitive process that brings about a deeper understanding of experience. Twentieth century writers on reflection, (Dewey, 1933, Habermas 1971, Schön 1983, Kolb, 1984 and Moon, 1999) are united in their consideration that the purpose of reflection is to aid learning. Dewey (1933: 78) is quoted as saying 'we do not learn from experience, we learn from reflecting on experience', however more recently it has been suggested by Varela, Thompson and Rosch (1993: 27), that reflection is not on experience, but *is* experience. There has been a large emphasis on Kolb's (1984) development of 'The Learning Cycle', which he based on the work of Dewey (1933), Lewin (1947) and Piaget (1970), to demonstrate how experience is subjected to reflection. James Zull (2002: 19) has examined evidence that the learning cycle arises naturally from the structure of the brain, which suggests it is an inherent human capacity. The human brain has not significantly changed in an evolutionary sense for at least the last 25,000 years, but whilst the cognitive capacity to engage in a learning cycle is inherent, the development of practice is progressive. Establishing what evidence exists for the progressive nature of reflective learning cycles through human development is of course beyond the scope of this research, however it is considered useful in the context of this chapter to briefly review evidence of the development of practices in pre-history, as it is exclusively found in art.

The palaeontologist Stephen Jay Gould reminds us, 'the Cro-Magnon people are us— by both bodily anatomy and parietal art', (Gould, 1999: 9). Of course, one can only speculate as to whether the Cro-Magnon cave painter was ever 'reflective' about his or her 'practice'. However, that it seems reasonable, in itself, to suggest that the last deer he or she ever drew possessed more 'artistry' than his or her first ever attempt, is quite telling. Abbé Breuil in his book 'Four Hundred Centuries of Cave Art' (1952) examines how the art of painting developed through the Magdalenian era. This progression was extremely gradual, to the point that one could attribute this progression to each individual cave painter's development. Between their first cave painting and their last, we can imagine that the drawings gradually became more competently composed, more efficient in the use of tools and media, and more stylised in the form of representing animal states. By contrast it seems counterintuitive to suggest the cave painters drawings, and tool use gradually

worsened over time, indeed such a notion would be 'un-human-like'. The development of such a successful species as ours requires that we improve our ability to perform across all the tasks in which we engage.

> Art is universal to all societies and unique to humans. Inevitably, when a phenomenon is both universal and species-unique, the question of its evolutionary origins arises. Within the reach of evolutionary theory, human evolution is special, and unusually complex, because it entails the co-evolution of biological and cultural forces. Art is central to that process, and one of the most interesting phenomena of human culture. The cognitive domains of human cultural and cognitive evolution have emerged in three cascading stages, which I have labelled, successively, as Mimetic (~2 million years ago), Mythic (~150 thousand years ago), and Theoretic (last 2 thousand years, approximately) (Donald, 1991, 1993, 1998, 2001). These dates are only rough approximations; it is the sequence, rather than the specific dates, that is important. The progression is cumulative and conservative, with each preceding stage remaining in place, and continuing to serve its specialized cognitive function. Humanity has an investment in all these cognitive domains, and its many forms reflect the very rich cognitive accumulations of human culture. Indeed, in many instances art has been a major factor in evolving these domains, and constitutes our primary evidence in determining the nature of prehistoric culture. (Donald, 2001: 8)

Viewing the development of art in an evolutionary context Merlin Donald (2001) describes how the 'new' is always built upon the 'old' and therefore art ought to be considered a reflection of the ancient form of human expression, mimesis. Further more the diversity of art reflects the evolution of modern cognition and culture, which he illustrates in the following table by mapping artistic forms onto the emergence of culture and cognition.

Figure 7: Mapping artistic forms onto the emergence of culture and cognition (Donald, 2001: 9)

External Form	Cognitive Domain
Pantomime	Whole-Body Mimetic
Prosody, Chant	Vocal Mimetic
Most Rituals	Whole-Body and Vocal Mimetic
Acting, Body Language	Facial, Vocal, Whole-Body Mimetic
Costume, Dress, Makeup	Technologically Amplified Mimetic
Most Styles of Painting	Visual Mimetic
Sculpture, Crafted Objects	Visual, Tactile, Kinematic Mimetic
Popular Music	Auditory Mimetic
Oral Storytelling	Linguistic/Mythic
Epic Oral Poetry	Linguistic/Mythic
Lyric Poetry	Linguistic/Mythic
Novels, Other Extended Narratives	Linguistic/Mythic
Traditional Architecture	Mimetic/Mythic
Comic Books, Cartoons	Mixed Mimetic/Mythic
Formal Public Ritual and Spectacle	Mixed Mimetic/Mythic
Cinema, Opera, Theater	Mixed Mimetic/Mythic
Modern Architecture	Mixed Mimetic/Mythic/Theoretic
Modern Painting	Mixed Mimetic/Mythic/Theoretic
Modern Poetry and Music	Mixed Mimetic/Mythic/Theoretic

The recent evidence to suggest that human beings learn through doing is compelling (Dewey, 1933, Habermas 1971, Schön 1983, Kolb, 1984 and Moon, 1999), is it such a grand claim therefore, to suggest that we always have, and likely always will? If true, then the human tendency to be reflective must be regarded as an embodied human capacity as intricately linked to the self-aware consciousness as the mind is to the body. This thesis shall later turn to the recent developments in cognitive science, which may help unpick the cognitive functions of reflection-in and –on – action and –practice and understand the nature of embodiment.

What is it to be 'reflective', and at what point in history did it enter into language as the notion of 'bending back'. How did the physical qualities of reflective surfaces become associated with the self-aware contemplative act of re-'cognising', and trying to understand that which has been 'cognised'? Certainly there is a wealth of written evidence that some human beings thought about what they had done after doing it, and there are museums full of physical evidence that practitioners advanced the technical proficiency of their practices over time. Humanity seems to have done, and continues to do, a lot of 'reflecting'. Let us first look at the etymology of reflection and the history of its usage.

2.2 The Historical Development of the Term Reflection

The etymology of reflection

Entry found in the Merriam-Webster's Collegiate Dictionary

- re.flec.tion n [ME, alter. of reflexion, fr. LL reflexion-, reflexio act of bending back, fr. L reflectere] (14c) 1: an instance of reflecting; esp: the return of light or sound waves from a surface 2: the production of an image by or as if by a mirror 3 a: the action of bending or folding back b: a reflected part: fold 4: something produced by reflecting: as a: an image given back by a reflecting surface b: an effect produced by an influence <the high crime rate is a ~ of our violent society> 5: an often obscure or indirect criticism: reproach <a ~ on his character> 6: a thought, idea, or opinion formed or a remark made as a result of meditation 7: consideration of some subject matter, idea, or purpose 8 obs: turning back: return 9 a: a transformation of a figure in which each point is replaced by a point symmetric with respect to a line or plane b: a transformation that involves reflection in more than one axis of a rectangular coordinate system -- re.flec.tion.al adj

At what point did the physical action of 'bending back' become associated both with physical mirrored surfaces and human thought? Whilst the Latin root is clearly evident in the use of 're' meaning back and 'flectere' meaning to bend, there are numerous earlier references, which allude to the physical presence of mirrors bending light back to the viewer, and furthermore of being associated with self-aware contemplation, even if this was bound up in a sense of divinity.

In ancient Egyptian the long name for mirror is ankh-en-maa-her, which is considered to translate as "life-force for seeing the face," this was later shortened to "see-face." The goddess Hathor, holding ankhs resembling mirrors have been discovered on coffin lids. These Egyptian mirrors were given religious titles like "the divine", "that which is in eternity," and "the truth", (Pendergrast, 2003: 18). The Egyptians had no word for, 'art', nor 'artist', rather, the name for the Egyptian sculptor translated as 'he who keeps alive'. The power of an image to embody some aspect of a living presence, be it as fleeting and transient as a reflection in a polished surface, or endowed with such longevity as a sculpture, was deeply rooted in Egyptian culture. The power of image to embody some aspect of a living presence, be it as fleeting and transient as a reflection in a polished surface, or endowed with such longevity as a sculpture, was deeply rooted in Egyptian culture. I will happily endure the dense crowds of people in the Louvre for a brief audience with 'The Seated Scribe' Egypt, 2620-2500 BC. His eyes are made of red-veined white magnesite into which is placed circular polished rock crystal with beaten copper behind to reflect the light in the room back out to the viewer. The effect is mesmerizing. Reflective surfaces clearly held more than mere functional meaning in the wider context of Egyptian culture.

Pendergrast (2003) through his journalistic research, in which he popularised a brief history of the mirror, provides a number of historical references in which the physical qualities of polished surfaces were associated with aspects of self-awareness and contemplation. The Etruscan word for the soul, 'hinthial', is purported to mean "image reflected in a mirror." The Jewish mystic Solomon Ibn Gabirol spoke of "the souls, close packed, / Peering in mirrors, [who] hope these may reflect / God's image glimpsed". Muhyi 'd-Din ibn 'Arabi, a Mohammedan, wrote of man's resemblance to God, and vice-versa: "God is the mirror in which thou seest thyself, and thou art His mirror in which He contemplates His names" (Pendergrast, 2003: 23-46). These associations were echoed when the Christian mystic Meister Eckhart, who was burnt for heresy in 1329, wrote: "The soul contemplates itself in the mirror of Divinity. God Himself is the mirror, soul is able to transcend all words, the more it approaches the mirror." The following passage, taken from the Encyclopaedia Britannica, expands upon this significant usage of the term reflection through the work of the 13th Century Beguine Marguerite Porete.

> Without denying the importance of the basic structures of the Christian religion, and while insisting that his radical preaching to the laity was capable of an orthodox interpretation, Eckhart and the new mystics of the 13th century were a real challenge to traditional Western ideas of mysticism. Their teaching seemed to imply an auto-theism in which the soul became identical with God, and many feared that this might lead to a disregard of the structures and sacraments of the church as the means to salvation and even to an antinomianism that would view the mystic as exempt from the moral law. The Council of Vienne condemned such errors in 1311, shortly after one of the most remarkable Beguines Marguerite

Porete, was burned as a heretic in Paris in 1310 for continuing to disseminate her mystical book Miroir des simples âmes (c. 1300; The Mirror of Simple Souls) which is thought to be the greatest religious tract written in Old French. The council associated these views with the Beguines, so-called "holy women" (Latin: mulieres sanctae, or mulieres religiosae) who first appeared in Liège toward the end of the 12th century. Use of the word "Beguine" (Latin: beguina) was established by the 1230s. Its etymology is uncertain; it seems to have originated as a pejorative term. By the mid-13th century the movement had spread throughout the Low Countries, Germany, and northern France. (Encyclopaedia Britannica, 2001)

It is clear that the 'mirror of simple souls' was far from the first reference to the physical qualities of a mirror being mapped onto the cognitive capacity to be self aware in contemplation. It is an interesting question to consider however, whether this association was arrived at independently in the 13th Century or whether it was developed from a long line of references and uses in oral language passing from one human culture to another. Whilst it is not my purpose to provide evidence as to whether this was or was not the case, what does seem common is the human capacity for both mapping concrete qualities onto abstract domains, and understanding the mappings which one comes into contact with in language. Here the concrete physical qualities of the mirror have been clearly mapped onto the abstract domain of contemplation of the self and/or the self through a 'sense of otherness'. It is amongst the most profound examples of the human capacity to generate abstract concepts from concrete experience. As will be seen in later chapters this will be shown to be a common occurrence in visual art practice. It is significant however, that these early references to reflection precede by some 600 years the use of reflection as a term in philosophy, denoting contemplation.

2.3 Philosophical Interest in Reflection – from Decartes to Dewey

In the 17th century the Jesuit philosopher Emmannuele Tesauro compared the human intellect to a perfect mirror, claiming that it was an appropriate metaphor because 'it is a more curious and agreeable thing to look at several objects in perspective than to see the originals pass before the eye' (Pendergrast, 2003: 23-46). Descartes' systematic doubt, however, where everything other than the 'reflective knowledge' that Descartes' directly 'thinks' can be doubted, might be considered the first real instance where philosophy embraced the term (Molander, 2008: 5). Reflection became a common expression in the English language to refer to 'the mode, operation, or faculty by which the mind has knowledge of itself and its operations, or by which it deals with ideas received from sensation and perception' (Oxford English Dictionary – OED online), after being employed as a term by the philosopher John Locke. Locke was the first to use the term "reflection" as a key term in his philosophical discussions. For Locke, sensation and reflection are the two sources of all our ideas (Pendergrast, 2003, Molander 2008).

> By Reflection then…I would be understood to mean, that notice which the Mind takes of its own Operations, and the manner of them. (Locke, 1690)

In terms of sensation, which for Locke is the other source of our ideas in addition to reflection, there is a broad spectrum of theory regarding its interpretation and significance. Maurice Merleau-Ponty (1962: 3) states in his chapter titled 'The sensation as a unit of experience':

> I might be said to have sense-experience (sentir) precisely to the extent that I coincide with the sensed, [...] Pure sensation will be the experience of an undifferentiated, instantaneous, dot-like impact. (Merleau-Ponty 1962: 3)

The view of sensation Merleau-Ponty presents suggests a holistic view of human beings, as immersed in their environment, in a way that is distinct from the approach of objective science.

> The traditional notion of sensation was not a concept born of reflection, but a late product of thought directed towards objects, the last element in the representation of the world, the furthest removed from its original source, and therefore the most unclear. Inevitably science, in its general efforts towards objectification, evolved a picture of the human organism as a physical system undergoing stimuli which were themselves identified by their physicochemical properties, and tried to reconstitute actual perception on this basis, and to close the circle of scientific knowledge itself, by establishing an objective science of subjectivity. (Merleau-Ponty, 1962: 10).

Merleau-Ponty's criticisms of an objective science of subjectivity are extensive and are concisely expressed as follows:

> The core of philosophy is no longer an autonomous transcendental subjectivity, to be found everywhere and nowhere: it lies in the perpetual beginning of reflection, at the point where an individual life begins to reflect on itself. Reflection is truly reflection only if it is not carried outside itself, only if it knows itself as reflection-on-an-unreflective-experience, and consequently as a change in structure of our existence. (Merleau-Ponty, 1962: 62)

The significance of Merleau-Ponty's (1962) view of phenomenological reflection can now be reviewed in light of recent theories of Embodied Mind. Antonio Damasio (1999) in his book 'The Feeling of what Happens' explains how he began seeing consciousness in terms of the *organism* and the *object,* and their *relationships*.

> All of a sudden, consciousness consisted of constructing knowledge about two facts: that the organism is involved in relating to some object, and that the object in the relation is causing a change in the organism. (Damasio, 1999: 133)

Mark Johnson (1990), describes these changes to the structure of experience as a continuous, analogue pattern of experience with sufficient internal structure to permit inferences in the following two ways.

> [...] our conceptual system 'plugged into' our most relevant experiences very accurately at two levels. (a) The basic level, at which we distinguish elephants from giraffes and tigers and at which we distinguish walking from running, and standing from sitting [...]. (b) The image-schematic level, which gives general form to our understanding in terms of structures such as CONTAINER, PATH, CYCLE, LINK, BALANCE, etc. This is the level that defines from itself, and allows us to make sense of the relations among diverse experiences. (Johnson 1990: 208).

In the 'The Phenomenology of Perception' (1962) Merleau-Ponty, who was committed to exploring the relationship between science and experience, experience and the world, describes a fundamental circularity between them and also alludes to the continuity between them.

> When I begin to reflect, my reflection bears upon an unreflective experience, moreover my reflection cannot be unaware of itself as an event and so it appears to itself in the light of a truly creative act, of a changed structure of consciousness, and yet it has to recognize, as having priority over its own operations, the world which is given to the subject because the subject is given to himself.... Perception is not a science of the world, it is not even an act, a deliberate taking up of a position; it is the background from which all acts stand out, and is presupposed by them: The world is not an object such that I have in my possession the law of its making; it is the natural setting of, and field for, all my thoughts and all my explicit perceptions. (Merleau-Ponty, 1962: x)

However, recent theorists suggest that phenomenological reflection is not an effective means of analysing experience in isolation. It needs cognitive science.

> Phenomenological reflection, though valuable in revealing the structure of experience, must be supplemented by empirical research into the cognitive unconsciousness. (Johnson, Lakoff, 1999: 4)

Conversely, cognitive science is beginning to recognise the need for phenomenological reflection. The metaphor of strands of a rope bound together for strength seems applicable here.

> A phenomenologically inclined cognitive scientist reflecting on the origins of cognition might reason thus: Minds awaken in a world. We did not design our world. We simply found ourselves with it; we awoke both to ourselves and to the world we inhabit. We come to reflect on that world as we grow and live. We reflect on a world that is not made, but found, and yet it is also our structure that enables us to reflect upon this world. Thus in reflection we find ourselves in a circle: we are in a world that seems to be there before reflection begins, but that world is not separate from us. For the French philosopher Maurice Merleau-Ponty, the recognition of this circle opened up a space between self and world, between the inner and the outer. This space was not a gulf or divide; it embraced the distinction between self and world, and yet provided the continuity between them. Its openness revealed a middle way, an *entre-deux*. (Varela, et. al., 1993: 3)

Husserl (1931) considered Phenomenology to be the study of essences, in which the analysis of the 'life-world' was not anthropological or historical but philosophical. The failure of the Husserlian phenomenology is considered to have stemmed from taking an entirely theoretical approach to the analysis of experience, which lacked any pragmatic dimension (Varela, et. al., 1993: 19). Furthermore this criticism is considered to hold for both Heidegger's existential phenomenology and Merleau-Ponty's phenomenology of lived experience. Despite the criticism, the phenomenological tradition is supported by contemporary philosophers, such as Johnson and Lakoff (1999), who also acknowledge American Pragmatism.

> John Dewey, no less than Merleau-Ponty, saw that our bodily experience is the primal basis for everything we can mean, think, know, and communicate. He understood the full richness, complexity, and philosophical importance of bodily experience. For their day, Dewey and Merleau-Ponty were models of what we will refer to as "empirically responsible philosophers." They drew upon the best available empirical psychology, physiology, and neuroscience to shape their philosophical thinking. (Johnson, Lakoff, 1999: ix)

The American Pragmatist John Dewey has had significant bearing on both the theories of the reflective practice and theories of the embodied mind to which this thesis attends. As stated earlier, the work of Dewey (1933), Habermas (1971), Schön (1983), Kolb (1984) and Moon (1999) have all advanced theories of reflective practice, and within any research a particular selection bias will be chosen. This thesis focuses specifically on the writings of Dewey (1933), rather than Habermas, and Schön (1983) rather than Kolb (1984) for the following reasons. Dewey (1933) and Habermas (1971) approach reflection in very different ways and for different purposes, although there are crossovers such as the notion that reflection serves to generate knowledge (Moon, 1999: 20). Dewey's (1933) specific purpose was to elucidate educational processes and arrive at a more general understanding of human function. Habermas (1971) on the other hand employed reflection to develop epistemological issues in the sociology of knowledge and draws attention to the nature of the different processes underlying the generation of forms of knowledge, in which reflection is just one of these processes (Habermas, 1971, Moon, 1999: 20). Dewey's (1933) writings seem more appropriate for use in this thesis based on his focus on the nature of reflection and how it occurs through the manipulation and reprocessing of knowledge. Dewey (1933) also has been central to the development of both Schön's (1983) theories and the work of Mark Johnson (1987, 1999, 2007). Kolb's (1984) learning cycle has been criticized for not paying sufficient attention to reflection, and indeed the stages of his learning cycle that deal with reflective practice are very similar to Schön's reflection-in and –on-action. Schön's (1983) theories are taken therefore as primary sources in this thesis. Schön's 'design as a reflective conversation with a situation' (1983) and 'learning as a reflective conversation with a material' (Bamberger & Schön, 1983), also broached examples in

the domain of art and design, which are central to this thesis. The following sections therefore move to examine firstly Dewey and then continues through to a thorough examination of Schön's (1983) theories of reflective practice.

Here Dewey suggests that the general features of reflective experiences are:

> (i) perplexity, confusion, doubt, due to the fact that one is implicated in an incomplete situation whose full character is not yet determined; (ii) a conjectural anticipation—a tentative interpretation of the given elements, attributing to them a tendency to effect certain consequences; (iii) a careful study (examination, inspection, exploration, analysis) of all attainable considerations which will define and clarify the problem in hand; (iv) a consequent elaboration of the tentative hypothesis to make it more precise and more consistent, because squaring with a wider range of facts; (v) taking one stand upon the projected hypothesis as a plan of action which is applied to the existing state of affairs: doing something overtly to bring about the anticipated result, and thereby testing the hypothesis. It is the extent and accuracy of steps three and four, which mark off a distinctive reflective experience from one on the trial and error plane. (Dewey, 1981: 504-505)

Dewey's five-point analysis of reflective experience may be considered a much broader account of reflection than generally prevails over its usage in language, where reflection is often referred to solely as a form of post-event contemplation. Given the influence this expanded view of reflection had on Donald Schön's theories of reflective practice, a closer look at what Dewey proposed in each of these definitions will be useful.

1. *"perplexity, confusion, doubt, due to the fact that one is implicated in an incomplete situation whose full character is not yet determined":*
   Immediately Dewey shifts the focus of reflection from the past to also encompass the present and the future. Reflection becomes a sense of anticipation and uncertainty about an incomplete situation, which implies action in a continuum. The notion of an incomplete situation is something I propose visual arts practitioners can relate to. As a painter I find Dewey's account very apt for describing many of the experiences I encounter whilst practicing. Very rarely is a creative process realised from concept to product without being at some point unresolved. The exceptions might be found in growing number of practitioners who work closely together with crafts practitioners who create the physical presence of the work on the artist's behalf. However, here the part of the creative process Dewey describes is only shifted from one practitioner to another. This felt perplexity, is the means through which a sense of rightness, or lack thereof, is recognised. It is a testament to the nonverbal character of these moments in practice where the meaning traffics as images, qualities, patterns, and feelings (Johnson, 2007: 9).

2. *"a conjectural anticipation—a tentative interpretation of the given elements, attributing to them a tendency to effect certain consequences"*:

Each 'given element' in a practice situation has a character. This character, when analysed can be found to possess an internal structure of many parts. Material, temporal, and spatial qualities, amongst many others, may compose the 'given element'. These factors provide the parameters governing the situation. Johnson and Lakoff (1980, 1999) have worked extensively in this area and their work shall be expanded upon later in this thesis. However, in order to address what Dewey meant by 'a conjectural anticipation', this notion of an internal structure must be clarified. Let us begin with a truism, which is evidenced in human language, 'concrete physical qualities are mapped onto abstract domains'. The concept of balance, for example, has many abstract meanings and applications. One might present a 'balanced argument', or attempt to 'find a balance between work and leisure time', or 'be a well balanced person'. These are all extremely abstract concepts existing only within a human context (in many languages). What is of interest here is where these notions originate. Abstract concepts of balance, are thought to have been metaphorically projected (Johnson, 1980, 1987, 2007) from the concrete physical nature of balance as a sense experience or 'sentir' (Merleau-Ponty, 2008: 3). A human being experiences balance in the following three meaningful ways 1, the result of the symmetry of the body and its interaction with gravity and movement, 2, internal pressures caused by having too much or too little gas or liquid in the body, 3, chemical homeostasis, the result of having too much or too little of a chemical in the body. In each of these cases the sentir is embodied, and can be experienced consciously on a daily basis. One only needs to think of being hungry, being parched, regaining a vertical position after tripping on the curb. The human capacity to abstract from concrete embodied experience is among the richest examples of human creativity. In 'metaphors we live by' (Johnson & Lakoff, 1980, 2003) we are treated to a wealth of examples of how the embodied experience of concrete phenomenon is metaphorically projected to formulate and enable conceptual understanding. Let us take an example, which Johnson elaborated upon when I interviewed him in 2007. Mark Johnson: "By the way there's a metaphor of standing, which is going to be operative here. The metaphor is 'EXISTING IS STANDING', or continuing to stand. And so when something is knocked over, it falls, so we talk about regime change, it was toppled, it fell. And so the notion of standing up right is metaphorically a kind of, continuing in existence. Anyway that's one of the metaphors that would be relevant to our experience of those works" (Gray, 2007). The extensive examples Johnson and Lakoff present are key to unlocking what Dewey alluded to in the above statement. The 'tentative

interpretation' of the range of 'given elements' experienced in practice are likely emerging into conscious language from the physical qualities and parameters governing the situation. Attributing to them a 'tendency to effect certain consequences', could then be considered a natural consequence of the human capacity to abstract from the concrete. Whilst materiality is essentially consistent, the way in which it is interpreted, albeit tentatively, by the practitioner is indexical and reflexive (Deleuze, 1992).

3. *A careful study (examination, inspection, exploration, analysis) of all attainable considerations which will define and clarify the problem in hand:*
   The tradition of examining, inspecting, exploring, and analysing is clearly established through the scientific method. The main issue here however, is whether the practitioner is aware of 'all' the attainable considerations. This is an important point, which is taken up in my analysis of the case studies. Due in part to a philosophical tradition born of mind/body dualism, and to the nature of 'focal disappearance' Leder (1990: 14), vital aspects of 'all the considerations' are missing. Where the operations of the body are privy to 'focal disappearance', reflection is an attempt to bring experience into focus. The notion that we do not hear our ears or see our eyes serves to reduce awareness of the body we experience through. We do not perceive the organs we perceive through, yet practice requires a cyclic perceptual engagement. As meaning-making is increasingly being understood as emerging first pre-linguistically, before propositions and concepts are achieved, (Johnson, 2007) the meaning-making processes in visual art practice require an account of the very operations that are governed by focal disappearance. How is this issue to be addressed? One key proposition, made by this thesis, is to develop reflective methods in which experience can be mapped and analysed through the language that describes it.

4. *A consequent elaboration of the tentative hypothesis to make it more precise and more consistent, because squaring with a wider range of facts:*
   In a nutshell, this is how human beings develop their way of doing things on a moment by moment basis. I propose Dewey is not describing a rigorously articulated hypothesis in the scientific tradition, but moreover the many ways in which we frame our understanding of a range of minor operations. Prediction is the primary means through which future events are played out and analysed for risk and gain. Prediction requires a tentative hypothesis to frame the characteristics of any given agents in a situation. How many tentative hypotheses govern a practitioners understanding of materiality? On a micro level, it is a practitioner's ability to continually develop their tentative hypotheses through the flux of experience, which allows for creative momentum, it is the skeletal structure of practice. The can be little

doubt that this process, the largely operates subconsciously, and from the data later explored in the form of case studies, it is an aspect of practice seldom considered, however its importance in practice is vital.

5. *Taking one stand upon the projected hypothesis as a plan of action, which is applied to the existing state of affairs. Doing something overtly to bring about the anticipated result, and thereby testing the hypothesis:*
   As a practitioner often the best starting point is merely to start, to begin with a hypothesis and stand by it until it fails or develops. As Quince, the architectural tutor in Schön's 'Reflective Practitioner' (1983) exemplar, tells his student, "You must start with a discipline"…

Shifting focus from reflection as post event contemplation, to an on going interaction with the world, presents opportunities for a fuller understanding of reflective practice in visual art practice. Pursuing reflection in the Deweyian sense also requires that Schön's (1983) reflective practitioner be analysed accordingly. As will be demonstrated in the next chapter, Schön was very familiar with Dewey's work.

It seems clear that Dewey considered the reflective experience to be synonymous with learning from experience.

> […] to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying; an experiment with the world to find out what it is like" (Dewey, 1981: 495-496).

Molander (2008: 3) considers that Dewey's broad application of reflection enables us 'to keep inquiry moving', a notion, which is central to Schön's (1983) account of reflection-in-action. Dewey (1981: 500) also appears to frame reflection as synonymous with thinking.

> [Thinking] … is the intentional endeavour to discover specific connections between something we do and the consequences, which result so that the two become continuous. (Dewey, 1981: 500)

The continuousness of the relationship between thinking and doing is pivotal to both Dewey's and Schön's notions of reflective practice. According to Dewey reflective experience requires:

> …a certain sympathetic identification of our own destiny, if only dramatic, with the outcome of the course of events. (Dewey, 1981: 501)

Molander (2008: 6) considers that Dewey 'wants to pack too much into a "reflective experience". Whilst admitting that "reflection" makes sense 'only in the context of experience'.

> It is also important, I think, that in Dewey's understanding "thinking" is not specifically "mental". Thinking is one aspect of how we place ourselves in the world as agents and social human beings. (Molander, 2008: 6)

The expanded view of both reflection and thinking, predates theories of the embodied mind, cognitive science and the growing body of empirical knowledge, which supports it. Dewey's influence can be seen in both the work of Schön (1983) whose theories of reflective practice we will turn to in the next section, this is acutely seen in Dewey's summary to 'Experience and Thinking', chapter 11 of his 1916 book Democracy and Education.

> Summary. In determining the place of thinking in experience we first noted that experience involves a connection of doing or trying with something, which is undergone in consequence. A separation of the active doing phase from the passive undergoing phase destroys the vital meaning of an experience. Thinking is the accurate and deliberate instituting of connections between what is done and its consequences. It notes not only that they are connected, but the details of the connection. It makes connecting links explicit in the form of relationships. The stimulus to thinking is found when we wish to determine the significance of some act, performed or to be performed. Then we anticipate consequences. This implies that the situation as it stands is, either in fact or to us, incomplete and hence indeterminate. The projection of consequences means a proposed or tentative solution. To perfect this hypothesis, existing conditions have to be carefully scrutinized and the implications of the hypothesis developed -- an operation called reasoning. Then the suggested solution -- the idea or theory -- has to be tested by acting upon it. If it brings about certain consequences, certain determinate changes, in the world, it is accepted as valid. Otherwise it is modified, and another trial made. Thinking includes all of these steps, -- the sense of a problem, the observation of conditions, the formation and rational elaboration of a suggested conclusion, and the active experimental testing. While all thinking results in knowledge, ultimately the value of knowledge is subordinate to its use in thinking. For we live not in a settled and finished world, but in one which is going on, and where our main task is prospective, and where retrospect -- and all knowledge as distinct from thought is retrospect -- is of value in the solidity, security, and fertility it affords our dealings with the future. (Dewey, 1916)

In relation to visual art practice, it is this strong recognition that the world is not settled or finished but one with which we are in a constant exchange, which makes our actions and interactions prospective rather than retrospective. In the following section a view of reflection is put forward that suggests humans possess the capacity to be mindful of this prospective nature of experience, to experience what one's mind is doing as it does it (Varela, et. al., 1993: 23). This is a somewhat radical view of reflection that in large part has been viewed as retrospective function. Making

brief reference to the following method will help to contrast against Schön's (1983) methods of reflective practice, which have been influenced by Dewey (1916).

2.4 The Role of Reflection in the Analysis of Experience – A Contemporary View of Reflection in Theories of the Embodied Mind

The following extracts from Varela's et. al., (1993) 'The Embodied Mind', will be expanded upon in chapter 7.

> We are still in need of a method, however. Where can we turn for a tradition that can provide an examination of human experience in both its reflective and its immediate, lived aspects? (Varela et. al., 1993: 21)
>
> Its purpose is to become mindful, to experience what one's mind is doing as it does it, to be present with one's mind. What relevance does this have for cognitive science? We believe that if cognitive science is to include human experience, it must have some method for exploring and knowing what human experience is. (Varela et. al., 1993: 23)

Varela, Thompson and Rosch (1993: 27) have been instrumental in the development of theories of the embodied mind. Of particular interest to this thesis is their focus on development the embodied mind not merely as a theory but as a practice.

> If the results of mindfulness/awareness practice are to bring one closer to one's ordinary experience rather than further from it, what can be the role of reflection? [...] This question brings us to the methodological heart of the interaction between mindfulness/awareness meditation, phenomenology, and cognitive science. What we are suggesting is a change in the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection. By embodied, we mean reflection in which body and mind have been brought together. What this formulation intends to convey is that reflection is not just on experience, but reflection is a form of experience itself-and that reflective form of experience can be performed with mindfulness/ awareness. When reflection is done in that way, it can cut the chain of habitual thought patterns and preconceptions such that it can be an open-ended reflection, open to possibilities other than those contained in one's current representations of the life space. We call this form of reflection mindful, open-ended reflection. (Varela et. al.,1993: 27)

2.5 Taking Reflection Forward

In this chapter the need for an epistemology of reflection has been identified based on the benefits of clarifying which of the numerous accounts of reflection will be referred to in the context of this thesis. The exploration of the historical emergence of the term reflection in relation to mirrored surfaces illustrated an underlying structure of human meaning making, the capacity to develop abstract concepts from concrete experience, which will be taken up in chapter 6. The overview of how

reflection became associated with contemplation and entered into philosophical discourse has helped to define how reflection can be employed as an analysis of experience. Particular emphasis is placed on the role of phenomenological reflection.

As stated, Dewey's (1981) 5 point analysis detailed in section 2.3, has been selected as providing a broad yet specific and structured definition of reflection. These views of reflection are referred to in respect to the reviewing of Schön's (1983) method of reflection-in-action.

As the thesis moves forward to examine theories of embodied mind our view of reflection must move with it. For Varela, et. al., (1993: 27) the question as to what role reflection can have in bringing us closer to experience is seen as the methodological heart of the interaction between mindfulness, phenomenology and cognitive science. I propose that the implications of this view be investigated for their potential to be translated into a useful method, which could engender modifications to andragogy on a number of levels.

CHAPTER 3 - THE INFLUENCE OF D. A. SCHÖN ON THE DEVELOPMENT OF REFLECTIVE PRACTICE

3.1 The Development of Schön's Epistemological Interests – The Cognitive Tools for Learning and the Role of Reflection

D. A. Schön's PhD thesis, delivered at Harvard in 1955, dealt with John Dewey's 'theory of inquiry". Dewey, a prominent American Pragmatism along side Charles Sanders-Pearce and William James, was among the first to write about reflective practice. It is important to note that American Pragmatism influenced Schön's (1983) later work and enabled him to move a theory of how professionals think in action beyond Simon's (1969) theory of technical rationality. Schön (1983) felt that Simon's (1969) theory of technical rationality ignored the importance of problem setting in the activity of problem solving, which consequently lead to a crisis of confidence in professional knowledge.

His first book, 'Displacement of Concepts' (Schön, 1963) deals with categories. In this book he explores how categories are used to examine things, but are not examined as a way of thinking per se.

> The interest in metaphor expressed in that book, would grow years later toward his elaborations on "generative metaphor," and its role in allowing us to see things anew. Thus, he was already showing some of what would be epistemological enduring interests for his inquiry, namely: learning and its cognitive tools, and the role of reflection (or lack of it) in learning processes in general, and conceptual and perceptual change in particular.
> (Pakman, 2000: 3)

Srivastva and Barrett (1988), describe how a generative metaphor in Schön's terms, is characterized by the carrying over of frames or perspectives from one domain to another. It allows for frame re-structuring when frame conflict exists. The notion of a generative metaphor may be extended to include a proposed metaphor that frames socially constructed reality in a new, more complex way. Furthermore not all metaphors are generative, some merely capitalize upon existing ways of seeing things. What is specific about generative metaphor, however, is that new perceptions, explanations and inventions are generated. Importantly the sense of what is wrong in a problematic situation, and what needs fixing, is the hallmark of a generative metaphor. The key idea of 'generative metaphor' that was taken forward was the way that figurative descriptions of social situations, however implicitly, shape the way the problems themselves are approached and tackled.

> A generative metaphor "derives its normative force from certain purposes and values, certain normative images, which have long been powerful in our culture." For Schön, the notion of generative metaphor "then becomes an

interpretive tool for the critical analysis of social policy". He argues that, "it is not that we ought to think metaphorically about social problems, but that we do already think about them, in terms of certain pervasive, tacit generative metaphors; and that we ought to become critically aware of these generative metaphors, to increase the rigour and precision of our analysis of social policy problems by examining the analogies and "disanalogies" between the familiar descriptions... and the actual problematic situations that confront us."
(Srivastva, Barrett, 1988)

Schön's theories on learning systems dealt with the idea that learning occurs at a supra-individual level. The notion that learning takes place on a level that transcends the individual speaks specifically of cultural/social influences.

Schön's next two books 'Technology and Change, The new Heraclitus' (1967) and 'Beyond the Stable State' show the influence of the work of Raymond Hainer, (1968).

> Donald Schön had been able to work through his ideas with Hainer, and to draw upon, for example, his exploration of pragmatism, rationalism and existentialism. (Hainer, 1968)

Appointed Ford Professor of Urban Studies and Education at MIT in 1972, Schön began collaborating with Chris Argyris. This collaboration resulted in three key publications:

- Theory in Practice: Increasing Professional Effectiveness (1974)
- Organizational Learning: A Theory of Action Perspective (1978)
- Organizational Learning II: Theory, Method, and Practice (1996)

Throughout these works, his writing concerns professional learning, learning processes in organizations, and critical self-reflecting practice. Through this brief chronological portrait of Schön's professional academic career, we can see how his thoughts developed and accumulated in the following highly influential books.

- The Reflective Practitioner: How professionals think in action (1983)
- Educating the Reflective Practitioner (1987)
- The Reflective Turn: Case studies in and on educational practice (1991)

In 'The Reflective Practitioner', the work of primary interest to this study, Schön (1983) sought to offer an epistemology of practice based on a close examination of what a small and selective range of what practitioners actually do. Schön, (1983) through his proposal of the reflective-practice concept, opposed design as rational problem solving defended by Simon in his Sciences of the Artificial (Simon, 1969). The disciplines he chose are significant and included:

- Architecture,

- Psychoanalysis

- Science-based professions - medicine, agronomy and engineering

- Town planning

- Management

Interestingly for this study, visual art practice is not included as a discipline and aside from a very few brief references to be found in his introduction to the subject of reflection-in-action, which will be mentioned in the next section, the domain is absent from his academic writings. 'The Reflective Practitioner' became a highly influential book across a number of professional domains outside of the aforementioned list. Nursing, and particularly education, are perhaps the most notable examples. Indeed, the popularity of 'The Reflective Practitioner' (Schön, 1983) in education prompted Schön to write, Educating the Reflective Practitioner (1987), and The Reflective Turn: Case studies in and on educational practice (1991).

3.2   Generative Metaphor, Knowing-in-Action, Reflection-in-Action and the Schön's Reliance on the 'Conversational' Metaphor

Within the following extracts from The Reflective Practitioner, D. A. Schön introduces his theory of reflection-in-action. As I will be examining what is distinctive about reflection-in-action in the visual arts from this theory, it is necessary to list this introduction down in some detail, so as to facilitate access to what Schön (1983) considered reflection-in-action.

> Reflection-in-action
>
> It is this entire process of reflection-in-action which is central to the "art" by which practitioners sometimes deal well with situations of uncertainty, instability, uniqueness, and value conflict. [...]
>
> [...] When we go about the spontaneous, intuitive performance of the actions of everyday life, we show ourselves to be knowledgeable in a special way. Often we cannot say what it is that we know. When we try to describe it we find ourselves at a loss, or we produce descriptions, that are obviously inappropriate. Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is in our action. [...] (Schön, 1983: 49)

Here, in his introduction to 'The Reflective Practitioner', Schön (1983) alludes to a layer of non-linguistic meaning, which is notably absent from the remainder of his academic writing. Polyani's (1967) 'tacit knowing' is also referenced here, and the

notion of 'patterns of action' and 'feel for the stuff', is later echoed in Johnson's (1987) theories of the embodied mind.

> […] *Knowing-in-action.* Once we put aside the model of Technical Rationality, which leads us to think of intelligent practice as an *application* of knowledge to instrumental decisions, there is nothing strange about the idea that a kind of knowing is inherent in intelligent action.
> Over the years, several writers on the epistemology of practice have been struck by the fact that skilful action often reveals a "knowing more than we can say." […]

> […] As early as 1938, in an essay called "Mind in Everyday Affairs," Chester Barnard distinguished "thinking processes" from "non-logical processes" which are not capable of being expressed in words or as reasoning, and which are only made known by a judgement, decision, or action. Barnard's examples include judgements of distance in golf or ball throwing, […]
> […]Michael Polanyi, who invented the phrase "tacit knowing," draws examples from the recognition of faces and the use of tools. […]
> […] Chris Alexander, in his Notes Toward a Synthesis of Form, considers the knowing involved in design. He believes that we can often recognise and correct the "bad fit" of a form to its context, but that we usually cannot describe the rules by which we find the fit bad or recognise the corrected form to be good. […]
> […] Ruminating on Alexander's example, Geoffrey Vickers points out that it is not only artistic judgements which are based on a sense of form which cannot be articulated:

>> artists, so far from being alone in this, exhibit most clearly an oddity which is present in all such judgements. We cannot recognise and describe deviations from the norm very much more clearly than we can recognise the norm itself. (Geoffrey Vickers, unpublished memorandum, MIT, 1978)

> (Schön, 1983: 49-50)

Interestingly, this brief reference to 'artists', which assumes artistic judgements are based on a 'sense of form that cannot be articulated', is the only reference to the discipline in 'The Reflective Practitioner' (Schön, 1983). Schön's work focused rather on professions of industrial and educational significance. This however, did not prevent his work from being influential in the relatively new field of art-practice-based research.

The closest Schön (1983) gets to art and design is architecture and music (Bamberger & Schön, 1983). In a later section, 'The Structure of Reflection-in-action', Schön (1983) references a mentor relationship between an Architectural professor and a student, which he earlier elaborated upon under the title 'Design as a reflective conversation with a situation'.

> Their hypothesis testing experiment is a game with the situation. They seek to make the situation conform to their hypothesis but remain open to the

possibility that it will not. Thus their hypothesis testing activity is neither self-fulfilling prophecy, which insures against the apprehension of disconfirming data, nor is it the neutral hypothesis testing method of controlled experiment, which calls for the experimenter to avoid influencing the object of study and to embrace disconfirming data. The practice situation is neither clay to be moulded at will nor an independent, self-sufficient object of study from which the inquirer keeps his distance. The inquirer's relation to this situation is *transactional*. (Schön, 1983: 150)

Schön adds in his notes, as clear evidence of his epistemological affiliations that:

> The idea of the relation of the knower to known as a "transaction" derives from the work of John Dewey. See A. F. Bentley and John Dewey, *Knowing the Known* (Boston: Beacon Press, 1949). (Schön, 1983: 361)

This notion of knowing-in-action requires an acknowledgement of embodied experience in a way that was removed from Technical Rationality (Simon, 1969). Its Philosophical roots where Pragmatist rather than Positivist, and talks about *'knowing'* over *'knowledge'*. This is significant in terms of this investigation for reasons I will expand upon in chapter 6, which introduces the work of Mark Johnson, whose work is also influenced by John Dewey.

> To put it briefly, for Dewey knowing is a matter of cultivating appropriate habits of intelligent inquiry that allow us to more or less satisfactorily reconfigure our experience in the face of problematic situations. The goal is not some illusory fixed and eternal knowledge. Instead, to call something knowledge is simply a way to valorize certain ways of knowing – ways of transforming experience – that tend to actually enrich our sense of the possibilities for action, that deepen and broaden our grasp of the meaning of a situation, and that help us lead more humane, constructive, and creative lives. So Dewey urges us to turn our focus away from the substantive term knowledge (as a noun) and to focus, instead, on knowing (as a verb). In this way we emphasize the character of the process of inquiry instead of some final product construed as a body of knowledge. (Johnson, 2010: 157)

Schön's (1983) criticisms of Technical Rationality frame an epistemology of reflection-in-action against the Positivist epistemology of practice.

> ...we have also begun to describe an epistemology of reflection-in-action which accounts for the artistry in situations of uniqueness and uncertainty. On this view of professional knowing, technical problem solving occupies a limited place within the inquirer's reflective conversation with his situation; the model of Technical Rationality appears as radically incomplete. (Schön, 1983: 165)

The Positivist epistemology of practice is propped up on three dichotomies that are challenged by Schön's (1983) theory of reflection-in-action. In a Positivist sense practice:

- Separates 'means' from 'ends'. Instrumental problem solving can be seen as a technical procedure to be measured by its effectiveness in achieving a pre-established objective.

- Separates 'research' from 'practice'. Rigorous practice can be seen as an application to instrumental problems of research-based theories and techniques. The objectivity and generality of which derive from the method of the controlled experiment.

- Separates 'knowing' from 'doing'. Action is only an implementation and a test of technical decision.

In Schön's (1983) case studies he shows that:

- 'Means' and 'ends' are framed interdependently through the practitioner's 'problem setting'.

- 'Practice' is a kind of 'research' in the reflective conversations of the practitioners.

- 'Knowing' and 'doing' are inseparable as the practitioner's inquiry is transactional with the situation.

> The values of control, distance and objectivity, central to the model of Technical Rationality, take on new meanings in the reflective conversation. Here the inquirer tries, within the limits of his virtual world, to control variables for the sake of hypothesis-testing experiment. But his hypothesis is about the potential for transformation, and in the testing he steps into the situation. (Schön, 1983: 166)

Despite the widespread application across the disciplines mentioned here, I find it interesting that the following description is framed around aspects of performance.

> 'Reflecting-in-action: If common sense recognises knowing-in-action, it also recognises that we sometimes think about what we are doing. Phrases like 'thinking on your feet', 'keeping your wits about you', and 'learning by doing' suggest not only that we can think about doing but that we can think about something while doing it. Some of the most interesting examples of this process occur in the midst of a performance. […] They (performing Jazz musicians) are reflecting-in-action on the music they are collectively making and on their individual contributions to it, thinking what they are doing and, in the process, evolving their way of doing it. Of course we need not suppose that they reflect-in-action in the medium of words. More likely, they reflect through a feel for the music […]
> […] when intuitive performance leads to surprises, pleasing and promising or unwanted, we may respond by reflecting-in-action. Like the baseball pitcher, we may reflect on our "winning habits"; or like the jazz musician, on our sense of the music we have been making; or like the designer, on the misfit we have unintentionally created. In such processes, reflection tends to focus interactively on the outcomes of action, the action itself, and the intuitive knowing implicit in the action. (Schön, 1983: 49-56)

Before studying Philosophy at Harvard, Schön attended the Conservatoire Nationale de Music in Paris. It is worth noting that he was awarded the Premier Prix as a clarinettist. He later also became an accomplished pianist and played in both jazz and chamber groups.

> This interest in improvisation and structure was mirrored in his academic writing, most notably in his exploration of [sic] professional's ability to 'think on their feet'. (Smith, 2011)

I find the notion that Schön's experience of improvisational jazz was mirrored in his academic writing quite alluring, and will return to it later. For now however, it is interesting to note that in Schön's premiere definition of reflection-in-action, in the creative discipline as an exemplary example. When he writes, 'of course we need not suppose that they reflect-in-action in the medium of words. More likely, they reflect through a feel for the music', we can assume that he his writing from direct experience. Reflecting through a feel for the music is a fascinating notion, and not unlike to my own experiences of reflecting through my feel for the material of paint, glass or stone. In his sequel 'Educating the Reflective Practitioner', Schön makes further brief reference to creative practice in the context of the curricular models in higher education.

> Beyond the confines of professional schools, there are other deviant traditions of education for practice. There are apprenticeships in industry and crafts. There is athletics coaching. And perhaps most important, there are the conservatories of music and dance and the studios of the visual and plastic arts. The artistry of painters, sculptors, musicians, dancers, and designers bears a strong family resemblance to the artistry of extraordinary lawyers, physicians, managers, and teachers. It is no accident that professionals often refer to "art" of teaching or management and use the term *artist* to refer to practitioners unusually adept at handling situations of uncertainty, uniqueness, and conflict.
>
> In education for the fine arts, we find people learning to design, perform, and produce by engaging in design, performance, and production. Everything is practicum. Professional knowledge, in the sense of the propositional contents of applied science and scholarship, occupies a marginal place – if it is present at all – at the edges of the curriculum. Emphasis is placed on learning by doing, which John Dewey described long ago as the "primary or initial subject matter": "Recognition of the natural course of development … always sets out with situations which involve learning by doing. Arts and occupations form the initial stage of the curriculum, corresponding as they do to knowing how to go about the accomplishment of ends" (Dewey, 1974: 364). (Schön, 1987: 17)

Schön's comments here need to be contextualised. As stated earlier we see the fine arts being used again as an exemplary example of unusual adeptness in the handling of uncertainty, uniqueness, and conflict. Yet whilst this model of practice is in

someway revered, the closest to visual art practice or the plastic arts presented in the case studies referred to in his writing is architectural design and music.

This notion however, is of closest relevance to the operation of Reflection-in-action in the visual arts. Reflection-in-action in the visual arts, in this context, could be considered 'the non-verbal feel for the materials employed in the performative operation of creative practice'. However, Schön's (1983) exploration of the learning systems in the arts maintains a strong emphasis on the conversational metaphor. In 'Learning as Reflective Conversation with Materials: Notes from Work in Progress' (Bamberger & Schön, 1983: 68) the authors make use of Schön's earlier work on generative metaphor and theory of reflection-in-action (1983) to emphasize that changes in the use of the materials can change modes of description. This notion is explored through an experiment in which novice musicians are assigned the task of creating a tune. Bamberger & Schön, (1983: 68) highlight the significance of conversation as a way of analyzing the evolving course of the study's participants and as a way of managing an ambiance for research.

> We have chosen this protocol because it seems a paradigmatic example of what we have come to call "conversational learning". By this we mean the gradual evolution of making something through reflective "conversation" between makers and their materials in the course of shaping meaning and coherence. "Reflective" has at least two intentions here, and often they are so intertwined as to be indistinguishable: the maker's spontaneous (and active) reflective response to their actions on the materials, and the "reflection" of the materials (as they take various shapes and forms) back to the makers. The two kinds of reflection can be thought of as two kinds of "talking back". In the first, the makers talk back to the materials (reshaping them); in the second, the materials talk back to the makers, reshaping what the makers know about them. The distinction is, in a sense, moot since materials don't "talk" and the "talk" of the makers is most often (but not always) action rather than words. Further, the back-talk of the materials is only to the extent that the makers "hear" it- i.e., the current state of the makers' knowledge-in-action strongly conditions what they recognise and apprehend as the "message" implicit in the current state of the materials. In turn, the makers' talk back to the materials is not "heard" by the materials except to the extent that these are re-shaped in some way. (Bamberger & Schön, 1983: 68)

This paper (Bamberger & Schön, 1983) published in the Volume 36, issue 2 of the Art Education journal, in the same year as Schön published the 'Reflective Practitioner' (1983), needs to be stressed as it is one of the few references Schön makes to the arts disciplines as distinct from design. It is important to note however, that the 'conversational' metaphor is considered as applicable to visual art practice and music as design and problem solving projects.

> We have tried to make an ambiance for research, give some examples, and pose some speculative questions. Nelson Goodman is willing to answer one of them: "Even if the ultimate product of science, unlike that of art, is a

literal, verbal or mathematical, denotational theory, science and art proceed in much the same way with their searching and building." (Goodman, 1978: 107) And Ben Shahn puts that "same way" like this; "So one must say that painting is both creative and responsive. It is an intimately communicative affair between the painter and his painting, a conversation back and forth, the painting telling the painter even as it receives its shape and form." (Shahn, 1957: 49). (Bamberger & Schön, 1983: 68)

I find Schön's et. al., (1983) reliance on the conversational metaphor, as a fits all sizes construct, problematic. Schön et. al., (1983) describes design phenomena as a computational strategy that relies upon a conversational metaphor.

> The metaphor of "conversation" can serve a two-fold purpose: it can, as suggested above, serve as a way of viewing the evolving course of our participants' work; at the same time, it can serve as a way of setting a mood, an ambiance for research. In this latter sense, the motion of "conversation" becomes important and productive as it encourages us, as researchers, to make our own action experiments in search of the emergence of new meaning, new features, new structures. (Bamberger & Schön, 1983: 68)

What is it to have a conversation? What characteristics does a conversational metaphor bring to a practitioner's experience of the practice situation? When Schön suggests that reflection can be thought of as "talking back", he introduces a metaphorical means for conceptualizing a complex cognitive process. It is a significant simplification of these cognitive processes, made with the best intentions of developing a practical method of dealing with the flux of experience. However, whilst it may have use value in many situations, the conversational metaphor needs to be examined with caution as to whether it is applicable in all situations.

There is an issue here, which is seemingly contradictory. On one hand Schön (1987: 25) considers that:

> Whatever language we may employ, however, our descriptions of knowing-in-action are always *constructions*. They are always attempts to put into explicit, symbolic form a kind of intelligence that begins by being tacit and spontaneous. (Schön, 1987: 25)

In this case the language employed, which I would also suggest extends out to the use of the conversational metaphor, is arbitrary. On the other hand Schön's paper on generative metaphor (1970) exploring the case of slum housing where the underlying metaphor of the slum is as a 'blight' or 'disease', is a warning that an inappropriate use of metaphor can have profoundly negative consequences. Schön (1970) claims the 'blight' metaphor encourages corresponding medical remedies, including surgery to remove the blight. Schön (1970) continues by suggesting that if the underlying metaphor of the slum is that of a "natural community", then this orients any response in terms of enhancing the life of that community. For Schön

(1983) then the way in which a problem is framed depends upon the underlying metaphors and conversely the metaphor in use sets the direction of problem solving.

The construct of the conversation requires translating the qualities of tacit engagement into something it is distinctly not. The question is just how vital the tacit dimension of the practice experience is. As an educator I can benefit from the simplicity of a reflective conversation with a situation, it is practical, but as a visual arts practitioner being attentive to the qualitative dimension of the creative process makes the conversation metaphor an over simplification or a rich cognitive process.

3.3   The Structure of Reflection-in-Action

For Schön the initiation of reflection-in-action, in the midst of practice, occurs when a practitioner has been unable to solve a problem in the way it has been set. From this situation, the framing of the problem is subjected to criticism and new directions for shaping the situation are developed, which changes and reframes the problem. The practitioner begins then to experiment with the reframed problem, in order to assess what consequences and implications can be drawn from it. Having reframed the problem, Schön suggests that the practitioner also tries to adapt the situation to the frame. Here a cyclic process occurs as not only the problem is reframed but the situation is also. Changing the situation, changes the problem, reframing the problem requires the situation to be made to fit the revised frame. This process is played out through discovered consequences, implications, appreciations, and further moves. These moves create further problems to be solved but surround the situation in new meanings. These new meanings are generated through the unintended changes caused through the experiment of reframing and adapting the situation. This is what Schön refers to as the situation 'talking back'. He describes the practitioner as listening to the situation as it talks back, appreciating what he/she hears, and reframing the situation in response to this reflective conversation.

> In this reflective conversation, the practitioner's efforts to solve the reframed problem yields new discoveries which call for new reflection-in-action. The process spirals through stages of appreciation, action, and re-appreciation. The unique and uncertain situation comes to be understood through the attempt to change it, and changed through the attempt to understand it. (Schön, 1983: 132)

This process relies heavily on the reframing of the situation. The operations of reframing link back to Schön's theories of generative metaphor.

> A generative metaphor in Schön's terms is characterized by the carrying over of frames or perspectives from one domain to another. It allows for frame re-structuring when frame conflict exists. The notion of a generative metaphor

may be extended to include a proposed metaphor that frames socially constructed reality in a new, more complex way. […] For Schön, the notion of generative metaphor "then becomes an interpretive tool for the critical analysis of social policy". He argues that "it is not that we ought to think metaphorically about social problems, but that we do already think about them in terms of certain pervasive, tacit generative metaphors; and that we ought to become critically aware of these generative metaphors, to increase the rigour and precision of our analysis of social policy problems by examining the analogies and "disanalogies" between the familiar descriptions...and the actual problematic situations that confront us. (Srivastva and Barrett, 1988)

There is therefore reason to be wary of generative metaphors, especially when they carry their own solutions to problems. More often than not they will fail to present an objective characterization of the problem situation.

The following text is an example of using metaphor to frame a situation. The author of the text first describes a situation that arose whilst he helped some friends finish rewiring their house. He elaborates on the problem solving process that enabled them to turn a frustrating situation into an eloquent solution of how to pass a wire through an empty tube embedded in the wall. In the many examples and explanations of generative metaphor I have read, I have found myself coming back to this story repeatedly as a means of explaining the concept to others. I consider it useful then to present this short text in full.

The development of generative metaphors

A few years ago I gave two friends of mine a hand finishing the electric wiring in their house. For this purpose long and narrow plastic pipes had been laid through the brick walls while constructing years earlier. Every single one of these pipes contained a string that would allow us now to pull the wiring through. Unfortunately, one of these strings had been pulled by accident and left us with a 8m long curved pipe without a means to pull the electric wire. We first tried to just push it through, but the wire wasn't rigid enough to make that work. So we reinforced it with wire and tried again. It lasted a while before we got frustrated with this strategy, realizing it wouldn't work despite efforts to reinforce the wire with all sorts of things. Amidst the frustration came the idea – first as a joke – to flush rather than push the wire. Water! From 'water' our thinking shifted to 'air', and only a few minutes later we had tied a tiny piece of fabric to a sewing thread and sucked it all the way through the pipe with the vacuum cleaner. The wire followed. Sometimes it pays off to take jokes seriously. The original set-up being a string to pull, our initial image had been one of pulling and pushing: our minds were set on 'mechanics'. As it became increasingly clear that our mechanical thinking didn't allow us to solve our problem, we accommodated 'hydraulic' and 'pneumatic' metaphors. All of a sudden it became easy: the point was in our problem-setting rather than in problem-solving as Donald Schön (1993) puts it.

Schön has described the process of metaphor development in different stages that are easily recognizable in this story. A first important phase consists of people's immersion in the experience. We were pushing and pulling wires with different methods. Despite our getting better at pulling and pushing, the

feeling grew that this would not work. In the midst of this, the generative image was triggered: sucking. We stopped looking at our problem as if it were a mechanical one, and re-imagined it as a pneumatic problem.

It seems important to notice that, at first, we didn't have a precise idea of where to go with this idea, but we somehow felt it could apply to our situation. Schön called this `an unarticulated sense of similarity'.

An immediate consequence of this new perspective was a change of vocabulary: we 'reframed and renamed'. We didn't talk about strength, length and rigidity anymore, but about weight and volume . . . What followed, Schön points out, was `an explicit account of similarities': we 'mapped' how the image of sucking would apply to a situation that until then we had looked at as one that needed pulling or pushing. The result was a new approach, and a solution. In my summary Schön's stages are as follows:

- immersion in the experience

- triggering the generative metaphor

- unarticulated sense of similarity

- naming and framing

- explicit account of similarities: 'mapping'

- new solutions

  (Hovelynck, 1998)

The situation that Hovelynck (1998) describes is not merely about problem-setting, it requires the generation of new meaning in the solving of the problem. The process is clearly focused on the end product, but still relies upon the metaphorical projection of physical qualities. When the process is experiential rather than problem-solving I propose the relationship between the metaphorical projection of physical qualities and the generation of meaning becomes of central importance. Here Schön et. al., (1983) raise the point that the generation of meaning is in itself a process of making.

Making meaning

If we take seriously the notion that meaning, itself, is a process of making, describing the work of the participants presents certain difficulties at the outset. (Bamberger & Schön, 1983: 6)

3.4   Design as a Reflective Conversation with a Situation

It is important to note that the concept of a 'reflective conversation with the situation' and indeed the whole development of an epistemology of practice based on an examination of what practitioners actually do, was first put forward by John Dewey in 1933 in his book 'How We Think: A restatement of the relation of reflective thinking to the educative process'. In this respect it might be argued that Schön was not really saying anything new at the time he published 'The Reflective Practitioner' in 1983. However, given the degree to which Dewey, and American Pragmatism in general, had been largely ignored throughout the mid part of the twentieth century, and that theories of professional practice, namely Simon's Technical Rationality, had caused what Schön described as a crisis in professional thinking.

> Technical-rationality is a positivist epistemology of practice. It is 'the dominant paradigm' which has failed to resolve the dilemma of rigour versus relevance confronting professionals. (Usher et. al. 1997: 143)

Schön's intervention was a timely reminder of the developments Dewey had made, and certainly helped to contextualize them in the later part of the twentieth century across a wide range of professions.

Schön, who uses the phrase 'design as a reflective conversation with a situation' as the title of his third chapter, makes use of a protocol study to investigate a case in the architectural profession. He chose architecture over other design professions, as he considered it to be an already well-established field of design, which he had the opportunity to observe and study.

At the beginning of the chapter, he briefly overviews design as a general field and states that it is expanding across a range of disciplines and that through this process it might be possible to discern an underlying generic design process. As an example for this he notes that various perspectives and notions exist in Architecture, for which underlying actions can be found.

Schön (1983) introduces his case study as an example that he believes represents a generic design process shared by other design professions. 'Design as a reflective conversation with the situation', is essentially metaphorical. It is interesting in the context of this thesis that he chose a conversational metaphor in which processes like 'talk back' are used to describe how the practitioner perceives what the situation is trying to 'tell' them. As will be seen later this conversational metaphor is useful in design but problematic in creative production.

Schön dissects the design process into variables, which include:

- possible moves
- norms
- interrelations

Through the complexity of these variables the outcomes of the design process, as the experienced by the designer, can be received 'happily or unhappily', than those intended.

> […] the designer may take account of unintended changes he has made in the situation by forming new appreciations and understandings and by making new moves. He shapes the situation in accordance with his initial appreciation of it, the situation "talks back" and he responds to the situation's back talk. (Schön, 1983: 79)

Schön considers that in a good design process this conversation with the situation is reflective. In his example, he observed the 20 min critiquing session between an architectural student, Petra and her tutor Quist. Schön (1983) begins by introducing the studio environment, and how students work and design there. In the session, Petra firstly describes her design process and the problems she is encountering. Quist proceeds by reflecting on Petra's sketches, and by making use of his repertoire of design experiences reframes the problems Petra is facing. This process leads to a re-appreciation of the situation.

> Drawing and talking are parallel ways of designing and together that make up what I call a language of designing. (Schön, 1983: 80)

The dialogue between Petra and Quist is concise but difficult to understand by outsiders because of what Schön calls "dietic utterances" for example the words 'here', 'that' and 'this' can only be interpreted through Petra's drawings and the transparent overlays Quist sketches onto. Quist criticizes Petra for taking the land contours and the architectural norm that building shapes and land contours must fit one another, too seriously. Consequently he considers Petra's sketches lack an individual discipline. Schön quotes Quist as saying *"You should begin with a discipline, even if it is arbitrary".* In this respect discipline means a self-imposed method, a set of self-determined rules in the geometry. Quist suggests that this discipline can be uncompromising to start with but can yield over time. In design this form of meta-theory can be seen to inform actions and decisions.

In the analysis section, Schön elaborates on the elements of his design language, which takes the form of a spatial action language. Schön summarizes this in a table of terms, which are used in the protocol analysis. Whilst the language is seemly informal, the terms embody a great deal of professional knowledge. Schön also highlights the key aspects of the reflective conversation, of which 'framing' the

problem is prominent. For Schön a failure to find a solution is a failure to frame the problem. It is considered imperative therefore that designers learn to frame and re-frame the problems they encounter. In contrast to Technical Ractionality, Schön considers that every design decision is a local experiment that contributes to the reframing of the problem, not the application of theory to a problem.

> [...] the designer must consider not only the present choice but the tree of further choices to which it leads, each of which has different meanings in relation to the systems of implications set up by earlier moves. (Schön, 1983: 80)

If design is a reflective conversation with the materials of the situation what is visual art practice? As the materials of design 'talking back' to the practitioner unanticipated problems and potentials are realized, the appreciation of which leads to new and unexpected phenomena.

> Designers might differ, for example with respect to the priorities they assign to design domains at various stages of the process. They might focus less on the global geometry of buildings as Quist does, than on the site or on the properties and potentials of materials. But whatever the differences designers have, such as backgrounds, experiences and priorities, they are likely to find themselves in a complex situation and a conversation with the situation. (Schön, 1983: 100)

Despite these differences Schön perceives an underlying structure to the design process.

3.5   Criticisms of Schön

Whilst Schön's (1983) theories are considered to have been influential, his work has been subject to criticism.

> It is noted later, for example, that constructs such as 'reflection-in-action' (Schön 1983) appear to have been accepted into established theory without substantial testing. Once ideas have been put into print, they easily became utilized as if they are fact. (Moon, 1999: 23)

Moon (1999: 23) makes an important point here that Schön's (1983) theories of reflective practice were not substantially tested, however they have been extensively cited across a wide range of papers over the last 30 years.

> There have been three important areas of criticism with regard to this model (beyond those wanting to hang onto 'technical rationality'). First, the distinction between reflection in and on action has been the subject of some debate (see Eraut 1994 and Usher et al 1997). Indeed Donald Schön may well have failed to clarify what is involved in the reflective process – and there is a problem, according to Eraut, around time – 'when time is extremely short,

decisions have to be rapid and the scope for reflection is extremely limited' (1994: 145). There have also been no psychological elaborations of the psychological realities of reflection in action (Russell and Munby 1989). (Smith, 2011)

Molander (2008: 4), states that detractors of Schön's notion of "reflection in action", such Eraut (1994), in suggesting that there is seldom time for reflection when a person is engaged in work indicate an overly narrow conception of what reflection is. Time in relation to reflection has been considered to possess distinct qualities. Here Burnard & Hennessy (2006), draw specific reference to visual art practice in addition to illustrating how Schön (1983) applied this theories to a range of time frames.

> Reflective time engages us intrinsically in a sharply focused attentive mode of functioning. Artists in particular give themselves over to virtually continuous reflective time, placing reflection at the heart of the creative process. Some authors consider that reflection is a recollective form constituted in a thought or action that is already passed or lived through (van Manen, 1990). Other theorists consider reflection to be constituted in action in different time frames. Such dimensions include reflection-on-action (Schön, 1987), reflection-in-action (Schön, 1983; Killian and Todnem, 1991), reflection-in and on-action (Zeichner and Liston, 1996) and reflection-for-action (Norlander-Case et al., 1999) with each drawing upon and utilising different time frames. These can be rapid and immediate, as automatic reflection or thoughtful reflection in the moment (called repair). Reflection can occur at a particular point in time (called review) or be more systematic over a period of time (called research). A long-term reflection can be informed by established theories (called retheorising) (Schön, 1983, 1987). (Burnard, et. al., 2006)

Within education where Schön's theories have received wide attention (Usher et. al., 1997: 143), the criticisms are yet to have been fully addressed (Smith, 2011).

> The widespread use of 'reflection' as a concept of importance for the development of teacher professionalism coincides with the publications of Schön's The Reflective Practitioner (1983) and the sequel Educating the Reflective Practitioner (1987). The texts are extensively referred to and have had enormous impact on education and related fields. Schön's theories, however, have not gone unchallenged. Gary Fenstermacher criticises the inconsistent use of the term 'reflection' in Schön's theories (Fenstermacher, 1988); Max van Manen argues that reflection does not describe the differences between novice teachers and experienced teachers (van Manen, 1995); Newman claims that the whole epistemological account in Schön's theories has to be rewritten (Newman, 1999); I [Erlandson] have argued that Schön generates a dualistic Cartesian worldview and a control-matrix in the theories presented in The Reflective Practitioner (1983) and Educating the Reflective Practitioner (1987). (Erlandson, 2004: 39)

Usher et. al. (1997: 143) considers however, that Schön's (1983) theories of reflective practice, have been frequently adapted by trainers in a variety of professional fields in ways that do not represent Schön's emphasis on enacting.

3.6   The Introduction of Schön's Theory of Reflection-in-Action in Education

In order to understand how Schön's (1983) theory of reflection-in-action came to be used in art and design and when it was introduced it is necessary to first ask how it became so widely used in education. Whilst there is no specific defining moment when Schön's theories made the transition from the disciplines he initially explored in the 'Reflective Practitioner' (Schön, 1983), it is widely acknowledged that it was his sequels to this work, 'Educating the Reflective Practitioner' (1987), and 'The Reflective Turn: Case studies in and on educational practice' (1991), which brought his theories into the domain of education, which emerged to be clearly the field most in demand of Schön's theories of reflective practice. It is contextually note worthy also that John Dewey, with whose work Schön was very familiar, was regarded as a prominent philosopher of education.

> In 1987, Donald Schön introduced the concept of reflective practice as a critical process in refining one's artistry or craft in a specific discipline. Schön recommended reflective practice as a way for beginners in a discipline to recognize consonance between their own individual practices and those of successful practitioners. As defined by Schön, reflective practice involves thoughtfully considering one's own experiences in applying knowledge to practice while being coached by professionals in the discipline (Schön, 1996). After the concept of reflective practice was introduced by Schön, many schools, colleges, and departments of education began designing teacher education and professional development programs based on this concept. As the concept grew in popularity, some researchers cautioned that SCDEs that incorporated reflective practice in their teacher education programs were focusing on the process of reflective practice while sacrificing important content in teacher education (Clift et al, 1990). These researchers recommended that reflective teaching combine John Dewey's philosophy on the moral, situational aspects of teaching with Schön 's process for a more contextual approach to the concept of reflective practice. (http://www.cyc-net.org/cyc-online/cycol-0404-reflective.html, accessed on 27.7.14)

No one of course is suggesting that reflective practices did not exist in visual art practice prior to this introduction. My first introduction to the notion of the reflective practitioner came whilst studying for my masters degree at the Sir John Cass department of Art & Design at the London Metropolitan University (formally the London Guildhall University) in 2001. A lecture series led by the former course organiser Christopher Smith entitled 'the reflective practitioner' developed the idea that the role of the student within the context of a 'by project' masters degree was that of a reflective practitioner. The subject of reflection-in-action fascinated me sufficiently to write my masters thesis about it.

Whilst Schön's (1983) theory of reflection-in-action has certainly been applied, at various levels, in the field of art education as an educational tool, it is as a research

method within doctoral projects in art and design that it has received most attention. As stated, in my research I have found a notably lack of evidence for creative practitioners having any knowledge of Schön's (1983) theory of reflection-in-action, therefore focus on its use in creative-production doctoral projects initially. The reason for this is to help isolate what is distinct about reflection-in-action in visual art practice that may require refinement to Schön's (1983) theories when applied to this field. In the context of this study the notion of reflective practice in creative-production doctoral projects has been more richly debated in recent years than in professional art practice outside of academic research.

The following citation frames the process of learning to become a reflective practitioner as an objective of doctoral research in art & design.

> In the USA the PhD quickly became a passport into teaching (as it is today in many disciplines in the UK) prompting some commentators to note that in practice it is now a qualification for teaching rather than research. Similarly, a doctorate in creative-production might be seen as appropriate training to teach others to become reflective artists and designers. (Scrivener, 2000: 18)

The ruling by the AHRC that a creative practitioner's artefacts are considered not evidence enough that research has been conducted, provides a significant context for why creative production research projects require reflection-in-action to be employed as a research tool for reporting on creative practice. The following ruling requires that practitioners report on their activities through academic writing.

> We do not believe a creative, performance, or practice-led output should be allowed to stand on its own as a record of research activity… we have come to the conclusion that this documentation — at least for the purposes of RAE — should be required to be presented in verbal written form' AHRB's (now altered to the AHRC) recommendation to the Funding Councils.
> (Brown, Gough, and Roddis, 2004).

In response to this, attempts to define specific practice-led research disciplines in the arts, such as 'Developmental Research' and 'Applied Research' (Design, B. Brown, P. Gough, J. Roddis: March 2004), are beginning to categorise the research methods through which practitioners are using their practices as a research tool. However, there are concerns about addressing the relationship of 'practice-led research' to 'scholarly research'.

> Given that the characteristic research stance is that of objectivity, control, and distance, how might the stance of the practitioner be described? (Schön, 1983)

Here Schön (1983) poses an interesting question, which poses another in the context of creative practice. How might the creative practitioner's position be described

when the research stance is that of objectivity, control, and distance? Indeed, this 'research stance' has been taken up in response to the AHRC's statement concerning practice-based submissions mentioned above.

> In consequence, the AHRB (now the AHRC) is in danger of increasingly reducing the academic community's opportunities to test current epistemological and pedagogic models against other, more responsive, 'conversational' or 'dialogical' alternatives. This is particularly unfortunate because an acknowledged major difficulty in evaluating any new or unconventional form of knowledge is that those who undertake such evaluation usually have a vested interest in maintaining the epistemological status quo, from which they derive their academic authority, economic advantages and evaluative criteria. The result is that, in the most extreme case, no form of knowledge is officially acceptable that does not already conform to the dominant epistemological model. (Biggs, 2004)

Reflection-in-action as a mode of professional development, a research tool, and an objective of doctoral research, has become integrated into the field of the visual arts
.

> Schön sees reflection as the primary cognitive mechanism for dealing with the unexpected and, through the resolution of the unexpected, for learning. There is, then, an argument for suggesting that the practitioner could benefit if reflection was recorded and then reported more systematically. (Scrivener, 2000: 12)

As stated earlier, however, Schön did not write specifically with the visual art practice in mind. Whilst his theories have been assimilated into the field of design through Schön's examples from architecture, questions have been raised about the applicability of his problem-solving model of reflection-in-action for creative production research projects. The following chapter therefore moves to address how Schön's (1983) reflective methods have been applied to design and visual art practice.

CHAPTER 4 – APPROACHES TO REFLECTION IN DESIGN AND VISUAL ART PRACTICE

This chapter follows on from Schön's (1983) theory of reflective practice to examine the contexts for their use in art and design research and through in to the visual arts. Whilst design disciplines have been explicitly referenced in Schön's (1983: 76) 'design as a reflective conversation with a situation', visual art practice has been referred to only sparingly in Schön's writing (Schön, et. al., 1983: 70). The question addressed in this chapter asks whether the applicability of Schön's (1983) problem-solving model of reflective practice, and the 'conversational metaphor' central to how Schön's (1983) reflective methods are approached across a range of disciplines, including design, can be adequately applied to visual art practice. The investigation of this question requires examining distinctions between approaches to reflective methods in design and visual art practice.

4.1 Distinctions of Creative-Production and Problem-Solving Research Projects

Professor Stephen Scrivener is an experienced supervisor and examiner on doctoral research projects in technology, design, and creative-production. Across a wide number of papers Scrivener has offered valuable contributions to the nature of research in art and design and the relationship between theory and practice. In this chapter I draw particularly upon Scrivener's (2000) paper, 'Reflection in and on Action and Practice in Creative-Production Doctoral Projects in Art and Design', as providing a strong academic framing for the distinctions of reflective methods between design and visual art. Scrivener (2000) draws two important distinctions that have helped frame the focus of the case studies that follow this chapter. The first distinction posed by Scrivener (2000: 1-7) considers that whilst the distinctions between creative-production and problem-solving projects in design and technology are by no means black-and-white, there remain fundamental differences between them, reflected in their process, form and presentation. The second looks at the distinction between the reflective methods developed and employed in doctoral research in problem-solving design projects and creative production on the one hand, and everyday visual art and design making on the other. This distinction also is considered distinguishable from Bachelor and Master education in art and design due to the emphasis on the additional requirements imposed on the student conducting doctoral research, which Scrivener (2000: 19) maintains take the activity of reflection beyond the ordinary practice situation. In the following section Scrivener (2000: 2-4) establishes norms that help outline the distinctions between creative production and problem-solving projects in design and technology.

Figure 8: (Scrivener, 2000: 2) Norms of Technology Research Projects

artefact is produced
artefact is new or improved
artefact is the solution to a known problem
artefact demonstrates a solution to problem
the problem recognised as such by to others
artefact (solution) is useful
knowledge reified in artefact can be described
this knowledge is widely applicable and widely transferable
knowledge reified in the artefact is more important than the artefact

In my experience, most students' and supervisors' interests can be accommodated in design research projects, which like technological projects, exhibit the features identified in Table 1. What characterises this type of project, whether technological or design, is that it is focussed on problem solving. Nevertheless, I have encountered, supervised and examined students whose projects, while being concerned with the production of artefacts, exhibit few of the other features identified in Table 1. What characterises this latter kind of project is that it is focussed on creative production. In the remainder of this paper, I will explore these differences and how they are reflected in problems of process, form and presentation. […][…] While in a typical problem-solving project the "know-how" exemplified in the artefacts is of central interest because it can be reused, in creative-production projects there is no general interest or utility in this "know-how". For example, even if one knew how to, why should one want to reproduce the photographs produced by a particular artist or the ceramics of a particular ceramist. For the same reason, there is no obvious merit to this knowledge being widely applicable and transferable (however, later I shall argue that it does provide examples, images, understandings that others may adopt for, or adapt to, their own purposes). Furthermore, as noted above, the artefacts are not exemplars of the project outcomes, they are the project outcomes. Table 2 illustrates how creative production projects relate to the norms of problem-solving projects. (Scrivener, 2000: 2-4)

Figure 9: (Scrivener, 2000: 4) Relating Creative-production to the Norms of Problem-solving Research

artefact is produced
artefact may not be a new or improved version of an earlier artefact
artefact is not a solution to a known problem
artefact doesn't demonstrate a solution to a problem
the topic of interest and creative objectives may not be of obvious relevance to others
artefact may have no obvious use
there may be no value abstracting knowledge for reuse
"knowledge" reified in the artefact is unlikely to be widely applicable or transferable
the artefact is more important than any "knowledge" reified in it

Isolating the norms listed in the two tables above is an important step toward clarifying what is distinct between visual art practice, creative production and design, and consequently how they might differ in approaches to applying Schön's (1983) reflective methods. Whilst Scrivener (2000: 5) stresses what appear to be fundamental differences between creative-production and problem-solving projects he also indicates how aspects of creative production may include problem solving processes.

> A creative-production project may comprise some problem solving and, indeed, it may involve cultural theory, cultural history, and scientific research, *inter alia*. Where this is the case, it is important that the outcomes of this activity are reported. Nevertheless, it is inappropriate to view the contribution to knowledge made through these activities as the primary goal of the activity, or for the fact of this knowledge or these activities to be used to obfuscate, i.e., to claim that one is the same as the other. In a creative-production project, this knowledge is a by-product of the process rather than its primary objective. One reason for seeking to distinguish this form of project from the problem-solving form is to establish a framework of ideas and concepts that will prevent the former from becoming subsumed under the latter, which has a longer doctoral tradition and well-established norms. (Scrivener, 2000: 5)

The notion that it is inappropriate to view the contribution to knowledge made as the primary goal of the activity is a key distinction between design and visual art practice that could impact on the way in which reflective methods might be approached. Scrivener's (2000: 5) drive to establish a framework of ideas and concepts that prevent inquiry through visual art practice being subsumed by more traditional forms of research, is I feel, supported by Mark Johnson's (2010) paper 'Embodied Knowing Through Art'.

> Artistic inquiry is less abstractive and generalizing than science, focusing more on grasping the qualitative unity of a situation. Art, in Dewey's view, does not so much describe or explain; rather, it presents or enacts the qualities, meanings, and values of a situation. Dewey saw that his account of inquiry and knowing reveals a deep parallel between acts of knowing and the processes of experiencing, making, and judging art. The parallel rests on Dewey's idea that the starting point of any experience is the sense of a unifying quality that pervades the entire situation and gives it its distinctive character and direction. [...] This pervasive unifying quality is what binds the various components of any given situation together into a unified complex whole that has meaning for us. Not surprisingly, Dewey often used artworks to illustrate his claims about the role of pervasive unifying qualities. (Johnson, 2010: 158-159)

I propose Dewey's (Johnson, 2010: 158-159) view that visual art focuses on the unifying qualities of an experience is central to what is distinct about visual art practices. The rationale to isolate this distinction is to ensure visual art practice can be adequately investigated. The need to clarify this distinction has a significant bearing on the applicability of Schön's (1983) reflective methods in relation visual

art practice. In setting out norms specific to creative production Scrivener identifies specific functions for the artefacts of creative making and draws attention to the role they play in contributing to human experience.

> While a creative-production project may not exhibit the norms of a problem-solving project, this does not mean that norms cannot be identified, quite the contrary. (Scrivener, 2000: 6)

Figure 10: (Scrivener, 2000: 6) Table 3 Norms of Creative-production Research Projects

| artefacts are produced |
| artefacts are original in a cultural context |
| artefacts are a response to issues, concerns and interests |
| artefacts manifests these issues, concerns and interests |
| the issues, concerns and interests reflect cultural preoccupations |
| artefacts contribute to human experience |
| artefacts are more important than any knowledge embodied in them |

The way in which visual art making can contribute to human experience may be understood in relation to Dewey's 'Art as Experience' (1939: 35-57). Johnson (2010) presents the following passage as one of Dewey's greatest insights, in which 'art involves an imaginative, expressive transformation of the materials of existence in ways that enhance and deepen the meaning of our experience' (Johnson, 2010).

> In short, art, in its form, unites the very same relation of doing and undergoing, outgoing and incoming energy, that makes an experience to be an experience. Because of elimination of all that does not contribute to mutual organization of the factors of both action and reception into one another, and because of selection of just the aspects and traits that contribute to their interpenetration of each other, the product is a work of esthetic art … The doing or making is artistic when the perceived result is of such a nature that its qualities as perceived have controlled the question of production. (Dewey 1987 [1934]: 48)

In the Routledge Companion to Research in the Arts (2010), both Scrivener and Johnson, through separate papers, explore the relationship of 'art and research' from different perspectives. It is clear that this thesis is concerned with the nature of reflective practice in the arts, and not with the nature of research and art. However in reference to Scrivener's (2000: 6) 'artefacts contribute to human experience', in the above table, both the approaches of Scrivener in 'Transformational practice: on the place of material novelty in artistic change' (2010: 259) and Johnson's (2010: 141) 'Art and the transformation of experience', have made valuable contributions to how art can contribute to human experience. Indeed Scrivener's three conceptions of research into art, research through art, and research for art (Scrivener, 2010:

264), in addition to Johnson's particular stance on research through art and design (2010: 152) suggest an emphasis on reflection.

> I assume, with Scrivener, that one important sense of arts research is the idea that good artists are engaged in an on going inquiry into the nature of their medium, into how to produce certain effects through it, and into how to expand the capacities of that medium. There can be no doubt, for anyone who has ever tried it, that this is an intensely rigorous mode of artistic inquiry into how to do certain things through art. It requires an arduous on going dialogue with your medium (or media), extending over the lifetime of an artist who remains open to discovering new things about the possibilities of her art. (Johnson, 2010: 150)

Here Johnson echoes Schön's et. al., (1983) 'Learning as a reflective conversation with materials', in reference to the notion of an on going dialogue with media. Whilst I propose that it is just this on going inquiry into the nature of media that is a key distinction between visual art practice and design, I suggest that the metaphorical reference to a 'dialogue', which is embedded in 'conversational metaphor' through which Schön et. al., (1983) frames reflective practice in design, is not applicable in the same way to visual art practice. It is my intention to examine the role of the 'conversational metaphor' and alternatives to it through the case studies. The conversational metaphor is not alone in terms of language usage that are problematic when applied to visual art practice.

4.2 Recording and Reporting on Practice the Development of a Research Method

There have been strong recommendations that practitioners could benefit if reflection was recorded and then reported on more systematically (Schön et, al. 1983, Scrivener, 2000, Fortnum, & Smith, 2007). However, the issues connected with this require careful consideration.

> Artists … have learned to tread cautiously when it comes to reporting the internal events that produce their works. They watch with suspicion all attempts to invade the inner workshop and to systematise its secrets. (Arnheim, 1962: 1)

Rebecca Fortnum and Chris Smith quote Arnheim in their joint paper 'The problem of documenting fine art processes' (Fortnum, & Smith, 2007). The question of who documents the process of art, and why, drives their debate. A key aspect of the paper also is the range of opposing and supporting views. The spectrum ranges from Hans Namuth's infamous documentation of Jackson Pollock painting 'in action', from which one can derive the notion that too much introspection can sometimes have negative consequences for creativity, to the growing number of 'work in progress' exhibitions since the 1990's, which suggest that more attention to the process of art making, both by visual arts practitioners and audiences, is being given.

Mark Jarvis in his 2007 article published in the Journal of Visual Art Practice, 'Articulating the Tacit Dimension in Art making', states:

> A more effective articulation of practice can enable the subsequent relationship between artist, artwork and viewer to become closer. The analysis of tacit and often hidden art making processes and meaning, should help to develop a more informed viewer. (Jarvis, 2007)

Furthermore Jarvis, (2007) quotes Schön (1988: 22) to suggest that 'with regard to the interaction of hand, body, tools and materials,' artists are, quintessential reflective practitioners. The passage to which Jarvis refers, in which Schön, (1988: 22) explores Michael Polyani's (1967) 'The Tacit Dimension', is worthy of note.

> [to become] skilful in the use of a tool is to learn and appreciate directly, without processes of intermediate reasoning the qualities of the materials we apprehend through the tacit sensation of the tool in our hand. (Schön 1988: 22)

However, regarding artists as 'quintessential reflective practitioners' is problematic if reflection, as Scrivener suggests, is unremarkable to and unmarked by the practitioner (Scrivener, 2000: 12).

> According to Schön (1983), reflection is central both to the practitioner's ability to successfully complete projects and to their professional development. However, such reflection is unremarkable to and unmarked by the practitioner. Hence, the importance of such events or how they have changed the practitioner may not be consciously registered. As noted earlier, Schön sees reflection as the primary cognitive mechanism for dealing with the unexpected and, through the resolution of the unexpected, for learning. There is, then, an argument for suggesting that the practitioner could benefit if reflection was recorded and then reported more systematically. (Scrivener, 2000: 12)

Whilst I did not consider my visual art practice a creative production research project, my personal and professional interest to continue the critical investigation of practice initiated through the MA (by Project), prompted me to develop a more systematic means of recording and reporting on my practice.

> The record of creative-production is the starting point for its documentation. At the very least, this should record reflection (i.e., reflection-in-action and -practice). This will provide the material for reflection on action and practice. As noted above, this latter process is more a matter of discipline than necessity. (Scrivener, 2000: 13)

It was as Scrivener (2000: 13) points out a discipline, rather than a necessity. As Smith & Fortnum, (2007) make clear the documentation of practice has certainly been made easier, cheaper through the development of more sophisticated technologies over the last 50 years. Indeed, it was Chris Smith who suggested making use of video documentation and the process of recording the reviewing of the footage in 2001, during my Masters education. This process went through a number of stages before I considered it useful for the case studies. (A series of short edited clips are provided on an accompanying hard drive as examples of the development of the research method applied to the case studies)
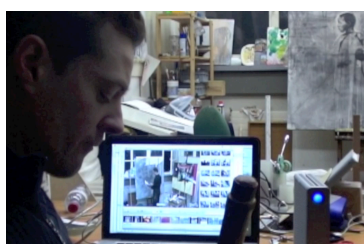
Figure 11: Film still Andrew Gray studio documentary – initial reviewing session

When initially reviewing the tapes in which I was commenting on myself working, I was struck at how lacking in insight the initial comments seemed. I appeared acutely bored by the passivity of watching myself working, and frustrated by the slow pace of the process of making captured on video. The context this related in part to the large scale mixed media paintings I was working on, which required around 100 hours to complete, therefore an hour long video tape might capture only a 100th of the progress. I can be seen frequently fidgeting, looking away, or standing up to go to the actual canvass. I was left with the feeling that I could learn far more from actually painting than reviewing myself painting.
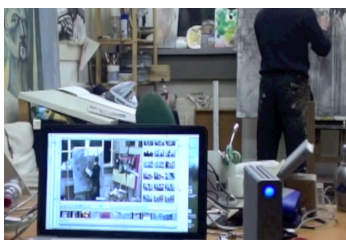
Figure 12: Film still Andrew Gray studio documentary - Preference of practice over reviewing practice

The passivity of reviewing the footage was clearly problematic for me as it was in stark contrast to the intense engagement of actually working on the painting. Indeed this problematic was exacerbated by the set up of the studio. The canvass I was working on lay directly in front of the desk on which I was viewing the video. Given the choice between the passivity of viewing myself working or the activity of actual studio practice, Scrivener's (2000: 13) distinction between the discipline required to reflect and report –on-action and -practice when operating outside of academic necessity, became very apparent.

I was dissatisfied with the limits of my reflections-on-action and the linguistic analysis, which seemed in contrast to my sense knowing through the making process or what Schön (1983) described as 'knowing-in-action'.

> I shall use *knowing-in-action* to refer to the sorts of knowhow we reveal in our intelligent action-publicly observable physical performances like riding a

bicycle and private operations like instant analysis of a balance sheet. In both cases knowing is *in* the action. We reveal it by our spontaneous, skillful execution of the performance; and we are characteristically unable to make it verbally explicit. (Schön, 1987: 25)

In relation to the skillful performance in visual art practice this notion of 'knowing-in-action' concerned me. There are stages in practice in which skillful execution could be considered a knowing, but it belied the experiential process of making that seemed to me more as a 'discovering-in-action', suggesting moving through something unknown towards realizations that become known, which are not yet at the level of reflection-in-action. There seemed to be a stage between these states that was not made explicit in Schön's (1983) theories that is significant in visual art practice.

By contrast to the initial trials of using video documentary to capture and reflect on action, I felt I was becoming more attentive to my natural inherent ability to reflect in the midst of action. In some cases the potential meaning of a gesture, or visual quality, would emerge as a state of realization that something had been internalized, and only later would that sense be articulated without having to search for it, rather it was a case of developing sensitivity towards it. I came to the conclusion that there was a rich layer of meaning making occurring on a non-verbal level and that my conceptual ideas had been shaped in part by my embodied experience of the physical qualities of the materials. I considered that this was a case where, as Johnson (2007) asserts, the nature of meaning traffics firstly in images, patterns, feelings and qualities before becoming conceptual and prepositional. It also reminded me of the writing of the Phenomenologist Gaston Bachelard in 'Earth and Reveries of Will - An Essay on the Imagination of Matter' (1943) in which he considers how human will is pitched against the resistance of matter.

Sometimes this form of natural phenomenological reflection would force me to pull out of the activity and write the idea down, wherever possible, sometimes on the studio wall. This process was certainly not as rigorous as systematic diary entries, but it curiously seemed more useful to me than the form of constructed reflection I had attempted to employ through recording and reporting on practice using the video as a tool.

As a consequence of my dissatisfaction with the documentary footage I found that when studio time was limited I would fail to review the tapes from the previous sessions. My studio practice was entirely unaffected by this lack of discipline. Whilst I continued to document my studio sessions I ceased the reviewing process, and over time the tapes built up. The process of setting up the camera and filming became redundant, and yet as habitualistic as having music playing in the studio. By contrast

my interest in the insights garnered through phenomenological reflection intensified.

Figure 13: Film still Andrew Gray studio documentary - Reviewing the reviewing process

However, this dissatisfaction transformed when I began the process of reviewing the reviewing stage. I began commenting on myself commenting on my self, and found the process very interesting. In one instance I returned to the studio after a month absence and found watching the tapes very encouraging. There was, for example, an experiential assertiveness to the painting approach when the work was at a less advanced stage, which forced me to reflect on the way I regarded the present state of the painting with a sense of preciousness, and concluded that this may inhibit the progress on the remaining areas.

This experience was certainly beneficial in developing the research method I have applied to the case studies. It also helped to establish what aspects of practice are to be documented, how they are documented, what it reveals about practice and how it is reported on. It also provided a context to understand the distinctions Scrivener (2000: 19) makes between creative production doctoral research projects and everyday art and design making.

4.3 The Role of Reflection in Creative Production Doctoral Research Projects

Scrivener (2000: 19) considers that the additional requirements imposed on the student in the context of a doctoral programme take the activity beyond ordinary art and design making. In the following passage Scrivener (2000: 10) examines the distinction between problem solving research projects and creative production in detail.

> Clearly, although Schön (1983) presents a theory of practice that is very different to Simon (1969), practice is nevertheless conceived in terms of problems and solutions. Furthermore, Schön's scientific language of theory of action, logic, experimentation, hypothesis and experimental rigour is at odds with my sense of creative-production. While I do not have adequate alternatives to put in their place, I would emphasise that I do not see creative production in these terms. Nevertheless, in my experience, the things onto which these words are attached, the process and its characteristics, seem to capture much of that which I have also observed in the actions of my creative-production project students. (Scrivener, 2000: 10)

Whilst specifically aimed at creative production research projects I consider that this is a significant passage also in relation to visual art practice. In this research I find that my sense of visual art practice is at odds with Schön's (1983) choice of scientific language. I agree with Scrivener's (2000) ascertain that the 'processes and characteristics' of this language has the potential to capture much of what I have also observed in both the actions of my own visual art practice, and that of others. However, the mere suggestion of the absence of adequate alternatives suggests that the appropriation of inadequate language is something of a compromise, however, useful it may be. If the potential exists to improve it even in a minor way I propose it is investigated. Scrivener (2000: 10) sets out the processes and characteristics evidenced in Schön's (1983) and how they can be applied to creative production in eleven succinct points, which I separate numerically so as to make referencing them more accessible:

1. Schön's (1983) theory stresses the role of tacit knowledge in competent practice, *i.e.*, knowing-in-action and -in-practice.
2. Second, he puts store on problem setting as something that recurs throughout the process in response to difficulty or uncertainty encountered during a task. Dialectic occurs between the situation and the practitioner's conception of the task in hand which stimulates a parallel dialectic between problem setting and problem solving.
3. Third, reflection is the primary conceptual tool for handling the unexpected.
4. Fourth, creative action is a way of keeping things moving.
5. Then there is the notion that past experience provides examples, images, understandings and actions, rather than generalised theories, methods, techniques or tools.
6. Sixth, there is the recognition that the creator's interest is in transforming the *situation* (*i.e.*, psychological, emotional and created) to something better (*e.g.*, equilibrium between intention and realisation).
7. Seventh, there is idea that action seeks to shape the situation to intentions, rather than to test understanding.
8. Eighth, there is the recognition that the process is subjective.
9. Ninth, there is the insight that the creator seeks affirmation, not confirmation, of the appropriateness of a course of action.
10. Then there is the idea that only those things that lend themselves to embodiment in creative action are worth exploring.
11. Finally, Schön shows that the practitioner's response to the situation demands a certain kind of rigour; there are appropriate and inappropriate ways of responding (see Section 8 for further discussion of this point).

(Scrivener, 2000: 10, numeration added)

However, because a creative-production project is not concerned with and does not reduce to a problem and its solution it is not possible to separate formative processes from outcomes and to specify a "calculus of decisions" (*i.e.*, that relates means to ends). The relationship between issues, concerns and interests and outcomes in a creative-production project is one that changes throughout the entire process. Thus, unlike a problem-solving project,

> where we can largely ignore the actual problem setting and solution processes, I am of the view that description of the creative-production process should be the principle means by which students demonstrate that they are self-conscious, systematic and reflective creators. In the following sections, I will argue that Schön's (1983) theory of design as reflective practice provides us with concepts which help to characterise creative production, *e.g.*, to identify what should be attended to in the process, its form and documentation. (Scrivener, 2000: 10)

I consider that many of the points listed above have the potential to correspond also to visual art practice in both an academic and non-academic context. Understanding the structure of visual art practice situations in these terms can be beneficial to the practitioner in a variety of contexts. Points 5 and 6 represent complex cognitive processes that require further consideration. I would suggest that point 7 is a two way process where action not only shapes the situation to intentions but also shapes the intentions in some situations. With regard to point 10 I must speculate as to whether Scrivener (2000: 10) refers to embodiment in the context of things that can be physically explored through practice or in a wider relation to embodied cognition. In reference to the latter, I consider the role of embodiment to be extremely worthy of exploration, particularly in relation to points 5 and 6 on the list. I consider this key to enriching Schön's (1983) theory of reflective practice and for deepening understanding of visual art practice. Due to the way in which issues, concerns, interests and outcomes changes throughout the entire process of creative making I support Scrivener's (2000: 11), and Jarvis' (2007), views that the articulation of the creative processes are a principle means of developing both a more informed practitioner and a more informed viewer.

> I am suggesting that if we are to give greater attention to the process of creative production, then this should focus on the recording and reporting of these moments of reflection, including intended and unintended consequences and responses to them. The systematic recording of making and reflection-in-action and -practice would play a crucial role in supporting the practitioner's reflections on action and practice and in making the whole creative-production project more accessible, both to the researcher and those to whom the project is communicated. (Scrivener, 2000: 13)

Following Scrivener's (2000) investigation further, through the context of the creative production research project may offer further insights into how Schön's (1983) theory in relation to visual art practice might be better understood.

4.4   Moments of Reflection-in-Action

Scrivener's (2000: 13) proposal that the description of creative production should be focused on these 'moments of reflection-in-action and –practice', leads to further questions as to the nature of each of those 'moments' in relation to visual art practice.

Schön (1983) describes how practice is an exploration in which the practitioner seeks to come to terms with a given creative task. This exploration involves the formulation and testing of ways of proceeding. Generally, all thinking in this activity is directed toward action. Occasionally, when ways of proceeding don't work or when they produce unintended consequences, the practitioner is forced to reflect on implicit knowledge and strategies. At such points, the practitioner steps out of action momentarily and past action and outcomes become objects of conscious attention. When a practitioner reflects on knowing-in-practice they reflect on knowledge and ways of working automated over an extended period (cf., Figure 1, reflection-in-action and -practice, RIAP). Practice is made up of projects lasting days, weeks, or months. Whenever work is suspended, at the end of the day, at weekends, during project suspensions and upon project completion, the opportunity exists to reflect on the current project, the approach taken to it, and on its relation to past projects. (cf., Figure 1, reflection on action and practice, ROAP). In contrast to reflection-in-action and -practice, reflection on action and practice is not driven by the unexpected per se but by the desire to learn from experience: it is a discipline rather than a necessity for further action. (Scrivener, 2000: 11)

Figure 14 (Scrivener, 2000: 12) Reflection in and on design episodes and projects
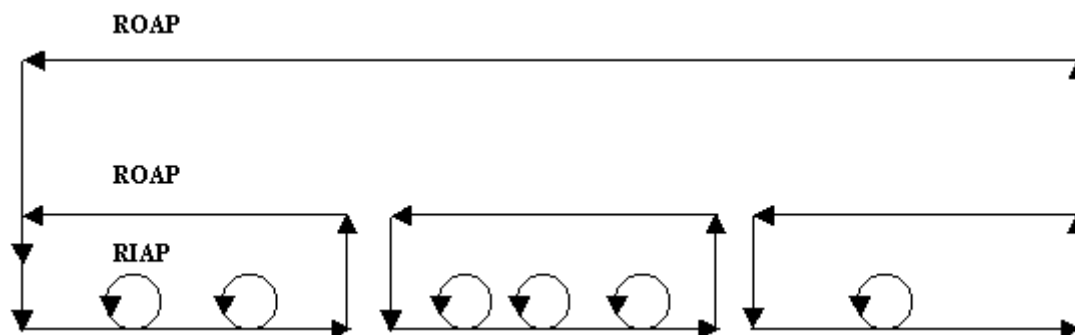
Reflection here is applied over various time scales, in this sense the discipline required needs to have endurance and applied in a number of contexts. Under the conditions of a doctoral program or similar conditions the capacity to reflect-in and –on-action and –practice, through rigourous documentation, is a necessity. Despite this obligation however, a practitioner still has to negotiate a range of reflective situations, and know what to reflect upon. Scrivener (2000: 12) outlines 5 aspects of these moments of reflection-in-action that he as a supervisor would like to see doctoral students record. This required reporting on the following operations, all of which were then to be reflected on, both with regard to their contribution to practice and their implications for future action and practice (Scrivener, 2000: 13).

1. each surprise during working and its associated frame
2. refuted theory of action
3. surfaced tacit knowledge
4. revised theory of action
5. revised frame and subsequent action (Scrivener, 2000: 13)

Regardless of the disciplined application of Schön's (1983) theory of reflective practice in the way proposed by Scrivener (2000), the quality of the reviewing process is only as good as the data collected. Of the 5 aspects list above the third is of particular interest in the context of this thesis. The notion of surfaced tacit knowledge, is something I consider to be extremely important in particular reference to visual art practice and I will return to it in subsequent chapters. As outlined in the previous chapter Knowing-in-action, (Schön, 1983) describes the tacit knowing implicit in skillful performance when practice is going well, reflection-in-action (Schön, 1983) takes over, and describes the processes cycled through, only when problems are encountered in practice. Scrivener (2000) illustrates how the transition between knowing-in-action and reflection-in-action is related to encounters with surprise.

> Table 4 shows the full range of outcomes arising from on-the-spot experimentation, i.e., those meeting the practitioner's expectations or not, together with the desirability of intended and unintended consequences.

Figure 15: (Scrivener, 2000: 12) The outcomes of on-the-spot-experimentation (from Schön, 1983: 153)

	Consequences in relation to intention	Desirability of all perceived consequences intended or unintended
1	Surprise	Undesirable
2	Surprise	Desirable or neutral
3	No surprise	Desirable or neutral
4	No surprise	Undesirable

> In the first case, the move is disaffirmed and the practitioner's theory of action is refuted; here the practitioner is obliged to reconsider its relevance and appropriateness. In the second case, although the theory of action is refuted, since the result is desirable there is no obligation, in the logic of reflective practice, for the practitioner to surface and reflect on the underlying theory of action. In the third case, the move is simply affirmed and design can continue without any need for reflection. Finally, in the fourth case, although the theory of action has produced the expected result the outcome is undesirable. This will necessitate reflection, not some much about the truth of the theory but its scope of relevance, thus promoting a search aimed at extending the theory of action to cover the observed case. Consequently, only outcomes 1 and 4 demand reflection-in-action and -practice, but demand it they do and to ignore such demand is a failure of rigour in on-the-spot experimentation. (Scrivener, 2000: 12)

Writing some ten years later Scrivener (2010) continues to explore surprise in relation to cognition. This progression from the practical application of Schön's (1983) theory of reflective practice to an examination of cognitive transformation, in which surprise is central, is an important development. It draws upon recent research across a range of knowledge fields, such as cognitive psychology. This

progression is echoed in the following chapters where the potential of embodied cognition to enrich understanding of reflective methods in the visual arts is explored.

> Kagan writes in the introduction to his book Surprise, Uncertainty and Mental Structures (2002: 4) that, events that are transformations of an agents psychological forms are significant incentives for brain activity and its psychological consequences […] Events that are discrepant from schemata create a state one might call surprise. Surprise occurs when ones expectations do not fit the situation. Meyer, et al. (1997) have proposed a staged model of cognitive surprise in which a cognized event is appraised utilizing a mechanism that computes the degree of discrepancy between the cognized event and existing beliefs, and then tests this value against an unexpectedness threshold. Crossing the unexpectedness threshold is accompanied by the experience (emotion) of surprise, followed by the interruption of on going information processing and the reallocation of processing resources to the analysis and evaluation of the unexpected event and its resolution, namely the updating and revision of existing schemas or beliefs (Meyer et al. 1997; Reisenzein 2001). The surprise mechanism functions to enable, by interrupting and refocusing attention and cognitive resources, and to provide an initial motivational impetus for immediate adaptation to the surprising event and cognitive change enabling future occurrences of similar events to be handled. (Scrivener, 2010: 273)

Scrivener's (2000: 18) approach has been to consider why the norms and tests of problem-solving research are not appropriate to creative-production. Scrivener (2000: 18) concludes that framing appropriate norms and tests is insufficient.

> The relationship between the issues, concerns and interests explored and the artefacts produced is so tied up with act of making that this can only be revealed through description and reflection on the underlying creative-production process. I am persuaded that Schön's (1983) theory of reflective practice provides us with ways of thinking about the nature of the creative-production process, the way past experience (both personal and collective) is brought to bear on it, the assessment of action, rigour in creative-production, and the stance of the practitioner.
>
> I have proposed that reflection should be central to the discipline of creative-production. This will involve recording creative production in a way that captures moments of reflection-in-action and -practice (*i.e.*, material for reflection on action and practice). This emphasis on the underlying experience of creative production has implications both for the shape of the research programme and the form of its reporting, and I have sketched out patterns for each that I hope to work from in future projects. (Scrivener, 2000: 18)

Schön's (1983) model of reflective practice as indicated by Scrivener (2000), has been shown to be beneficial in bringing structure and rigour to reflective methods across design and creative production research projects. Despite the framing of knowing-in-action and reflection-in-action (Schön, 1983) having greater correlation to design in its use of scientific language, Scrivener (2000: 18-19) has found it workable in the context of creative production research. I have suggested that the

appropriation of inadequate language, which leads to issues of structuring what is attended to in reflection, constitutes a compromise, and proposed to investigate the potential to improve the applicability of Schön's (1983) theories, even in a minor way, in relation to visual art practice. In this respect the recommendation for addressing the issues of applicability of Schön's (1983) reflective method in relation to visual art practice is presented as additional to, rather than a radical overhaul of, the theories proposed in the reflective practitioner (Schön, 1983).

Scrivener (2000: 18-19) suggests a focus for this investigation by placing the emphasis firmly on the underlying experience of creative production. This provides a focus for reflection, which Scrivener (2000: 18-19) proposes ought to be central for his creative production doctoral research students, in a way distinct from students conducting technology or problem-solving design projects. Focusing a practitioner's attention on the underlying experience of practice is a powerful recommendation that I consider equally valuable in relation to visual art practice and one that is taken up through the following case studies and indeed in the remainder of this thesis.

The following section therefore presents two case studies that were chosen to investigate samples of reflective methods in academic research in art and design. In both of the case studies reflective methods have been constructed to accommodate academic rigour. The term Constructed Reflection, has therefore been assigned to them.

In the following chapter reference is made to Scrivener's (2000: 19) distinction between the reflective methods employed in academic research in art and those occurring naturally in the practitioners' practice situations. The term Naturalistic Reflection has therefore been assigned to the two case studies presented. The focus in the analysis of these case studies, places the emphasis on the underlying experience of practice and how that might be better recorded and reported on.

Constructed Reflective Methods (CRM)– Case Studies 1 & 2

The term Constructed Reflective Methods (CRM) has been developed to describe methods of reflection designed to be academically rigorous. Two cases studies where chosen from a number of candidates through which to explore Scrivener's (2000: 2-7) distinction between the way in which Schön's theories can be applied. Initially this search extended only to completed PhD thesis in both art and design, however upon the recommendation of my main supervisor, I looked also at post-doctoral research and independent research projects that were academic in nature.

For the example of CRM in design, Owain Pedgley's doctoral thesis was chosen as his primary focus was the development of a systematic means of recording and

reporting on design activity through the use of a diary. Pedgey's (2007) use of the diary as a reflective tool and his use of Schön's (1983) theories of reflection-in-action, served to illustrate the benefits of Schön's (1983) problem-solving model of reflective practice in the field of design. Pedgley, (2007) describes how end-of-the-day diary entries (framed as reflections-on-action and –practice), helped to 'raise the level of alertness to own design activity (reflections-in-action and –practice), easing the grasping of some design issues and aiding decision-making' (Pedgley, 2007).

For the example of CRM in visual art practice, the decision was taken to look Beth Harland's involvement with the VIRP (Visual Intelligences Research Project). Whilst not a doctoral research project it seemed to epitomise the academic rigour that could be applied to reflective methods in visual art practice, whilst presenting the opportunity to explore what is distinct between visual art practice and design.

4.5 Case Study 1: Owain Pedgley – Capturing and Analysing Own Design Activity

> A strength of practice-led research is the familiarisation that the researcher can draw upon in creating these connections, both for the designing being analysed and the specialist subject being probed. (Pedgley, 2007)

The following citation comes from the field of research in design, Owain Pedgley, like Scrivener (2000), isolates a number of important issues relating to the methodological considerations in developing rigorous research methods in ones own practice.

> The purpose of this paper (Capturing and analysing own design activity, (Pedgley, 2007) is to identify and discuss the principal methodological considerations for creating a convincing research evidence base from own design practice. It centers on the need for systematic and objective tools for capturing and analysing design activity, with the intention of achieving the rigour associated with studies of other people's designing (Cross et al., 1996; Bayazit, 2004). One of the chief characteristics of practice-led research is that it is highly personal, being centred on the creative practices of the self. Practice-led researchers must subscribe to the goal of making public one's private design discourses. There can be no place for seeking to uphold an inexplicable 'black box' account of art and design practice (Fallman, 2003) or a reluctance to be candid about own creative processes (Hockey and Allen-Collinson, 2000). Nor can the artefacts arising from design projects be relied upon to communicate aspects of their conception, development or research relevance (Rust et al., 2000). The consensus amongst researchers is that practice-led research must include substantial reflection, analysis and theorising on one's design activity and design outcomes if the work is to be differentiated from routine design practice (Frayling, 1997; Friedman, 1997; Cross, 1998; in press). (Pedgley, 2007)

Pedgley's (2007) research is significant also in respect to the case studies presented in this chapter, as it provides clarity between the reflective methods employed in the problem-solving and creative production research projects described by Scrivener in the previous chapter.

The position Pedgley (2007) describes has become a familiar rationale for practice-based research in art and design. Schön's (1983) claim that, 'Professional knowledge, in the sense of the propositional contents of applied science and scholarship, occupies a marginal place – if it is present at all – at the edges of the curriculum', may have been true in 1983, but the advent of practice-led and practice-based research has brought academic rigor into art and design research. Professional knowledge and scholarship rather are integral aspects of critical art practice for many creative practitioners, and the drive through practice-based and practice-led research to have practitioners theorising their own practice is testament to the significant academic progress made over the last two decades.

Owain Pedgley has contributed to the development of this trend through the practice-based research methods applied to his 1999 doctoral thesis in industrial design at Loughborough University. Now Assistant Professor in the Department of Industrial Design at Middle East Technical University, Ankara; and Visiting Fellow in the Department of Design and Technology, Loughborough University, he is also a founding member of the musical instrument innovation project Cool Acoustics.

It was through the field of New Product Design that Pedgley reinvented the concept of an all polymer acoustic guitar first developed in the 1950s by Mario Maccaferri, but which at that time failed in the market place. In his 2007 paper 'Capturing and analysing own design activity', (Pedgley: 2004, 463-483), Pedgley outlines work from his 1999 doctoral thesis, which centred on the 'guitar project'. This paper carries the retrospective refinements of 8 years of academic work and may be considered superior to the original thesis. It deals with his thesis as a critical study on the reflective methods employed in the research process. Indeed this was Pedgley's recommendation both in a personal email to the author and in an earlier JISCMail thread entitled 'Please Help: Practice as a method of data collection'.

> Much time has passed since gaining my doctorate (over ten years now). Consequently, I am heavily critical of the way I presented my doctoral study in the thesis and also have reservations about some of the research structure. The fact that it is still cited as a good example gives a sense of fulfilment for me of course. I guess it should really be viewed as an historic document now, conceived and prepared at a time when far, far less advice was available on conducting academic research through designing an artefact. Even PhD-design list did not exist :) If you would like to access the thinking and achievements for the various PhD thesis chapters, then it would be better for you to look at the journal articles that were published subsequently.
> (https://www.jiscmail.ac.uk/cgibin/webadmin?A2=phddesign;e27e7640.1005)

The journal articles Pedgley refers to are as follows:

Pedgley O. (2009), 'Influence of stakeholders on industrial design materials and manufacturing selection', International Journal of Design, Vol.3 No.1, pp1-15.

Pedgley O., Norman E. and Armstrong R. (2009), 'Materials-inspired innovation for acoustic guitar design', METU Journal of The Faculty of Architecture, Vol.26 No.1, pp157-175.

Pedgley O. (2007), 'Capturing and analysing own design activity', Design Studies, Vol.28 No.5, pp463-483.

Pedgley O. and Wormald P. (2007), 'Integration of design projects within a PhD', Design Issues, Vol.23 No.3, pp70-85.

From these papers a critical analysis of the reflective methods employed in Pedgley's design practice can be garnered. The method of particular relevance concerns the use of a diary in order to record daily activities. The rationale for including Pedgley's reflective practice in this thesis is threefold. Firstly as a practice-led research project in the field of design it provides a concrete case study through which to explore the distinctions between a problem-solving model research project and the creative production research projects which will follow (Scrivener, 2000: 2-7). Secondly, Pedgley's application of a rigorous reflective method through the use of a diary is clearly developed from the need to satisfy academic criteria and is embedded in a tradition of academic research, this provides a counter point for the analysis of the case studies from practitioners operating outside of academia. Thirdly, the diary method he developed possesses a number of novel refinements from those employed in the social sciences in order to collect ethnographic data, which are distinct to creative practice.

Pedgley's rationale for using the diary method, was derived from the premise that a successful data collection method had to satisfy four criteria:

1. **Solo effort.** Opportunities to employ a second researcher to fulfil a data collector or analyzer role may not exist. Data collection must therefore be executable as a solo effort.
2. **Endurance.** Data collection must be compatible with a longitudinal design project, spanning months if not years.
3. **Subject delimitation.** Without subject delimitation, literally all aspects of design activity are candidates for capture. This would result either in data overload and researcher fatigue or data dilution, caused by too much breadth and too little depth. Data collection must therefore be carefully directed towards the specialist subject of the research.
4. **Mobility.** Data collection must allow designing to be carried out in

multiple locations, such as a studio, workshop and home, as is normal for a longitudinal project.

Pedgley (2007) follows this up with the following list, presented in Design Studies 28, (2007: 470) that details which of the data collection methods available to him satisfied all four criteria. The methods he considered include:

- Project archiving – in which the designer systematically collects and archives outputs for modelling, minutes of meetings and suchlike
- Project report – the designer creates a varied and detailed factual account of the project upon its completion
- Interview – suggested as oral exchanges between a designer and a researcher
- Questionnaire – a range of 'tick box' and 'write about' requests are prepared by a researcher and completed in printed form by the designer
- Survey – Suggested as being administered on a large enough scale to gain statistically strong generalised results. Exactly how extensive ought a survey to be in order to provide usable data in this context?
- Observation – A researcher carefully monitors and takes notes on a practitioners externally perceptible activities
- Participant observation – The designer is involved in observing and note taking on the dynamics of social situations occurring during the design process
- Action research – here the designer initiates and evaluates perhaps with the aid of an observer/researcher, the effects of a planned intervention on the design process.
- Diary – The design process is reported on at regular intervals. In this context Pedgley suggests that there be a particularly strong emphasis on the designers personal experiences and perceptions. This suggestion has a rationale and theoretical context with requires further analysis in this chapter
- Protocol analysis – Real-time audio is recorded with the intention of capturing concurrent vocalisation, which can later be transcribed. Video footage is recorded from which Pedgley suggests cognitive activity can be revealed
- Replication protocol analysis – a researcher independently attempts to deduce the designers apparent line of thinking by examining both the brief and the final design proposal
- Reflective conversation – A reference to Schön's reflective practitioner whereby the designer uses reflection-in and –on action and –practice to

verbalise thinking. Pedgley describes this as occurring both during and after design episodes. It is questionable the degree to which a practitioner can conduct a verbal reflective conversation whilst in the midst of designing.

The 'reflective conversation' was included as a candidate data collection tool, but it was rejected because it required a conversational interview with a 'facilitator'. However, reflective conversation has its origins not as an empirical data collection tool but rather as an explanation of the silent cognitive processes that drive professional expertise, known as 'reflective practice' (Schön, 1983). Reflective practice is said to comprise reflection-in-action (the mechanism for 'thinking-on-one's-feet') and reflection-on-action (the mechanism for retrospective 'stock-taking') (Moon, 1999). In the context of design practice, reflection-on-action involves a deliberate pause in designing to make critical comment on the period of activities that has passed, in order to orient subsequent designing in a desired direction. The reflection is made using the outputs of design modelling as stimulus material, revealing for example a 'conversation with materials conducted in the medium of drawings' (Schön and Wiggins, 1992). (Pedgley, 2007: 470)
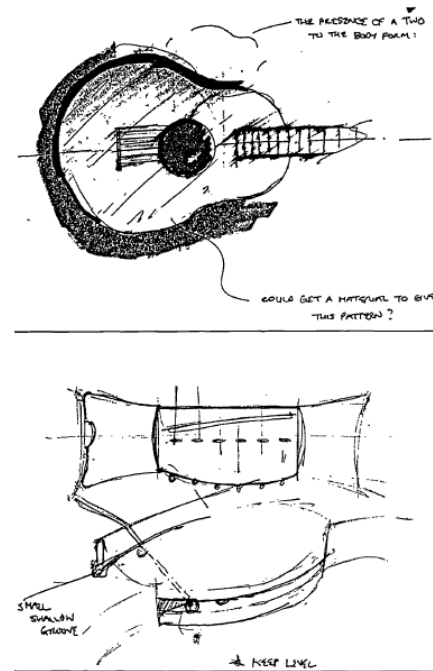
Figure 16: (Pedgley, 1999: 260) Artwork associated with cognitive modeling initiated by the act of drawing

Pedgley questions the degree to which a practitioner can conduct a verbal conversation whilst in the midst of action. When I first came across Schön's (1983) work, 10 years ago this was also my first question however, this appears to have been a common misconception that Schön (1983: 276) attempts to counter when addressing the limits of reflection-in-action.

> According to conventional wisdom, thinking interferes with doing in two ways. First, artistry being indescribable, reflection on action is doomed to failure, and second, reflection-in-action paralyzes action. Both arguments are largely, though not entirely mistaken. They owe their plausibility to the persistence of misleading views about the relation of thought to action.
> As to the first argument, I have already noted that "artistry" has two meanings. It may designate intuitive knowing, like the intuitive judgements of a skilled craftsman or the intuitive theories-in-action of an expert block-

balancer. It may also designate reflection-in-action on intuitive knowing, as in Quist's designing or the Supervisor's interpreting. In both these senses, artistry is describable. When practitioners reflect-in-action, they describe their own intuitive understandings. And it is possible to describe reflection-in-action itself, as I have done in previous chapters. (Schön, 1983: 276)

From the list presented in Design Studies 28, Pedgley (2007: 470) deduced that of the suggested data collection methods that satisfied all four criteria, both 'action research' and 'participant observation' required a social interaction, which for solo practitioners may be untenable. Furthermore, the use of a 'project report' was considered by Pedgley as too distant, in terms of post-event analysis, leaving the diary as the only credible method.

Diaries are used widely in social sciences to gather ethnographic data. One of the attractions of a diary as a data collection tool is that it requires no oral-to-text transcription, so a great deal of time and effort can be avoided during data preparation. Nonetheless, the use of diaries as a design research tool is rare, most probably because diaries are associated with longitudinal design activity and macroscopic analyses, which have tended not to be the focus of researchers. Almost without exception, where diaries have been used they have been for studying other people's longitudinal designing rather than to account for own design practices. For example, Jagodzinski et al. (2000) used a written log as a repository for the results of interviews held weekly with design engineers across a 40-week project. Ball et al. (1994) managed diary studies of seven electrical and electronic engineering student projects. Mackinder and Marvin (1982) compiled diary studies of architects' intended and actual activities over a weeklong project. The only known previous work combining longitudinal own design practice with a diary is Hales (1987), who used a daily journal to log details of meetings and work done across a three-year engineering design project, recording a total of 1373 'project interchanges'. […] It was apparent that the full potential of design diaries as a data collection tool had yet to be realised. A major objective of this present work was therefore to trial and evaluate a new form of design diary, devised especially to capture own design activity in the context of practice-led research. In response to weaknesses identified by Hales (1987), emphasis was placed on increasing the level of personal conscience and accountability communicated in the diary, augmenting plain logs of 'time spent and work done'. The new diary was required to extend beyond the specification-oriented investigation and inspiration typically found in a fieldwork diary, to contain more insightful accounts of decision-making. As well as facts, diaries traditionally reveal emotional responses towards circumstances, along with moments of serendipity and comments on perceived roles within social situations (Duncan, 1993; Moon, 1999). These were the kinds of entries that were sought, characterised especially well by Brett (1987). (Pedgley, 2007)

During the third year of Pedgley's doctoral research project in 1999, he created over a period of 203 days, 408 separate diary entries. The duration of these entries ranged from 45 minutes to 10 seconds, and averaged at 15 minutes (Pedgley, 1999, 2007). Prior to commencing this section of his research and beginning the diary entries, Pedgley outlined a theoretical basis for the use of the diary, which grounded party in Schön's theories of reflection-in-action.

Hatton and Smith (1995) identify three types of written report arising from reflection-on-action: descriptive reflection (a factual account of an event), dialogic reflection ('stepping back' to give account of personal involvement and influence on an event) and critical reflection (exploring reasons for an event in a broader social, ethical, moral or historical context). Reflection-on-action has obvious parallels to the retrospective accounting required for diary writing. It was thus adopted as the main mechanism for creating diary content, performed as a self-conversation with one's inner voice. (Pedgley, 2007)

This emphasis on reflection-on-action, which Pedgley describes also as marcoscopic analysis, rather than reflection-in-action, microscopic, grounds the reflective practice employed in Pedgley's research firmly in post event analysis.

End-of-the-day diary writing was experienced as a secretarial layer on top of the guitar project. It required meticulous organisation, whilst a quiet location without interruptions was found to be beneficial. Perseverance towards the task was solid because the award of an academic degree was at stake. Even so, as would be expected over such a longitudinal project, motivation for diary writing occasionally waned. An awareness to write diary entries was omnipresent and was felt to raise the level of alertness to own design activity, easing the grasping of some design issues and aiding decision-making. Regrettably, the degree of deviation away from 'normal practice' caused by such interference effects is impossible to ascertain, but the lasting impression having completed the diary is that the effects had a positive influence. On a few occasions, the prospect of design activity rich in attention to materials and manufacturing fuelled an excitement that strong diary entries would result. With regard to data validity, the diary entries showed extensive correlation to modelling outputs throughout the guitar project: evidence that can allay concerns over honesty and post-event rationalisation. (Pedgley 2007)

This thesis concludes that Owain Pedgey's use of the diary as a reflective tool and his use of Schön's (1983) theories of reflection-in-action, serves to illustrate the benefits of Schön's (1983) problem solving model of reflective practice in the field of design. Pedgley, (2007) describes how end-of-the-day diary entries (framed as reflections-on-action and –practice), helped to 'raise the level of alertness to own design activity (reflections-in-action and –practice), easing the grasping of some design issues and aiding decision-making' (Pedgley, 2007).

4.6   Case Study 2: Beth Harland - Structuring a 'Conversation' Between the Painting's Surface and the Digital Screen

For the example of constructed reflective methods in visual art practice the decision was taken to look Beth Harland's involvement with the VIRP (Visual Intelligences Research Project). Whilst not a doctoral research project it seemed to epitomise the academic rigour that could be applied to reflective methods in visual art practice, whilst presenting the opportunity to explore what is distinct between visual art

practice and design. This case study will therefore look initially at the VIRP as a whole, before then focusing on Harland's involvement.

In 2004, Harland participated in a seminar organised by Rebecca Fortnum, then Research Fellow for the VIRP, which was an initiative of the art section of the Lancaster Institute for the Contemporary Arts within Lancaster University. This seminar brought a group of prominent artists together to respond to a list of questions relating to issues of decision-making and process within their individual practice (Senior, 2007).

In 2006, the work the seminar inspired, culminated in an exhibition 'Inspiration to Order', staged at the University Art Gallery of California State University in 2006, so titled from an essay by Max Ernst (Fortnum, 2006).

In the catalogue for the 'Inspiration to Order' Exhibition, staged at the University Art Gallery of California State University in 2006, the curator Rebecca Fortnum, presented a paper entitled, 'What is visual intelligence, and how do artists use it?' The pertinence of the question provide scope for an extensive exploration of various answers, which are worth exploring here in order to contextual Beth Harland's contribution to the Visual Intelligence Research Project (hitherto referred to as VIRP) in respect to this thesis. Rebecca Fortnum begins by quoting Martin Kemp, a quote, which both Fortnum and Smith suggest is a statement which 'rings true for most artists and, if demonstrated, does much to challenge populist views of the 'conceptual' nature of contemporary art' (Fortnum & Smith, 2007).

> …works of art are physical products made by executants who face real challenges, and do not come ready-made from the heads of their makers. (Kemp 2003: 37). (Fortnum, 2007)

This extract from Kemp's 'The Art Book', is refreshingly resolute, and I shall draw upon it again later in the thesis in context to the embodied nature of reflection-in-action. However, Nigel Whiteley (JVAP, 2007) who presents more of this quotation,

> Whether he [David Hockney] is right or wrong, in part or whole, it also reminds me that art historians have no monopoly of interpretation, and that many of our concerns may be driven more by the internal dynamics of our industry than by acts of hard looking and intellectual adventure. (Whiteley, 2007)

Whiteley (2007) employs it in order to remind us, that in reviewing Hockney's book 'Secret Knowledge', Kemp is making the point that the statements of artists must be treated with as much caution as those of historians in terms of discerning truth conditions about art practice. Whiteley furthermore makes the valid assessment, which Fortnum and the VIRP attempt to address, that the written accounts of historians, whilst all valuable and contribute to cultural knowledge and

understanding (Whiteley, 2007) are insufficient on the own to offer insight into the intimate functions of visual art practice.

> What these other approaches almost invariably lack are specifics about the artist's working process and thinking, and the documentation of the creative process with an embedded commentary that helps to explain why as well as what and how. (Whiteley, 2007)

Rebecca Fortnum's introduction to the concept of Visual Intelligences from the catalogue of the 'Inspiration to Order' exhibition continues from Kemp's description of art practice as being made by 'executants who face real challenges' (Kemp 2003: 37):

> The Visual Intelligences Research Project at The Lancaster Institute for the Contemporary Arts seeks to investigate these 'real challenges', that is the way visual artists think and make and, most importantly, the relationship between their thinking and making. The term I am proposing for the interconnection of thinking and making is 'visual intelligence' and, whilst the phrase has its difficulties, for many it proves an interesting proposition. The term seeks to address the fact that Kemp highlights; most visual artists make a number of decisions whilst making their work that aren't purely conceptual or only to do with material and technique but lie in the relationships between these aspects of making. At this moment in time the articulation of visual intelligence could be helpful for both intellectual and pragmatic reasons, providing new ways to map artists' processes and methodologies. It is hoped that the phrase may present a genuine life raft, enabling the decision-making processes of contemporary visual practices to be recognised and enter certain academic debates where they have been largely absent. (Fortnum, 2006)

The agendas of the VIRP are here expanded considerably, the ambition of which is admirable. From that of a research project involving a number of artists/researchers, which culminated in an exhibition, Fortnum presents the concept of 'Visual Intelligences' rather as an overarching phrase, which having been applied during the VIRP, is suggested may present a genuine opportunity to examine the decision-making processes of contemporary creative practice to gain a level of recognition in academic debate, which Fortnum considers is presently lacking (Fortnum, 2007). This term is presented both as sign and signifier for the tacit/embodied decision-making processes involved in the act of making, that which Katz (1997) is quoted as calling unconscious or nonverbal intelligence.

> Well… I'm pretty sure… you have an idea about what a painting should be, or an idea of a painting. And then it correlates with something I see and then I start out empirically and optically. And when I do that I get involved… there's an unconscious procedure and it gets into something I wouldn't have thought of to start with. It moves around a bit and that's the part that's interesting. Because when you go in there you find things; weird things happen and some are all right and some aren't all right. But they wouldn't have happened if you just took the idea and did it, and that's part of it. I think with painting you have the opportunity to go inside yourself and find

your unconscious intelligence or your non-verbal intelligence and your non-verbal sensibility and your non-verbal being in a sense. And you alternate between consciousness and unconsciousness and it can engage much more of you than if you just merely took an idea and executed it. (Katz 1997: 238)

Nigel Whiteley who also quotes Katz in his contribution to the JVAP (2007) draws parallels between Katz's use of the phrase non-verbal intelligence and visual intelligence.

> Katz uses the terms 'non-verbal intelligence' and 'non-verbal sensibility' to describe the decision-making process. Equally, he may have referred to 'visual' or 'creative intelligence' to describe this tacit knowledge and process. Whatever the term employed, what he is alluding to is a decision-making process that ensures the right sort of outcome as opposed to a mere illustration of an idea that someone without experience, skill, expertise etc., would be more likely to produce. (Whiteley, 2007)

Whether it is the 'moments of reflection-in-action' that Scrivener (2000: 13) contests ought to be primary for explicating practice, 'Visual Intelligence' or any other name, it is important that clarification is brought to what these terms and phrases signify. Schön can also be seen to question the importance of the name we choose to signify what occurs in the midst of action.

> Whatever language we may employ, however, our descriptions of knowing-in-action are always *constructions*. They are always attempts to put into explicit, symbolic form a kind of intelligence that begins by being tacit and spontaneous. (Schön, 1987: 25)

Schön's assertion that his own description of the 'kind of intelligence that begins by being tacit and spontaneous', namely what he calls knowing-in-action, is just a construction is contextually significant. What has in this thesis been described as embodied experience, Fortnum (2007) calls visual intelligence, and these terms, together with knowing-in-action, must be recognised as constructions. In some respects one might argue that they are all trying to say the same thing, however the form of the construction is in itself significant. The question is whether the form is appropriate for a particular discipline, not whether it is right or wrong. I consider the development of the term 'visual intelligence' (Fortnum, 2007) is in and of itself a significant attempt to examine what is distinct between visual art practice and design.

Fortnum acknowledges that there are issues with the name 'Visual Intelligences', but her consequent investigation of both 'visual' and 'intelligence', expose important distinctions concerning what is meant by the phrase. Briefly focusing on these distinctions will help further contextualise the work of the VIRP.

The primary issue Fortnum raises in respect to the term 'visual', questions the

implications of the many diverse art practices to have emerged since the 1960's, which deny total reliance on visual qualities, particularly the influence of these practices on the traditional analysis of art history and its more contemporary version, visual studies (Fortnum, 2007).

> It appears that the visual has an established critical domain but one that finds itself increasingly estranged from contemporary developments. Contemporary visual art invigorates itself via other academic fields such as psychoanalysis, philosophy and political theory, which enable it to join current debates. This challenge for new ways of understanding and relating to art is re-iterated by art itself as it has evolved during the twentieth century. Cherry quotes Charles Harrison characterizing conceptual art as a "withdrawal of visuality" and notes the emergence of art practices that are "antagonistic or averse to the visual" and calls for a different type of critical response.
>
> […] Compelling writing by art historians such as Michael Baxandall, Svetlana Alpers and Michael Podro have in common a sense that their analyses are founded in a primary experience of looking; the intuitions or reactions experienced whilst contemplating a work of art are acknowledged and then related to a scholarly exploration of the artist's works and processes.
>
>> Critical description never properly or adequately corresponds to the interest and force of a painting, both because our interest is irreducibly bound to our perceiving, and because what we describe takes on its force for us only in the context of innumerable other recognitions in which it is embedded and which lie beyond the scope of describing. (Michael Podro, 1998: 147)

Fortnum presents strong cases against an 'over-prioritization of sight' in art history (Fortnum, 2007) or the 'occularcentrism of visual studies' (Cherry, 2004), such as the writing of Mieke Bal.

> Perception, however, is a psychosomatic process, strongly dependent, for example, on the position of the perceiving body in relation depends on so many factors that it is pointless to strive for objectivity". (Mieke Bal, 2001: 42)
>
> […] Rather than avoid the idea of the visual then, it would make sense to acknowledge its importance in our perception of art and its basis in the material, sensory world. In the term 'visual intelligence' then, the visual refers to the perceived physical nature of medium and process. Accepting our inability to verbally define the visual is important and perhaps releases us to engage with the more ephemeral kinds of statements about art that often issue from a studio practice. (Fortnum, 2006: 8)

The VIRP is, as Fortnum (2007) states, an attempt to examine what happens when visual artists make decisions whilst making their work, that aren't purely conceptual, or only to do with material and technique, but rather lie in the relationships between these aspects of making. I consider that the 'surfaced tacit knowledge' that Scrivener (2000: 13) states ought to be reported on when rigorously applying

Schön's model of reflection-in-action, also alludes to this relationship. The VIRP might then be seen as only a slight modification in the use of terms, but I suggest it is much more than that. The description of the relationship Fortnum presents (2007) is not a 'knowing-in-action' but rather an unknown that becomes known. Neither is it 'knowledge' that surfaces, tacitly or otherwise, neither would I suggest that the term 'visual' intelligence, is the most explicit means of describing the 'perceived physical nature of medium and process', rather I propose that the term 'embodied practice' encompasses this relationship more fully.

Beth Harland: Zone 15, 2006

> I think moving towards something that is unknown is important. Foucault calls it 'working at the edge of an un-thought, slowly building a language in which to think it'." (Harland, cited in Fortnum, 2006: 12)

Beth Harland's appreciation of Foucault's phrase, coupled with her own, was a deciding factor in her inclusion here. I found it suggested that for her, the process of art-making is not a means to an end, nor subservient to the conceptual ideas that drive her practice. This helped validate and contextualise the rich data that could be garnered from an analysis of some of the reflective methods she has explored and employed.

In addition, I found the phrase thoroughly alluring in its own right, and felt compelled to explore my own interpretation of it. What is really meant by building a language in which to think the un-thought one is working at the edge of? Whilst this reframing sounds cryptic and clumsy the notion rings all sorts of bells, which seems to represent a state of being I recognise as a practitioner. The description of this felt state however, strikes me as an incomplete telling of the story. Nonetheless I consider that there is something highly significant for the-greater-understanding-of-artistic-processes, hidden in Foucault's phrase. Throughout the process of making new thoughts certainly emerge that appear for all the world as if that's what we'd been thinking all along, but are perhaps rather less rigorous and intentional than we'd believe them to be. I rather think Foucault alludes to the complex processes of embodiment through which the rich phenomenological influence of materiality, temporality, spatiality, and sensory experience continually informs our conscious awareness and, only later, our conceptual frameworks. However, I shall resist the temptation to examine this poignant phrase further until the concluding chapter where its contextualisation will be greatest.

Beth Harland is a prime candidate for this case study series. As a creative practitioner her reflective practice has developed partly through the rigor of her academic affiliations, she completed her PhD entitled 'A Fragment of Time in the Pure State; a mapping of Painting's Time through Proust, Deleuze and the Digital

Image', in 2007. Having studied at The Ruskin School of Art, Oxford University, and Royal College of Art, London, she has developed into an internationally exhibiting artist whose work explores the relationship between painting and photography. Presently she is a Reader in Fine Art and Head of Research Degrees at the Winchester School of Art, University of Southampton.

The aim to set up a way to document and publish the aspects of the process and outcome, Beth Harland's painting 'Zone 15', was ingeniously accomplished. Beth Harland's collaboration with Gary Pearson of Lomi-Lomi design and Martyn Evans of Sumac UK produced an interactive painting, which played through Adobe Flash. Clicking to view the image, the viewer witnesses the painting emerge over fractionally less than a minute. Once complete sections of the painting then become interactive to a degree, with the viewer able to scroll over the surface and select areas of the painting, which open into a range of investigations into the making process. Beth Harland generously offers up the textual and pictorial references that inspired the painting, together with a range of preliminary sketches, digital drawings and studio photographs.

Figure 17: (Harland, 2006) Zone 15, oil on canvass – (Last accessed 18.9.14) http://www.visualintelligences.com/beth-harland-i20_921.html)

Figure 18: (Harland, 2006) Compositional sketch for Zone 15.

The played time lapse image begins as a sketched composition, which whilst very similar to the sketched draft design seems to have altered very slightly in response to the washed or projected colour background. The darker area emerging at the bottom of the screen clearly indicates the illusion created by this form of documentation. The painting itself never existed in this state. The shades would have been applied stroke by stroke onto the surface in full vibrancy. The use of superimposition creates layers of false saturation as one image slowly dissolves through another. Could it be said that this serves the function of

documenting practice or ought we rather to consider it the creation of something new? Harland's work lends itself to these qualities as she seeks to alter photographic images through digital manipulation.

Figure 19: (Harland, 2006) Detail 4 seconds into the Flash media presentation

The original photographs she took for this series, 'prosaic objects, ordered on a table top', are repeatedly manipulated until spatial order becomes disjointed and traditional genres of still life and landscape seem to merge'. (Harland, 2007)
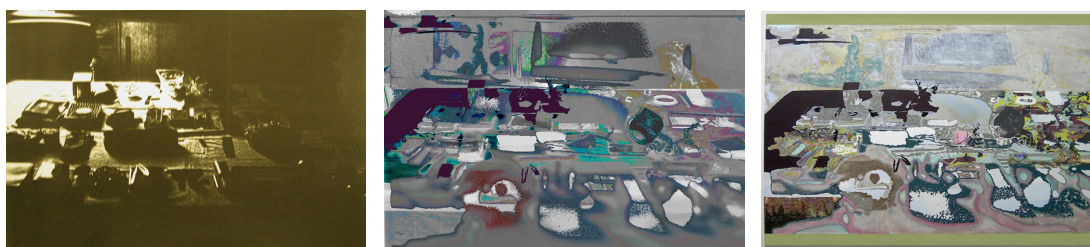
Figure 20: (Harland, 2006) - Figure 21: (Harland, 2006) - Figure 22: (Harland, 2006)
Zone 15 process image 1,　　Zone 15 process image 2　　Zone 15 process image 3

In this respect I can imagine Beth Harland being delighted with the many incalculable and unique intermediate steps created by the process of cross fading the stills of the paintings development through one another. However, in terms of making the process of art making more transparent to the viewer this cinematic aspect must be questioned.

The phenomena is certainly novel, however as a painter I find it somewhat surreal to see the paint appearing on the canvass without reference to how it was put there. At no point do we see the painter applying pigment to the surface. The illusion of

paint dissolving into being at all places at once belies both the qualities of paint and the temporal aspects of painting, including all the messy stages when an area could be said to be half done or half finished. What does this documentation technique tell us about the patterns of action implicit in her practice? Did Harland start from the left or the right, did she produce the outlines first before painting the centers, were the outlines faithfully filled in or modified during the process of painting, was the colour premixed or mixed on the canvass? These details are obscured through the slickness of the presentation.

Procedures and systems emerge from the medium and, rather than constrict, they often give the artist structure and a sense of freedom. There are times however when the limits of the medium will be temporarily exhausted. Beth Harland examines this when talking about her interest in digital imagery. She suggests changing media can propel the work's trajectory. She says, "Jon Thompson talks about 'learning how to make a space for yourself in which to act' and says 'sometimes painters have to do something else to find this' and this rang true with me –I think new mediums bring with them different ways of looking and thinking and they disturb your habits" (Harland, 2007). These parameters and procedures for the making of a visual artwork develop through a relation between the material process, and concept or idea. Harland adopts an approach to making that has a conscious ideological framework. She describes its thus, "One of the things that is very important to me is the notion of Faktura, which is from the Soviet avant-garde. It's an emphasis on the mechanical quality and the materiality of the procedure…. For me the linking of form and content is crucial so that painting as a practice signifies subject just as much as the found or constructed image that I choose to work from….. I want to resist making a representation of something in the world, so that the matter of painting itself is a mode of address and a site of critical thinking which goes beyond the image." So, artists continually write their own internal rule books prior to making work. Any study of visual intelligence thus needs to begin by a thorough mapping of an individual's acknowledged boundaries. Before work commences many possibilities are hypothesised and decisions are taken.

> In the recent series of paintings entitled Zone, the making process is structured as a 'conversation' between the painting's surface and the digital screen, the image developing through alternate modes of painting and digital reworking. Photographs of prosaic objects, ordered on a table-top, are repeatedly manipulated until spatial order becomes disjointed and traditional genres of still life and landscape seem to merge.

> Central issues in the working process include the impact of visual technologies on aspects of space and duration in painting (the digital offering painting an expanded topography) and concepts of rhizomatic space, fragmentation, re-inscription and appropriation. Fragmentary quotations from other paintings and various image sources are woven into a complex surface. Chance and mechanical projection procedures combine to produce a double space in which

oppositions of figure/ground begin to disperse, enabling multiple positions, fluid structure, slippage. This spatial, and temporal investigation is also linked with filmic encounters such as Tarkovsky's Stalker, and references various writings including Deleuze and Proust.

The process of copying/translation from digital print-out to painting, is a form of mapping, bridging the retinal and the tactile. Due to the fragmentation of the original image I'm perpetually losing my place and finding it again, and this experience transfers to the viewer, caught in the movement between clarity and indistinction – in flux. The work tends to operate in the domain of haptic visuality or close range vision; the boundaries are blurred and flawed, images partially absorbed and fleetingly described. The haptic is a form of looking that tends to move rather than focus, and one that alludes to senses other than the visual; an embodied form of seeing. The physicality of the surfaces in the paintings is important, all are made in oil paint but numerous different approaches to marking the surface and different consistencies/mediums are adopted to evoke sensory experience. The play of difference and fragment, yet coherence, becomes a delicate balance.

The fragility of boundaries, definition of inside and outside, is referenced through camouflage and formal decisions such as the use of the coloured border. Like the framer's device 'passepartout', it interfaces the interior and exterior of the work and is linked to Derrida's notion of parergon - without it the depiction is exposed, too present. I approach making strategically, sometimes mechanistically but always with an interest in the meaning engendered by the material and its behaviour, viewing the matter of painting as itself a mode of address; a site for critical thinking. (Harland, 2007)

The following extracts have been selected from a complete transcription that can be viewed on Beth Harland's page on the Visual Intelligencies website (http://www.visualintelligences.com/beth-harland.html). It takes the form of Harland's responses, answering a series of questions put to her at a VIRP seminar by Rebecca Fortnum, Paula Kane, and Micheal Ginsborg. It is included here as it focuses intently on her reflective methods and is presented as data to be analysed.

In the case of the Beth Harland, the attempts to systematize the process of documentation and reflection introduces a relationship between clear critical aims and the notion of 'moving towards an unknown'. Harland (2004) reflects on her process of making as a strategic and mechanical approach, whilst maintaining her interest in the meaning engendered by the materials and its behaviour, which suggests an emphasis on the underlying experience of practice. The distinctions between the research through visual art practice typified in Harland's involvement in the VIRP and problem-solving research, is illustrated in something Harland (2004) calls 'moments of spill that occur in the process'. The relationship between the new meanings engendered through the materiality of the painting process and the strategic and mechanical approaches that guide the painting alludes to the relationship between thinking and making Fortnum (2007) states the VIRP was set up to explore.

The similarities between the approaches to CRM in design and visual art practice are many, however, a distinction between them is evident. Where the approaches to aspects of reflection are distinct, it follows that aspects of the reflective methods ought also to be distinct. The aspect I deduced was particularly distinct concerns the personal meanings that emerge out of practice and the practitioners' ways of dealing with them. In design personal meaning is placed in the context of solving the problem of the design and producing an object that will perform a function. In visual art practice however, new meaning is dealt with very differently, and is framed in the context of personal agendas. It is, as Scrivener (2000) suggests, the emphasis on the underlying experience of practice that is distinct between these two case studies.

CHAPTER 5 – METHODOLOGY

5.1 Defining a Research Philosophy

The research philosophy in this thesis follows a Phenomenological rather than a Positivistic approach. Positivistic perspectives would have required that the reflective methods employed in visual art practice be analysed in a detached and systematic manner. This was considered inappropriate on the grounds that analysis of reflective practices, require subjective, ethnographic and qualitative approaches. The Phenomenological perspective by contrast, allows for the collection of holistic, qualitative, units of analysis under naturalistic conditions (Frey, Botan, Friedman, & Kreps, 1991). The Phenomenological perspective also accommodates the subjectivity in the participants' frames of reference that is clearly evident in the case studies and depth interviews.

The research method developed and employed in this thesis uses an ethnographic approach toward the collection of holistic, qualitative data for analysis. The naturalistic conditions characteristic of a Phenomenological perspective, (Frey, Botan, Friedman, & Kreps, 1991) corresponds in this context, to the participants of the case studies working in their studio environments.

The purpose of conducting the following case studies through field research, studio observations and depth interviews, is to explore the distinctions between Constructed and Naturalistic reflection in order to gain a richer account of what is distinct about reflective methods in visual art practice per se. The question addressed in this section specifically concerns reflective methods used in ordinary every-day visual art practice as being distinct from the cases studies detailing academic research in the visual arts. This refers to the second of Scrivener's (2000: 18-19) distinctions referred to in the previous chapter. The research method is applied to three case studies, which are introduced in the second part of this chapter.

The primary research method for the following case studies involves a documentary technique, initially proposed by Christopher Smith during the MA (by Project) in 2001. It involves documenting studio practice with video cameras and then filming the practitioner reviewing and commenting on the footage. Following Scrivener's (2000: 12) recommendation that practitioners could benefit by recording and reporting on reflection systematically, I made use of this process in my own visual art practice between 2004 -2006 after setting up a studio in Switzerland. Upon further research I discovered that Schön et. al. (1983) made use of this research method and also developed novel forms of analysis.

5.2 Developing a Research Method for Collecting Qualitative Data in the Visual Art Practice Studio Environment

Towards a Methodology of Research

What contributed to this turn-around? At some point, while still engaged with the initial question, we set ourselves the task of trying to capture moments in which individuals actually came to see in new ways. To do this we designed simple but rich task situations and video-taped the work of the individuals doing them. Some of the tasks we borrowed from more traditional ones (like the Vygotsky block task), but some were more open-minded (like making a tune). Our real work began when we faced the problem of making sense of what our task-participants were doing.

The modes of analysis evolved over a number of tasks and also over several years, eventually raising questions that went far beyond the immediate objective of capturing moments of insight. The most powerful strategy we found as a starting point for our analysis was something we called "chunking the protocol." This involved looking for what seemed important boundaries that articulated observable phases or organic "chunks" within the continuing course of a participant's work. These we thought might signal shifts in behaviour and/or focus in the evolution of the participant's understanding. (Bamberger & Schön, 1983: 68)

Prior to commencing this research degree my experience of documenting my studio practice, was far from successful. Having set up and filmed myself working, and then filmed myself watching myself working, I found the passivity of reviewing the footage was problematic and in stark contrast to the intense engagement of actually working. However, I persisted with intention that the potential to revisit past experience would be useful.

We have to take certain things as read. We have to fall back on routines in which previous thought and sentiment has been sedimented. It is here that the full importance of reflection-on-action becomes revealed. As we think and act, questions arise that cannot be answered in the present. The space afforded by recording, supervision and conversation with our peers allows us to approach these. Reflection requires space in the present and the promise of space in the future. (Smith, 1994: 150)

Despite that in relation to my own studio practice I felt that I could learn far more from actually working, than reviewing myself working, this documentary technique presented itself as the primary means of dealing with other practitioners' practices. The experience of using this technique in my own practice, and what I learnt from it, has aided the development of an effective means of using this technique in the case studies. Indeed, the evidence of the participants' responses to the phenomena of viewing themselves working was resoundingly positive. This can also be evidenced in the case studies detailed in Paul Harper's doctoral thesis 'Talking and Doing:

Communicating Crafting' (2013: 180), who recently published research developing, using, and advocating this method.

Given the nature of the research and the degree of background reading required, I elected in consultation with my supervisors, not to use a practice-based method. I ceased gathering data on my own practice and concentrated on the collection and analysis of qualitative data from the reflective methods employed by other practitioners.

The documentary technique, which I first employed in 2007, involves a three stage process:

1. Field Research: Initially the visual arts practitioner participates in an informal interview centered on the practitioner's background, training and motivations.

2. Protocol analysis: The second stage involves filming the subject in the naturalistic environment of their studio. Two cameras are set up in non-invasive positions and run for the length of the studio session. This ranged between 2 and 5 hours. Video footage is recorded for the purpose of capturing cognitive activity. Real-time audio is recorded through the internal microphone on the camera with the intention of capturing concurrent vocalisation, which can later be transcribed.

3. In the third and final stage the subject is filmed watching the second stage documentary.

During the first interview phase, participants generally used this as an opportunity to offer a conceptual account of their practice, which was later useful as a contrast against the material account of the processes they engaged in during the studio documentary, and reviewed during the third stage of the research method. During this initial interview no explicit inquiry is made concerning the practitioner's reflective methods, unless the practitioner initiates discussion on the matter. The purpose of not pursuing what the focus of the analysis will be was to prevent influencing the practitioner's responses.

During the second studio documentary phase the subject is neither spoken to, nor communicated with. No notes are taken, nor any activities other than reloading the tapes every hour, performed, that could distract the practitioner from their studio practice. After the filming in the studio the raw footage was cut down into an edited documentary making use of the two angles of the cameras. My previous education in filmmaking and editing was useful in this regard. Intentionally however, the footage was not dealt with stylistically. The decision to edit the raw footage was

partly based on my early experiences of using this method prior to commencing this research degree. I considered that a contributory factor to the disengagement I felt with watching raw footage was the monotony of a single camera angle, and the periods of inaction when I was out of frame. I did not consider the single camera perspective representative of the practitioner's dynamic movement in studio.

I considered the edited documentary generally made the viewing experience more engaging for the interviewee, which I considered made the process of conducting the third phase of the research method more productive. This was not always the case however; in the second of the case studies presented here the subject vocalized his disappointment that so much had been edited out. The decision to edit the documentary of course introduces a selection bias, which needs to be taken into account. In this respect, I found myself selecting sections of the raw footage that seemed to reveal the moments of reflection-in-action Scrivener (2000: 13) proposed the description of creative production should be focused on. The questions regarding the nature of each of those 'moments' in relation to visual art practice were very much integral to what I as a researcher hoped to observe and explore. Given the focus of the selection bias, the guided questions and the analysis methods, this particular research cannot be considered based on Grounded Theory. However, this research method can be successfully used in line with a Grounded Theory method (Harper, 2013: 209).

During the third phase of this research method the participant was invited to comment on themselves working. The analysis of these responses must take into account both the interviewer and response bias. As mentioned above the participant's responses to the phenomena of watching themselves was positive. There is an issue here that I consider important to raise. The experience of having someone (interviewer bias) take an interest in your work, film you and then present an edited documentary for you to watch and comment on seems to have had a positive psychological effect (response bias). Whilst this was beneficial for this research, the fact that my own experience of using this method was not positive makes me wary. I may question whether I would find the experience pleasurable if someone filmed me and showed and interest in my work, I can speculate that I would. The researcher effect here is not quantifiable and it is not in the scope of this research to conduct the necessary psychological quantitative data collection, or statistical analysis to investigate whether that is a general phenomenon or something specific to the research conducted in this thesis. However, if this research method is to be considered generally recommended and beneficial to all practitioners in all circumstances, further research ought to be conducted. The selection of the interviewee's also introduces an inclusion bias, in the sense that proximity and availability were factors.

The interviews were semi-structured and discursive. The questions where not preordained and responded largely to the participants comments, but the general focus guided the interview particularly toward the end of the interview session. The specifics of each participants responses will be reviewed toward the end of this chapter.

There were a number of methods of qualitative data collection that were not selected in this research on grounds that are explained here.

- Diary/Audio Journal – This method was not selected due to its longitudinal nature. Requesting the visual arts practitioner to engage in a process of reporting on at regular intervals was considered too invasive.

- Replication protocol analysis – attempts to deduce the visual arts practitioner's line of thinking merely by examining the conceptual ideas drawn from the first stage interview and the final art works may well be an appropriate method in design, but it entirely neglects the embodied aspects of practice evidenced in the practitioner's processes.

- Reflective conversation – Inviting the practitioners to use reflection-in and –on action and –practice to verbalise thinking would have required instruction to introduce both the terms and the methods, which would have turned these cases studies into constructed rather than naturalistic reflection practices.

- Establish a panel & group discussions (composed of the interviewees) - the decision was taken to focus on individual practitioners in the naturalistic environments of their studios. The study is not concerned with individual life stories, although it pays close attention to this aspect of each case for what it might reveal about the whole phenomena of visual art practice.

5.3 Oral History, Multi-Lingual Interview Techniques and Location Set Up

Oral history, first credited to Nevins (1940), has been widely applied to a range of disciplines including anthropology, sociology, law, psychology, history and political science (Russel, 1999: 1). I do not consider my role as an interviewer presented here fits with the standard Russel (1999: 1) here describes.

> […] the skilled practitioner must remain impartial, listen, and stay in the background. (Russel, 1999: 1)

From my experience of conducting interviews with visual arts practitioners I have found that my own experience of practice has been beneficial. My stance as an interviewer therefore, is framed as an 'informed and sympathetic collaborator' (Harper, 2013: 180). In this respect I acknowledge my background as a visual arts practitioner with an interest in reflective methods and the role of embodiment in shaping experience of the practice situation (Rossman and Rallis, 2003, p.10). The notion of being an informed collaborator is established naturally through discussion between practitioners who share an intimate knowledge of visual art practice is presented as an exemplary example of the collaborative nature of the interview process described by Lomax and Casey (1998:1.4).

Indeed having a fellow visual artist conduct the interview, as opposed to an interviewer from a psychological or sociological discipline, is presented as being of particular advantage in respect to the interview structure. An intimate knowledge of practice enables one to ask pertinent questions, contextualize and encourage practitioners' responses. Mark Feldstein, in "Kissing Cousins: Journalism and Oral History (Oral History Review, 31. 1: 2004: 1-22), writes that oral historians and journalists are related, but separate, and considers that each discipline can improve by employing techniques from the other.

> The most liberty awarded to oral history practitioners comes from Mark Feldstein's review of the methods where he compares oral history to journalism where both disciplines attempt to compile narratives and landscapes to uncover truths (otherwise not available). Feldstein argues that each would benefit from adopting some methodologies of the other. Journalism, he says, would benefit from applying the exhaustive research common to oral history, most importantly verification and finding corroborating evidence. On the other hand, Feldstein argues that oral history can be enhanced by utilizing the more sophisticated interviewing techniques common to journalists. One idea is to establish context where the narrative be supplemented or challenged by framing it in the historical context of the time with the intention of getting more information. In addition, Feldstein is a strong advocate for applying some strong interviewing techniques, like the use of adversarial encounters, as a tactic for getting more information from the narrators. (El Sayed, 2013)

In this sense the decision was taken that the role of being an interviewer in the context of this research, was as an informed investigative collaborator employing strong interviewing techniques, rather than an impartial oral historian, for the purpose of deriving more information from the interviewees. The other reason to take this approach was that the interview was not concerned with the interviewee's life history but their specific relationship to the practice situation, and if possible evidence of their reflective practice.

In each of the three documentary phases the interview questions were unstructured and guided by responses to the practitioners comments. Whilst the scope is provided

for the subjects to construct the data about their own practice, in collaboration with the interviewer, the interviewer's questions are influenced by the background investigation into reflective practice. Harper (2013:182) suggests the following points in structuring of adequate questions in relation to interviews with art & design practitioners, which can be contrasted with my interview methods.

- not asking leading or overly complex questions;
- avoiding talking too much, or offering too much in the way of interpretation, so that the interviewer contributes too much to the narrative;
- allowing for silence, so that the subject has time to reflect, or because silence can have its own eloquence;
- using gestures and body language to encourage or prompt the subject, again so that the interviewer isn't too prominent in the recording, and so that the recording isn't overly punctuated by audible prompts.
(Harper, 2013:182)

The interview is therefore an opportunity to hear a visual artist's ideas and observations in relation to their practice in their own words and in their own language.

In the case of Swiss sculptor Andreas Reichlin the initial interview and case study documentary was filmed in his studio in 2008. The follow-up interview was also recorded at his studio in 2009, in a non-studio-practice situation. Both interviews were conducted in his native language of Swiss German and transcribed by a professional German Teacher in collaboration with the interviewer. The language of the interview was driven by necessity as Reichlin's English was limited, however it was also considered to be an ideal research situation, in relation to oral history, to conduct the interview in the interviewee's mother tongue, without the use of a translator (Field, 2009:174).

Working and conducting research in Switzerland required that I learn to speak, write and translate German, but also learn to orally speak and understand the dialect of Swiss German, which whilst notably distinct as an oral language, does not exist in written form.

> Evans-Pritchard (1951:79, cited in Bradby, 2002) writes: "(...) in learning the language one learns the culture and the social system which are conceptualized in the language". (Filep, 2009: 60)

Undertaking the interview with Andreas Riechlin in his native language was advantageous also for establishing a rapport with him. However necessity of

translation in order to make this case study accessible to non-German speaking readers, introduced a research method that required careful consideration.

> Translation, defined as transcribing the text of a source language into the target language (Gau et al., 2008), is more than just "changing the words", or as Temple (2002:4–5) points out: "communication across languages involves more than just a literal transfer of information". Therefore, as Simon (1996:137–138, cited in Temple, 2002: 5) writes: "The solutions to many of the translator's dilemmas are not to be found in dictionaries, but rather in an understanding of the way language is tied to local realities, to literary forms and to changing identities. Translators must constantly make decisions about the cultural meanings which language carries, and evaluate the degree to which the two different worlds they inhibit are 'the same'." We have to understand language as "an important part of conceptualization, incorporating values and beliefs, (…). [Language] carries accumulated and particular cultural, social, and political meanings that cannot simply be read off through the process of translation" (Temple, 2002:5). (Filep, 2009: 60)

Considering the implications of research into translation, I employed a bilingual Swiss/English translator to aid my own translation ability. I then reviewed the transcription together with the interviewee and the translator, to discuss specific meanings. The transcription detailed in full in the appendix is used together with the audio-visual documentary presented as a Quicktime movie, which is not subtitled.

In the case of the American painter Laurence Karasek, the initial informal conversation was not recorded, as it took place at a busy public exhibition and was a spontaneous meeting. During this initial meeting Karasek agreed to accommodate the second stage documentary process. The second stage documentary was filmed in his studio and documented the development of a new painting 'Bloom' from his garden series from commencement to completion. During the filming two cameras were running; a static camera documenting a wide shot which encompassed the painting and the table on which Karasek mixed the paints, and handheld close ups from multiple angles. The raw footage was edited down to 20 minutes. The follow up third stage interview in which Karasek was filmed watching himself work was filmed in my studio. The length of the edit proved problematic for Karasek as he wanted to see more than twenty minutes, during the third stage interview therefore we watched the edited version twice and then a selection of the raw footage tapes.

In the case of the interview with American performance artist Patrick Sims his studio in Barcelona was the chosen location. Upon arrival however, the work in progress I had hoped to film had already been completed, prior to a major new performance in the L' Antic theatre, Barcelona. The interview therefore has a different character then the first two in this series in that it is presented as a standalone interview. The selection of this subject was taken as his work ranged across the creative spectrum

and provided a case study that was distinct from the traditional visual art disciplines of painting and sculpture.

In both Karasek's and Sims' case studies the interviews are conducted in English.

5.4   Attending to the Details of Documentary Filmmaking as a Research Tool

Equipment:

The following case studies where made with minimal filmmaking equipment. Two Canon MD205 digital video cameras with Hama tripods were used. Whilst this camera would not be described as a professional model and could not produce broadcast quality material, it is a good quality camera with a good internal microphone, from which the transcriptions detailed in this thesis were easily made. The smaller size of the camera was also considered advantageous for being less intrusive.

The raw footage was recorded on Mini DV tape and edited using standard iMovie software. The resulting documentaries have been saved as QuickTime movies and saved onto an external memory sticks that accompany this thesis.

Duration:

The duration of each interview was chosen in response to each case study. In the case of Andreas Riechlin, I responded to something he said in the first initial stage in order to adapt the length of the second phase of the documentary process. He stated that he can work for several hours at a time and that short hour-long sessions are useless for him. If he had only an hour he would just clean the studio and not commence work. In response to this I filmed the second stage over a full day studio session. In Laurence Karasek's case the second stage documentary captured the development of a new art work from start to finish in an intense four hour session.

Incorporating flexibility into the duration of the data collection process I felt was necessary in order to respond to the individual circumstances surrounding each case study.

Ethics

During the first stage meetings with each of the participants, both the purpose of the films and the use to which they would be put, was made explicit. Participants were requested to sign a consent form giving the researcher the right to use the

films for non-commercial, educational and research purposes. The form explains that any use of the material not covered by the agreement will require the consent of interviewee. The form is aligned with Chapter IV of the Copyright, Designs and Patents Act 1988, in regard to the interviewee's moral rights. A copy of the form is included as an Appendix.

5.5 Case Study 3: Andreas Reichlin, Sculptor

Refer to file '1. Andrew Gray – Case Study Andreas Reichlin.mov', on the accompanying external hard-drive.

Andreas Reichlin (born 1968) lives and works in Immensee, Switzerland. Having began his sculpture career using wood and trained at Académie de la Grande Chaumiere carpentier in Paris, he progressively transferred his media of choice to metal. This progression from the rectangular blocks of wood to the cylindrical steel tubes can still be seen

Figure 23: Film still #1

outside of his studio. For over a decade Reichlin has been abstracting the forms of the cylinder, drawing his inspiration from nature. He describes the qualities of taut surfaces, sweeping edges and perfect finishes as the basic elements with which he seeks the reduction to the essential forms of nature.

Having begun working with solid steel tubing, cutting, inverting, and reattaching the sections of tubing to achieve the wave-like forms characteristic of his work, the restrictions on the size of his sculptures was imposed by weight. Andreas developed and employed an alternative technique in which he could replicate the character of the solid

Figure 24: Film still #2

tubing by making hollow structures out of refabricated sheet metal. This case study follows the development of one such structure.

Figure 25: Film still #3

Figure 26: (Reichlin, 2010) Untitled (last accessed 18.9.14) http://www.andreasreichlin.com

Figure 27: Film still #4

Andreas Reichlin: I know now, but at the time I had completely forgotten, just forgotten, that you where there, I was so into the work. (Gray, 2009)

This is a commonality I have found in my case studies, casual conversations with other practitioners, and my own practice. There appears to be a form of 'focal disappearance', in which all sensory information superfluous to the immediate act of making can be screened out. This is an issue that will be taken up later in this thesis as it relates to questions of mindfulness, concentration, habitualization and awareness.

Figure 28: Film still #5

> AR: […] When I have a new idea I put what I'm doing aside and I make a small model from the new work, very spontaneously. I have to realize the ideas immediately.
>
> […]You mean whether the form changes? I think not, no, I think…. I have a very clear vision how I'd like to do it. Then comes only the craftwork to realize it. And the problem is that when you have a small model you can make it very spontaneously, very quickly, it is complete, it is correct, it is right.
>
> AG: Its not so much work?
>
> AR: Exactly, and if you are working one month or two months on the same sculpture then it means that you have to bring during the whole time the same quality as you brought in, in 5 or 6 hours (making the small model). And this is very difficult, that the large sculptures have the same power, spontaneity, and clarity. You see I'm working already a long time on this, I work, and work, and that it has this lightness, this calmness, that it is self-evident (Selbstverständlichkeit). You don't need to ask what for and why, its logical, it is just normal, it is just here. (Gray, 2009)

Sculpting the larger forms appeared therefore, to be something of a means to an end where the form does not alter from the maquette to the final piece. Might Reichlin therefore, be described as engaged in the 'sport' of welding to some degree, working as an artisan to manufacture his design? The question could be posed as to whether he could commission an artisan to manufacture his design for him? Having watched Reichlin working the struggle to translate the spontaneously conceived form from the maquette through a process of months into the final sculpture is not something that can be simply scaled up. The nature of the form changes with the scale. He is not therefore operating as an welder might do building a ship, faithfully following the design. He is responding to the qualities of the media and adjusting his design as he moves through the process of making. This process might be simply described

through the mountaineering metaphor from Schön's et. al., (1983) case studies exploring 'learning as a reflective conversation with materials'.

> This unplanned move serves as the piton whereby her reflective conversation carries her beyond what she knows already. (Bamberger & Schön, 1983: 72)

Schön's idea here is that as the practitioner 'ascends' the practice situation, the practitioner places pitons to secure them. Despite this mountaineering metaphor the conversational metaphor is still central to his description of practice. I must stress that I do not see Reichlin's practice in these terms.

The difference for me is that in the studio of Andreas Reichlin, these explorations of metal and form, also explore in parallel, integrally and as a prerequisite for action, inferences, metaphorical projections, and conceptual blends. Andreas may have other names for these capacities, but whether or not he is aware of them only on a subconscious level he is exercising these human capacities in ways that a commercial welder may not. These inferences both emerging from practice and feeding through the practical work are projected metaphorically onto abstract domains. One such example is starkly literal. The philosophy of the sculptures, as Andreas has stated, is that the inside is turned outside.

AR: The inner part of the heart (demonstrates sweeping gesture curving his hands from his chest out in front of him) is made like this – (Spoken in English) this is the inside – this is the inside (referring to concave areas of the sculpture that are facing outwards)
The inside comes outside – (spoken in German) that is the idea and the philosophy – I know it only that is the dosha, that is the name (of the sculpture) 'dosha' and that's why there's also the contact (touches the sculpture). (Gray, 2009)

Figure 29: film still #6

For Andreas, the 'dosha', refers to Ayurvedic medicine and specifically the three energies believed to be in the body, which govern physiological activity. The dosha is projected outwardly and revealed to the world. Whilst it is not my intention at this point, to begin discussing the validity of this reference, Andreas's belief in this expression of these energies provides an interesting contrast to the physicality of the structures he creates. In Andreas's sculptures the physical frame of reference is a cylinder. The cylinder is sliced top to bottom, and the slice is flipped vertically, leaving the inside of the cylinder facing outward. The literal metaphorical projection, from the qualities of the cylinder, to the human being, is not difficult to

map. What for me differentiates this sculptural activity from metal work as a commercial profession, in this case, is not the claim that it is an expression of the soul, but rather that the form, the source domain of which is a manipulated cylinder, has been projected onto an abstract domain, whose source is the human being, or at least a concept of transcendental otherness, invented by a human being.

Andreas had never heard of the concept of 'image schemata', or any of Johnson's (1987) theories pertaining to a bodily-basis of meaning, nor does his practice require him to. If he had however, he may have been aware that his principle forms, 'the inside/outside metaphor', graphically illustrates the in/out schema as presented by Johnson in 'The Body in the Mind' (1987). The image schemata for a container, is that it has an inside, an outside, and a boundary. The 'containment' schemata can be mapped onto external objects such as a glass, a room, a metal cylinder, a country etc., but its source domain is the human body, our insides, the outside, and our skin that divides 'us' from that which is 'not us'. Andreas Reichlin's explorations of form in this respect are, to quote Johnson (2007), 'an exemplary example of human meaning making'. Intuitively Andreas Reichlin's inversion of the container not only makes use of an integral meaning structure that is forcibly rooted in the human body, but manipulates it to create novelty. It is exemplary because it provides a platform for further projection. The sculpture he was working on in August 2008, when I first filmed him in his studio, was his first exploration of working with pieces whose circumference totalled more than 360 degrees. As with his earlier work the cylindrical form was mapped metaphorically onto the human body, or rather vice versa. The complete circle represented a human life, more than one circle therefore must represent more than one human life. With this simple formula as an underlying structure, the sculpture was provided a platform to be an exploration/expression of 'love', union and human relationships.

> AR: Except this one I'm working on now, that is more. This is 360 (gestures the initial shape) and another piece, more comes in. This is for me… I mean this work symbolizes love.
>
> AG: That totals more than a whole circle?
>
> AR: Yes, something more comes into it. When you are in love there is always someone else involved, a second person comes in from outside and that's why it is more than a circle. (Gray, 2009)

Figure 30: film still #7

Again there is a clear metaphorical structure between the notion of the cylinder representing a human being. In this case the 360 degrees have been added to we therefore have two human beings. I enquired whether the idea in this respect grew out of the experience of practice, the qualities of the materials, tools, workspace

etc., but Andreas stated that the form originally conceived spontaneously in a maquette, did not change on route to being a finished large scale sculpture.

> AG: Once you have made the model and then you move to the larger piece, you encounter this problem, this machine, this new process, this quality in the polishing, does a new concept emerge through the process, through the material, the time you have, the space you have, your experience of the work? The metal is hot, sharp, heavy, you expend so mush energy, do all these processes change the idea from the original model?

> AR: You mean whether the form changes? I think not, no, I think…. I have a very clear vision how I'd like to do it. Then comes only the craftwork to realize it. And the problem is that when you have a small model you can make it very spontaneously, very quickly, it is complete, it is correct, it is right. (Gray, 2009)

In practical terms I believe there is evidence that what Andreas says here is true of his practice. In retrospect however, I believe I could have been more thorough with my elicitation. I ought to have asked in that moment, whether the spontaneously conceived maquette, was influenced by qualities of the material. Further more I believe an inquiry into Andreas's early work is necessary in order to find the origins of some of his principle forms, which are irrevocable bound to the form of the cylinder.

> AG: For me it is a very interesting question – what comes first – ok this is the quality, and for me, I can work with this quality and bring it to a metaphor for life, or do I have an idea, a concept of life and I must find something that displays that quality? Does the material and the process lead to the idea, or does the idea find the material and the process?

> AR: I think it is both. It is really both. (Gray, 2009)

For an investigation into what is distinct about NRM, and consequently visual art processes, the question as to whether the modifications subconsciously led Andreas to this idea and not the other way round. Later whilst discussing whether the idea preceded the practice or vice versa, he stated that he believed it to be both. However, I must recognise that it was very much a led question. The relationship between the practice situation and the quality of the completed sculptures was very apparent to me as an observer.

> AG: It is a huge contrast, this piece here is very quiet, its very stable, and the experience of the piece is a calm experience, but the practice to make it is the total opposite.

> AR: Exactly!

> AG: It is loud and heavy…

> AR: …and hot

Figure 31: film still #8

AG: ..and hot, and I have seen when you work that you make small pauses as if it's a reward, of as if the stillness in your pause is the quality you wish the sculpture eventually to have.

AR: I find that really beautiful what you have just said. I have never been aware of that. The work is loud, extremely, with the machines and other things, and the sculpture is quiet. You don't feel the work anymore. It is quiet, still. This is a totally new aspect. (Gray, 2009)

I must pose the question as to how can such a fundamental aspect of the practice situation be obscured from his conscious awareness? There is no question that Andreas Reichlin was attendant to the physical sensations of the practice situation. How many times has he cut himself on a sharp piece of metal, burnt himself, had his fingers crushed under the weight of the metal? How many times have his eye's felt dry from the dust, been blinded by the welding arc, how many times have his ears been left ringing by hours of noise. One need only watch the documentary to realise these questions are descriptive of his practice. There is the sense of 'focal disappearance' (Leder, 1990) and its role in obscuring embodied experience from conscious awareness, and consequently from central theories of the mind for much of philosophical history, put forward by Drew Leder in his book, 'The absent body' (1990), but Reichlin's experience of practice is certainly internalised. Neither is there any question that Reichlin is aware of the physical quality of the silent and immovable sculpture. What is interesting is that he had not considered the relationship between these two qualities. In some ways it is indicative of a view of practice as a means to an end, and Reichlin has expressed that once realised in miniature the larger sculptures follow a very clear design. However, the silence achieved by the work is only achieved through the noise of practice. The bringing together of these two experiences of the object under construction and the object at rest on its plinth is an example of a conceptual blend that clearly held significance for Reichlin.

AR: You know it would be great to, for example, for an exhibition, if you see the work, just this sculpture, you just see only that… but when you close your eyes, you know you hear just the audio. That fascinates me now!

Figure 32.1: film still#9   Figure 32.2: film still#10   Figure 33: film still# 11

AG: You'd play just the soundtrack from the process, no images.

AG: (turns the light down on the computer screen – both AG & AR listen to the audio) [See Figure 32.1 & 32.2]

AR: It's really exciting (listening to the audio with no images) It's the essence.

AR: You told me something which I have never forgotten, you told me, I work in such noise, emissions, with such a lot of noise, always (points to ears), When the work is finished the sculpture is silent. That's what you told me. I'll never forget this. That was amazing. It was when we spoke here a year ago. I could imagine to place a sculpture in a room where you hear only the sound of its making, its development. Do you understand?

Figure 34: film still # 12

The sound of the process, just the sound, not visual. The sound of the chains, the power tools… For once no music, just this sound. With really good speakers, good quality recording. That is really cool. I will do that at the next exhibition! (Gray, 2009)

Reflexively I must acknowledge my role in influencing the outcomes of this part of the interview session. However, as stated in the methodology, my role as a researcher is also the stance of a sympathetic and informed collaborator (Harper, 2013). Practitioners share ideas, influence and inspire one another because they can. A similar language is spoken, visually and contextually for the purpose of edification and mutual benefit. I do not consider with negative connotations the result of this particular interaction. Indeed, I believe it could be mutually beneficial both to this research and to Andreas Reichlin's practice. This physical attribute of his practice is now cemented in his thought processes through his awareness and perception of the relationship between his practice and the resulting sculptures. Just as the physical attributes of the cylinder where mapped onto an in/out schema, the physical attributes of action and rest are now prevalent themes. What Andreas will do with this is yet to be seen. He has already elected to actively record the studio ambiance and play it at his next exhibition. What will it mean if he takes the idea further into the sculptures themselves?

Unlike Schön's (1983) exemplars of reflection-in-action, where there was often an andragogical relationship occurring that necessitated dialogue and linguistic interpretations of the situation, I may generalise from experience and my case studies that in visual art practice the practitioner is predominately operating alone in a private space. There is little interpersonal dialogue or any utterances at all in these cases during the time when the practitioner is engaged in the act of making. I for one can testify to having worked in my own studio for several hours without having uttered a sound. Throughout the time I have spent observing Andreas Reichlin working in his studio, he has made no utterances whatever. The reflective conversation Schön describes can here only operate metaphorically, of course the

notion of the situation 'talking back' to the practitioner, was only ever meant metaphorically.

> The two kinds of reflection can be thought of as two kinds of "talking back". In the first, the makers talk back to the materials (reshaping them); in the second, the materials talk back to the makers, reshaping what the makers know about them. The distinction is, in a sense, moot since materials don't "talk" and the "talk" of the makers is most often (but not always) action rather than words. Further, the back-talk of the materials is only to the extent that the makers "hear" it- i.e., the current state of the makers' knowledge-in-action strongly conditions what they recognise and apprehend as the "message" implicit in the current state of the materials. In turn, the makers' talk back to the materials is not "heard" by the materials except to the extent that these are re-shaped in some way. (Bamberger & Schön, 1983: 68)

Johnson (2007: 9) provides a strong case that human meaning traffics as images, patterns, qualities and feelings before emerging into language. What happens to Schön's (1983) conversational metaphor when meaning is viewed in this way? What other metaphorical structures can we use to describe the processes governing the act of creative making? I propose care be taken with the conversational metaphor. Schön's paper on generative metaphor (1970) explores the case of slum housing where the underlying metaphor of the slum is as a 'blight' or 'disease'. Schön (1970) claims this encourages corresponding medical remedies, including surgery to remove the blight. Reliance upon an inappropriate metaphor can have negative consequences. Schön (1970) continues by suggesting that if the underlying metaphor is the slum is that of a "natural community", then this orients any response in terms of enhancing the life of that community. For Schön then the way in which a problem is framed depends upon the underlying metaphors and conversely the metaphor in use sets the direction of problem solving. What alternatives might be taken to describe the relationship a practitioner has to the materials in the act of making? What if the metaphor dealt with qualities or gesture?

Figure 35: film still (sequence) # 13

Gesture cuts through language to a level of pre-linguistic meaning, just as Andreas Riechlin's hand cuts the air to trace the form he feels in his mind.

> AG: (Stops the film, and refers to a gesture made by AR, in which he models the shape of a form he is marking for being cut with his hands) What is that?

> AR: There? That's the inside. The soul – did I do that before?

AG: You made it one time with your hand like this, (gesturing the motion), then you made it now like this (gesturing again).

AR: Ok. There I'm trying to formulate the thoughts that I have. To bring them into a form, a connecting platform, connecting the plastic and my thoughts. It's like drawing in space, it is the form so I can feel how it has to function. So the form is correct. I think that is the point.

AG: For the practical work, this gesturing with the hand has no direct function, as such. The metal work itself doesn't come further. But for the body, to make this (gesturing the form), what you said, 'drawing in space', it's a way to take the form.

AR: Exactly, it's a way to take the form. When I feel it like that in the space I can eliminate the mistakes. If I don't make this, then it is much more work to repair the mistake. Here I can just feel it. It's like a sketch.

AG: If it was possible to cut the metal only with your hand…

AR: That would be cool. I think that would be a dream. (Gray, 2009)

When questioned on this gesture Reichlin is able to realise the function articulately but had been unaware that he was doing it. It would indeed be a dream if he cut the metal with his hand directly, but in all actuality the reality is far more interesting. The processes he has to go through to overcome the resistance of matter and its relationship to his will is something the phenomenologist Gaston Bachelard explored in 'Earth and the reveries of will' (1943).

> Of course we learn from material reality. In handling diverse and quite distinctive types of matter, we develop our own individual patterns of flexibility and resolution. Not only do we become adept at crafting forms, we become materially skilful at balancing our strength against the resistance of matter. (Bachelard, 1943: 19)

Andreas Reichlin has certainly become adept at balancing his strength against the resistance of matter. Andreas was in 'mid flow', he had attached a 'block-and-tackle' to an affixed appendage, the purpose of which was to forcibly twist a section of the sculpture. As he was about to apply the necessary force when he paused, looked questioningly at the area and raised a finger into the air, in a classic gesture of 'hold that thought'.

Figure 36: film still #14

Figure 37: film still #15

He leaned on the sculpture for approximately a minute, pondering the implications of his actions. He had only lightly welded a major section of the sculpture to the

115

main trunk because he would soon have to remove it altogether in order to access and complete a 'hard to reach' section. The risk however, was that the welding would not be strong enough to cope with the pressure. Andreas therefore had to assess and quantify the threshold at which the most minimal welding would hold the force he intended to exert.

AR: Exactly, That's why I have to weld this now, even though I must take it away again later. 'What happens when I lift this piece up', 'The other piece breaks apart' – It's a shame. This is what I was thinking

Figure 38: film still #16

Figure 39: film still #17

AG: Yes, 'how much must you fix it…'

AR: As little as possible because I must cut it again.

AG: That is just with your feeling? You must have a lot of experience with metal to understand how little you can afford to fix it without it breaking.

Figure 40: film still #18

AR: That is somehow, (points to his heart) feeling

AG: How long have you worked with metal?

AR: When did I begin to work with metal, about 10 years, not so long. (Gray, 2009)

The questioning in this regard was rather a led interview technique, however I consider Reichlin's responses genuinely his own. The tacit knowing displayed in Reichlin's sense of this situation is consciously acknowledged as a qualitative feeling as opposed to a quantitative measurement. In knowing-in-action, Schön's (1983) description of the tacit knowing implicit in skillful performance when practice is going well, might be considered adequate to explain the 'feeling' Reichlin uses to guide his actions in this instance. Likewise reflection-in-action (Schön, 1983) can adequately describe the processes cycled through, when he encountered this potential problem, paused and proceeded with caution. However, the question as to whether the reflective conversation analogy is an adequate framing of the situation requires further research to probe the layers of nonverbal embodied experience and

its role in shaping experience. To this end the following chapter will explore theories of embodied mind.

Figure 41: film still (sequence) # 19

AR: (referring to his actions on screen) Now its good. Do you see this small adjustment to make it curve upwards? Do you see it now, I'm pulling? This is so exciting – I've never seen such a film! This is the first time [I've watched myself working]

AG: So you must cut this away?

AR: (gesturing a twisting motion with his hands) The upper piece is like this, so the back part must twist more. It has to have more power.

AG: How do you define what is the right form from the form that feels wrong?

AR: You can see it with these forms (gestures the angle of the curve in front of the screen). This is a principle of the forms. If you twist one side this way the other has to go in the opposite direction. When it's straight it is somehow dead. It is cut. If it twists its like it's like it's grown.

AG: Organic?

AR: Exactly, Grown, like a plant. It's totally normal. You can feel it now it has to be like this, in this form. (Gray, 2009)

Firstly Reichlin's reaction to watching himself working is overwhelmingly positive. In this instance he is observing the success in his actions. In twisting the metal he is finding the form he has drawn in space with his hand. It occurred to me that the dimensions of the curve on the metal sculpture approximately fit the circumference of his extended arm where the centre point is his shoulder. The curves drawn in space correlate to his bodily movement just as his notion that 'straight is dead, and something twisted is grown' correlate to his observations of nature.

The time Reichlin spends in his studio is split into two main sections:

1. The majority of the time is spent sculpting the large-scale structures over months, attempting to capture the essence of the form conceived in…
2. …the maquette, which are spontaneously created in a matter of hours.

There are of course the occasions when he has only an hour or so, a time period, which for Reichlin is problematic.

AG: Do you find you can work for 2, 3 hours without pause?

AR: 5 or 6 hours, no problem.

AG: I find that when the work is going well then I have no feeling for the time.

AR: Yes, you have no feeling for the time. You say 'the flow', when you are in it. But there are also days when I cannot even work for one hour, then I need to go away because it doesn't work, or I clean the studio.

There are no occasions when he would willingly consider suspending action to commence recording or reporting on practice. As Scrivener (2000) states, it is simply not necessary for action. From the methodological approach of collecting qualitative data however, this case study has shown a number of instances when the recording and reporting on Reichlin's practice has been beneficial. Perhaps most prevalent is the moment Reichlin realised that there is a relationship between the diametric juxtaposition of the making process and the finished sculpture. Another important aspect of his practice, which he had not been previously aware of, was the role that drawing in space, using his natural arm movement, plays in helping him feel the form he is trying to create. These aspects came to light from the process of being filmed by a 'sympathetic, informed, collaborator' (Harper, 2013). It must be concluded that for Reichlin and consequently for practitioners employing naturalistic reflection, where the will to employ a constructed reflective method is lacking, significant insights can still be gained by recording and reviewing practice together with an informed collaborator.

For Reichlin, the terms knowing-in-action and reflection-in-action, are not employed in his practice. However, it is clear that Andreas does possess what Schön (1983) describes as knowing-in-action in the sense that he demonstrates tacit knowing implicit in skillful performance when practice is going well. Evidence can be seen in many instances throughout the documentary, how he attaches the clamps, welds the appendages and expertly handles the wide range of potentially hazardous power tools in his studio. It is clear also that Andreas reflects-in-action in the way that Schön (1983) describes, cycling through the process when problems are encountered in practice, such as the moment when he was forced to suspend action and consider the threshold of a temporary weld he intended to put under pressure. However, there is another layer to the naturalistic reflection Reichlin employs, it is the emergent tacit dimension that Scrivener (2000) lists amongst aspects of practice to be reported on. It is in the discovering of the form by drawing in space, the feel of the 'organic twist' that is synonymous with life, and the capacity to recognise the right form when it is gradually moved toward. Of key importance to visual art practice is the generation of meaning on a pre-linguistic, nonverbal, tacit level, which emerges through the embodied experience of practice and only later, into conceptual, descriptive language. This additional layer of meaning is distinct from

Schön's (1983) categorization of the moments when practice is going well (knowing-in-action) and the process of overcoming a problem (reflection-in-action). It is this process of generating meaning through practice that enables the outcomes of practice to contribute to human experience (Scrivener, 2000: 6), or be an exemplary example of human meaning making processes (Johnson, 2007).

Taking into account Schön's et. al., (1983) recognition that his conversational metaphor is not dependant on the exchange of words, it still frames the way we review this exchange as a conversation. It suggests two distinct entities expressing and responding to each other, which is anthropomorphic in nature. It is a calculated simplification of a complex cognitive process that is useful in many everyday situations. This simplification has been proved to be beneficial to domains where the embodied experience of practice is not of central importance, say, psychology, town planning and design, for example. However, I propose that the conversational metaphor belies the embodied nature of reflection-in-action in visual art practice. Where the phenomenological quality of the tools, the space, the materials etc., are central to the meaning generated through the practitioner's experience of them, the metaphorical structure framing visual art practice might benefit from exploring accounts of pre-linguistic and non-verbal meaning, as an alternatives to a conversational metaphor.

5.6 Case Study 4 – Interview with Laurence Karasek, Painter

Refer to file '2. Andrew Gray - 0027081 - Interview with Laurence Karasek.mov', on the accompanying external hard-drive.

Having pursued a formal education in painting at the Royal School of Art in London during the early 1960's, Laurence Karasek found the only medium through which to deal with the increasingly challenging ideas in the art of the time, to be sculpture. By the time Laurence Karasek was a nationally known and respected sculptor in New Zealand in the early 1970's, he met Clement Greenberg. This meeting inspired Laurence to relocate to New York where he came into contact with many leading artists, including Dennis Oppenheim, whose Metaphorical Minimalism evoked the sentiment of 'reduction' so characteristic of the Avant Garde in New York at the time, was an element he was later to react strongly against.

In New York Laurence continued to refine his adopted medium, exhibiting widely and continuing as a lecturer of art by becoming the Chair of the Art Department at the University of Montana. In the early 1980's, after becoming a member of the board at the Sculpture Residency Programme in New York, Laurence began to seriously investigate the painterly aspects of his art practice.

Figure 42: film still #20

The following case study was conducted in Switzerland in Laurence Karasek's studio. The follow up interview which filmed Laurence watching himself working was filmed later in my art studio, also in Switzerland.

LK: This is all part of the process, when I think about my painting, I don't usually, since I'm alone in the studio, talk. So this will be an interesting articulation of my thinking without actually having to paint. Which is another commitment and obligation. So it's a commentary on a commentary. So its a learning thing for me, an informative, instructive thing for me to do. I'm happy about that so go ahead. (Gray, 2006)

Figure 43: film still #21

Documentary is played – duration 20mins

AG: How is it starting on that kind of fresh, virgin paper?

LK: Terrible, its totally difficult. Enormous, problematic. That's a nice detail. (Gray, 2006)

As with the previous case study Laurence viewed the process of being filmed in his studio and interviewed positively. Karasek commences work on a new painting. It is a series of abstractions based on garden imagery. The particular photograph he is working from depicts a close up of flowering bush. The difference between the image and the final painting however is clearly evident.

AG: The story about the flowers, I somehow got the feeling that the photograph wasn't important at all, it was arbitrary. It was just a means, a vehicle, to get started.

Figure 44: LK archive

Figure 45: (Karasek, 2006) Blooms 38" x 51", Oil on Paper (last accessed 18.9.14)

http://cargocollective.com/LaurenceKarasek/Garden-Series

> LK: Yes, actually you are correct, it's just a starting point, to have a subject to translate from. Rather than working as an abstract expressionist works, […] I am trying to have the same kind of freshness of the moment, but at that moment an indication of structure and space also. So flatness is also a replication of a special concept. So the lines are – Here I'm fairly, I notice that my body language is fairly intense.

> AG: there's a lot of swaying back and forth.

> LK: Yes. It's quite a dance […](Gray, 2006)

One of the immediate characteristics of his engagement with the painting was the tenseness of his body and gesture, something that he commented on himself. In a way similar to Reichlin, Karasek can be seen drawing in space the form he intends to mark upon the surface.

> AG: This movement with the hand, are you aware of doing that?

> LK: Not so much. I'm aware of the fact that its extremely intense, I want to make sure I don't

Figure 46: film still #22

succumb to accidental or casual lines, although they look accidental they're not. They're very deliberate […](Gray, 2006)

To some degree this act of gesturing passes unconsciously for Karasek, and yet it is evidence of an acute sense of embodiment in the act of making. It presents itself as a means of feeling the form through bodily movement. Karasek can be seen making these gestures throughout the process. I questioned him upon it earlier in the interview and he presented a conceptual account of the process.

> AG: So here you are trying to visualize the lines before you make them?

> LK: No they signify, a structure that I'm perversely creating with different colours and lines and so on, which is in turn an abstraction, because I'm not a camera, so I'm doing it in fragments, with one stroke after another. So its an interpretive process actually. When I try to structure the form of the image of the flowers, of the space and the form of the flowers structured on the surface of the paper, it's the way that its connected, every part is connected to the other and as I'm doing it there are certain masses of form accumulations of form that I feel, like stacking of things, or contrasts of types of forms, or connections or groups, actually groupings of forms, so that they form clusters, they form associations and they have a compositional structure that I'm trying to resolve, but not frontally, its in fragments as one brush stroke or line at a time. It's trying to do the whole thing in one moment. (Gray, 2006)

The idea that the painting process is interpretive echoes something Harland is quoted earlier as saying:

> I think moving towards something that is unknown is important. Foucault calls it 'working at the edge of an un-thought, slowly building a language in which to think it'." (Beth Harland, 2006: 12)

It is this very process of moving towards something that is unknown that I consider distinct from either knowing-in-action or reflection-in-action (Schön, 1983). Karasek, like Harland, has a clear agenda to his process, what he calls:

Figure 47: film still #23
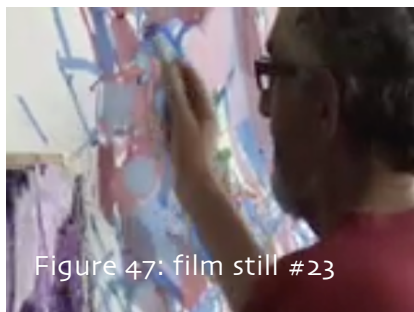
> LK: […] a self generating rule system, of restriction and limitation, versus fullness, and the luscious flowing sensual paint and all that. If you can imagine a conceptual feast that is being eaten with a tiny spoon [laughs], this is basically the sensation I have. I have this enormous complex structure, which I understand, which is dynamic, dynamic in the classic sense of having energy and connection, but at the same time its also structural in a chemical way of this relating to that and that relating to this. (Gray, 2006)

However, both painters are also moving through an unknowing-in-action, which is experiential rather than problem solving. The responses are not just to the media but also to the layers of nonverbal meaning emerging through the connections.

AG: This whole process here now, we were discussing this before, you're struggling with this area of the painting…

LK: Well, there's always a part of the painting, which is problematic, more difficult and it's usually the left hand side for some reason.

AG: Did that mark satisfy that area?

Figure 48: film still #24

LK: Yes, this mark counter balances this darker area here. It relieves the pressure of this, as a compensation for that dark area, filled in area, I'm trying to draw form, and trying to avoid drawing form. […] I mean, it's a way of contrasts and dynamic contrasts where you have different things that balance each other out, so it's a dynamic action. So you can accept what it is without changing it by doing something else. It's a very important concept actually, accepting what it is with out fussing over it so that you can deal with the reality of the moment by taking another action which then explains and defines the thing that you're having a problem with which is perhaps the work or something that isn't quite right you can actually interpret that phenomenon in an external, by going out of the problem, by going external, to an external expression of it that is different and away from it. That was a good shot where you had the close up, I had no idea what you were doing with the camera. (Gray, 2006)
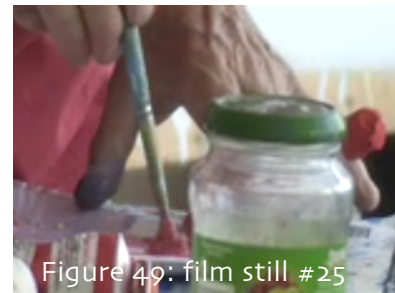
Figure 49: film still #25

I consider Karasek's comments in this section to be synonymous with reflection-in and –on-action, and also generative metaphor, which suggests that Karasek has an intuitive understanding of the reflective processes Schön (1983) describes albeit called by different names. The notion also of 'accepting what it is with out fussing over it so that you can deal with the reality of the moment', suggests a state of mindfulness in the midst of the practice situation. The scene moves to show Karasek modelling the movement of the line again without drawing it. This time Karasek notices it himself.

Figure 50: film still #26

LK: Well, I'm trying to feel my way through the form there I'm trying…

AG: Do you find that that helps you come to terms with that form when you play it out in the motion of the body first?

LK: Yes, yes.

AG: So its like sculpted in space before you make the mark?

LK: Yes, it actually is. Pretty much. It's very much a physical [pause] thinking process. (Gray, 2006)

This was a very similar line of inquiry as with Andreas Reichlin, the role of gesture a as means of articulating form was evident in the case studies. However, there is a sense that is more to gesture than merely a means of mapping or rehearsing movement. McNeill (2005: 2) considers that the form of the gesture is driven by its meaning as much as by simulation. The pause before Karasek said 'thinking process' I felt was also significant, it was almost as if he was trying to find an alternative to saying 'thinking'.

AG: One comment I was going to make. The way the image is being built out here, [points to screen] its almost organic in some way. A kind of a tree like structure, there's no marks going down here until there're marks here to support it – its almost like its growing out of this. And once this becomes more stable, able to carry the weight of the line down there, then you start to move into the space.

LK: Yes, there's a stacking of form here, a stacking that begins here and moves up. Its true, its like when they build a bridge they start with the ends they build out and build out until the can meet in the middle. Its true its kind of like that. I'm impressed how compulsive I seem, driven and compulsive. It's no wonder I get paint in my finger nails, [laughs] its totally, you can't avoid being completely involved in the sensuality of the paint. (Gray, 2006)

Figure 51: film still #27

Karasek's response to watching the edited documentary increased in enthusiasm and he began giving a running commentary.

> LK: So here I'm really loading up the brush I'm going quite fast with the urgency of the idea that's compelling and driving me right now, what I'm going to do with this colour. It looks like I need more fluid, so I'm going to poor some in.
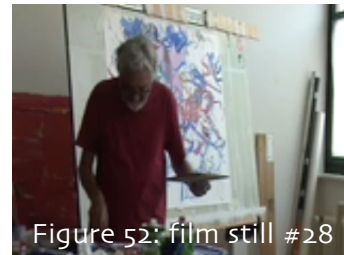
Figure 52: film still #28

Scene changes – Laurence looks bemused.

> AG: we're jumping ahead in time right now.

> LK: Oh. (Gray, 2006)

Unfortunately his commentary was cut short by the edit. In this case the chosen research method was detrimental to the collection of data. It might have been better to review only the raw footage and allow Karasek to comment on the entire process.

> AG: I'm interested in this relationship between the painting and the photograph. There's this continual marrying between… the choreography of the painting… you are engaged with the tool and the material, the stepping back continually, step back, mark, step back, mark, and also in that the photograph, mark, step back, there was a kind of continuity to the way you were structuring, layering…

Figure 53: film still #29

> LK: Yeah, well it has to do with the body language of which the paintbrush, or oil stick or pencil, is a part, it's the end of your arm, so you have a feeling of what you want to do that runs through your body. The body then automatically relates back your feeling to that point of action which is the end of the brush so the ideas, actually this is quite an interesting revelation in a way because the ideas that you want to create, that you conceive of, you feel when you look at your painting, the image you're painting from, run all the way through the motor activity of your body into the physicality of the medium itself and the brush. So it becomes all one. There's no separation, the mind, the body, the pacing up and down on the floor, the verticality of the piece, the wall, the painting, its all part of the same physical existence.
> Is that the end of it?

Figure 54: film still #30

> AG: It passed very quickly, didn't it?

> LK: Yes, why did you cut so much of it out actually? Was it repetitive?

AG: Well I wasn't sure how long we'd have for the interview, and 20 minutes seemed a concise section.

LK: It passed very quickly, from the hour you spent filming me, seemed like 2 mins. (Gray, 2006)

Here the choice to edit the documentary into a 20 minute section was clearly an error. Karasek is just beginning to express a felt revelation, which I consider to be of considerable significance. The end of the documentary marked the end of his commentary. However, I consider it a success also that Karasek saw able to arrive at, and articulate, this revelation through the act of reviewing documentary imagery of himself working. I want to pull out this section of text and highlight it for further analysis.

LK: *[…] The body then automatically relates back your feeling to that point of action, which is the end of the brush […]*(Gray, 2006)

Here Karasek is reflecting-on-action about a cognitive process, which it might be convenient to call reflection-in-action, or a reflective conversation with a situation of materials, but I consider Karasek's description to be richer. The conversational metaphor is a simplification of a complex cognitive process, which is inappropriate in this context. Karasek is describing how *the body* relates back *a feeling*.

[…] actually this is quite an interesting revelation in a way because the ideas that you want to create, that you conceive of, you feel when you look at your painting […](Gray, 2006)

In analysing the language Karasek uses in this context I find it noteworthy that he does not refer to thinking or reflecting, rather 'the ideas *you want to create… you feel'*. It suggests a relationship to the act of making in which the ideas are far from preordained but are being refined in a very particular way. Karasek's articulate description of practice continues in a way that supports the appropriateness of an embodied approach to reflection in visual art processes.

[…] the image you're painting from, runs all the way through the motor activity of your body into the physicality of the medium itself and the brush. So it becomes all one. There's no separation, the mind, the body, the pacing up and down on the floor, the verticality of the piece, the wall, the painting, its all part of the same physical existence. […](Gray, 2006)

I consider this to be a significant account of visual arts practice and more transparent in its clarity than reflective. It suggests a multiplicity of embodied connections occurring in the flux of moment-by-moment perceptions. There is no need to simplify this beautiful cognitive process by using a crude conversational metaphor.

As Karasek sat back from the screen he began reflecting on his process of making. This introduced a dialogue that was distinct from reviewing the documentary.

> LK: Because there is no time, its just the idea, you know, the idea that body's forth, like language itself, you have no idea where language comes from, it just comes out of you and the ideas follow the words, here the visual ideas follow your body, your mind, your thinking, your feeling, all these are put together, and become, if you're lucky, an expressive statement, if you're very lucky it works out. If you're in tune with what you're doing. Its like an atheletic performance it can be quite beautiful and truthful. Given all the factors. The image that comes to mind, is a person riding a horse for example, how complex that is, and they jump over a fence or something and they control the horse, there's no difference between the rider of the horse, the horse's mind the rider's mind, they're all one. And they're all in relationship to whatever it is they're doing. It's like this there's no difference between my mind and my body here. My mind is my body, my body is my mind. The painting is me, the idea and the painting become one. (Gray, 2006)

Figure 55: film still # 31

Questioning Karasek much later he had never heard of Mark Johnson or his book 'The Body in the Mind' (1987), or indeed any theories of embodied cognition. Yet his intuitive response was that of a connected embodiment in which there is no difference between his body and his mind.

> AG: Do you hold with the idea that, although you're setting out a certain agenda, and you're engaging in a certain activity, and you have your rule sets that limit, but that at the same time its not that the act of painting is a slave to the conceptual idea, there's a relationship there where the actual act of painting itself is feeding the conceptual ideas.

> LK: Absolutely, because you have to be in the moment. This kind of painting which is physical, and phenomenological in a sense, as it has to do with the surface and how the paint runs at certain times, or drips or something. It's all part of the mesh of feelings, of ideas, of sensations. I might just as well be building a sculpture here for example, its the same physicality, painting is extremely physical, I wouldn't say totally physical, but it certainly has a physical reality as much as any other physical reality that existence has. And although you're working on a flat surface, you're working on a three-dimensional flat surface if you know what I mean, that exists in space. So the

flat surface of the painting, allows you to have imagination through it, so you go through it, as you go through it, you imagine, you're guiding it, from the other side, from the front of the canvass the visual side of the canvass, with your body, with your actions.

AG: So you see it more as a three-dimensional space, than a flat surface?

LK: Yes. Totally. Totally as a three-dimensional experience, even through you are using a flat surface and you're using a point or a brush or something to do it, and you're using flat colours and so on. It's all part of an extension of your experience. I notice that the painting becomes an extension of my body language, and my body language becomes an extension of the painting. And it becomes very intense because I feel very intensely about my work. My body becomes all tense and I start to work in a rhythmic way that is a reflection of the rhythmic strokes and the pattern of stroking and so on, of application, that I'm actually performing, it's a performance piece. That's why I find this film so interesting, because its actually a performance piece that we're seeing here not just the painting, and out of it comes a framed painting in the end. But actually it's a record of an action, an actual physical action. I had my students one time find out what their patterns of behaviour were by dipping their feet in paint and walking back and forth in the kitchen, and they developed certain patterns of behaviour between the fridge and the sink and so on. For an hour long, it was an actual representation of something that had happened physically over a period of time. So time is also important in painting, and the annihilation of time in the painting is what happens because the artist feels no time, because he leaves his normal body outside of the studio. Are we watching it again? (Gray, 2006)

After the viewing I requested we continue with some formal questions that broached the subject of reflection-in-action. I recall being apprehensive that the theme was somehow too technical but I regret colouring my question with a negative framing, as my concerns were unjustified.

AG: I'd like to get onto some more formal questions.

LK: Sure, go ahead, ask me any question you like.

AG: I'd like to ask what reflection-in-action actually means for you, although its such a dire question somehow. But I'm quite interested in how you negotiate that space, whether you are even aware that there is a process of refinement going on, what you think about reflecting on your work what do you do?

LK: I had my answer already before you used the word dire. No its not dire, its difficult. There's a tremendous sense of responsibility you have with an on going piece, for example, you started filming when there was an hour or two of earlier work from the previous day. And it was quite good I thought. I liked it. It's quite a responsibility to make it better or continue it. So reflection is a sense of perfectionism that you carry, that you have to carry as an artist. You reflect upon, is it perfect, and that's the underlying reflection in making an art piece is, you know, perfectionism, perfect statements each time over the complexity of structuring the work. The reflection-in-action would be something like a commentary, if I was making a commentary, like is this too big, is this right here. It's kind of like as I used to do when I was teaching my

students drawing. How big is this, what direction, what angle, I was talking out loud, and if I was talking out loud here, I would be thinking like that, I would be saying, is this where it ought to be and does this express the feeling I have, is this connected, and there's an intensity I see in things, I observe and I see an intensity there, does it reflect an intensity.

AG: Is that kind of questioning coming out in words?

LK: No. Its not coming out as words its just in my head. I'm not saying them but I'm thinking, As you think, you know, is this big enough, is this where it ought to be, is the angle of it right, how about the colour, was that a good brush stroke, did that work, does it work with the other brush strokes, and this kind of thing. And it's a relational thinking is the reflection, which is always the case with an artist they're thinking about the relationships they're building. Is it this, can I do this. Is the colour right is the form right, its reflecting on the relationships between the parts. There's very little that's done, actually done that doesn't have an existence somehow, materially, physically, some effect on time or space, some manifestation, so.

AG: Is that a kind of post-event activity then...

LK: No, no, it goes...

AG: ... so that you make a mark, then ask the question whether it works, then make another, then ask another question, is it after the event, or whether that thought process, or feeling process is occurring as you make the mark?

LK: No it occurs as you're making them. Does this go there, or there, then you step back and see if it does go there or there, and sometimes it doesn't, sometimes, many times they're corrections. This whole thing was built on, recreating and restating and finally, you get to know the image you're working with so well, that it comes together, it becomes familiar, the patterns, the forms and so on, the composition of it becomes very familiar to you and you get to know it and so it becomes in a way, more resolved as you get to know it, although this way of working there never really is a resolution. You don't want a resolution of the ritualistic kind, you want a resolution of the expressive and emotional kind. That says this is a truthful statement of how you feel about what you're looking at and observing, does it replicate your idea. And of course you don't know that exactly, because you don't know what the outcome is going to be, although following a line of restraints, restrictions, and patterns and rules and regulations that you impose upon yourself, eventually a stream, a sequence of work comes out, that's predictable. (Gray, 2006)

It is questionable whether Karasek's case study ought to be considered an example of naturalistic or constructed reflection. The obvious answer I think is that the distinction itself is problematic as in reality it is not so black and white. Karasek has had a career spanning four decades and has lectured in university. Whilst he is under no academic obligation to record or report on his practice he is more than capable of doing so. His responses to the concept of reflection-in-action appear quite formal at first and even follow a conversational metaphor. It is the notion that he considers himself to be articulating his decisions and questioning his decisions in his head,

much as he might if he were articulating them verbally. For Karasek this might be a true reflection of the cognitive processes firing during the act of making. However his comments that poetically speak of the sensuality of the paint, indicate the felt, phenomenological dimension of his experience.

Both the case studies exploring Naturalistic reflection have focused on the underlying experience of practice. From these case studies it can be deduced that both knowing-in-action and reflection-in-action are descriptive of certain aspects of the visual arts practice situation. However, I conclude from the case studies that the tacit dimension and the generation of new meaning through the experience of practice cannot easily be articulated verbally. If the potential of focus on the underlying experience of practice is going to be fully explored, it would benefit from further research into the embodied aspects of practice and from an alternative to a conversational metaphorical construct.

3. Interview with Patrick Sims

This interview recorded in the artist's studio in Barcelona in 2007 immediately prior to the opening of his show the 'Armature of the Absolute' at the L'Antic theatre, 1st November. Consequently when the interview took place all of the studio practice had been completed. As a result the interview took the form of a reflection on the making of the show. It is a semi-guided interview involving non-structured questions that respond to the interviewee and deal with development of his conceptual ideas. As an interview rather than an exemplar of the research employed in the previous two case studies, the transcript is presented in the Appendix.

CHAPTER 6 – EMBODIED PRACTICE – THEORIES OF EMBODIED MIND AND THEIR IMPLICATIONS FOR A RICHER ACCOUNT OF REFLECTION

The previous case studies demonstrated how a focus on the underlying experience of practice proposed by Scrivener (2000: 18-19), can be of benefit to understanding practice. Through the case studies however, a need has arisen for greater clarity in relation to what that underlying experience of practice is. This thesis takes the following position; theories of embodied mind, also referred to as embodied cognition and a bodily-basis of meaning, can offer that clarity. Bringing the theories outlined in this chapter to bear on the issue of reflective practice requires reviewing and synthesising existing sets of theories, which is offered as an original contribution to knowledge in the context of this thesis.

6.1 The Context and History of Theories of Embodied Mind

The roots of Schön's (1983) theories of reflection-in-action, and Johnson's (1987) theories of Embodied Mind have many commonalities. Evidence exists that both Schön (1983) and Johnson (1987) have both been greatly influenced by American Pragmatism and in particular the work of John Dewey (1933). However, despite Schön's 'The Reflective Practitioner' (1983), and Johnson's 'The Body in the Mind' (1987), being published merely four years apart, Schön's (1983) writings predate many of the recent findings in cognitive science which have prompted Johnson (1987), amongst others, to reassess the role of the body in the development of meaning, imagination and reason. As has been discussed through the epistemology of reflection in chapter 2, reflection is essential grounded in meaning making, it is a primary means through which we make sense of our world. Making sense of meaning making in relation to embodied cognition is therefore essential.

Theories of the embodied mind have emerged out of, and now cover a range of knowledge fields including philosophy, psychology, cognitive science and artificial intelligence (Varela et. al., 1993: 4). The problem of cognitive science is its disparate nature and its relative infancy in terms of the history of science. It is not possible to proceed without an account of what cognitive science is.

> In its widest sense the term cognitive science is used to indicate that the study of mind is in itself a worthy scientific pursuit. At this time cognitive science is not yet established as a mature science. It does not have a clearly agreed upon sense of direction and a large number of researchers constituating a community, as is the case with, say atomic physics or molecular biology. Rather it is more of a loose affiliation of disciplines than a discipline of its own. (Varela et. al., 1993: 4)

Theories of the embodied mind also referred to as embodied cognition, consider that all aspects of human cognition emerge from aspects of the human body. This is a

major paradigm shift that I propose has considerable implications for visual art practice and how practitioners gain access to practice through reflective methods.

Early reference to embodiment in the mind can be found in the writings of Emanuel Kant, who in his early work Universal Natural History and Theory of Heaven (Kant, 1755) advocated an embodied view of the mind-body problem. A number of writers over the last century have put forward theories relating to the embodied mind that can be considered to have established frames of reference for contemporary theorists, this list includes, but is not limited to, William James (1907) and John Dewey (1933), George Santayana (1936), José Ortega y Gasset (1968), Maurice Merleau-Ponty (1962), and Martin Heidegger (2010).

Present accounts of embodiment however, rely much less upon philosophy but rather from recent research in psychology, linguistics, cognitive science, dynamical systems, artificial intelligence, robotics and neurobiology. Gerald Edelman (1987) who proposed a form of Neural Darwinism, and António Damásio (1999) a neuroscientist/neurobiologist who has put forward work on the underlying biology of human emotions and rationality, and others, have explored the connection between the body, structures in the brain, and the mind. Major aspects of embodied cognition include concepts, categories, and performance in the motor system, the perceptual system, and the body's interactions with the environment, which has challenged ontological assumptions about the world that is experienced and shaped by the body and the brain.

The biologists Gregory Bateson (1979), Humberto Maturana et. al., (1980), Francisco Varela et. al. (1993) developed closely related versions of the idea, which they call enactivism. The motor theory of speech perception proposed by Alvin Liberman et. al., (1991) argues that the identification of words is embodied in perception of the bodily movements by which spoken words are made, a sentiment echoed in the work of Johnson and Lakoff (1999).

As we will see through a detailed examination of theories of the Embodied Mind, and the notion of embodied cognition, essential tenets of the Western Philosophical tradition require revision based upon recent findings across a wide range of knowledge fields, particularly cognitive science and linguistics. Contrary to Frege's (1892) assertion that human meaning is irreducible beyond concepts and prepositions, Johnson maintains that meaning traffics as images, qualities, patterns and feelings before emerging into language (Johnson, 2007). Practitioners in the visual arts can but surely be allured by notion that the images and qualities with which they work, the feelings experienced whilst working and the patterns of action as they establish a practice are in themselves rich in meaning long before the practitioner can express them in language. Indeed it is well documented, and is also

evidenced in the case studies that practitioners find talking about the process of making problematic. Do visual art practitioners recognise when this pre-linguistic meaning works itself into language and their descriptions of practice? Where does this leave Schön's (1983) conversational model of reflective practice?

The purpose of this chapter therefore is twofold. Firstly, to examine theories of Embodied Mind and the challenge to Western thought it poses, and secondly to explore the implications of these theories for developing the role of reflection in visual art practice.

6.2 The Embodied Mind and its Challenge to Western Thought

> *"Mental facts cannot be properly studied apart from the physical environment of which they take cognizance. The great fault of the older rational psychology was to set up the soul as an absolute spiritual being with certain faculties of its own by which the several activities of remembering, imagining, reasoning and willing, etc. were explained, almost without reference to the peculiarities of the world with which these activities deal. But the richer insight of modern days perceives that our inner faculties are adapted in advance to the features of the world in which we dwell, adapted, I mean, so as to secure our safety and prosperity in its midst."* (James 1900: 3)

> *"[...] to see the organism in nature, the nervous system in the organism, the brain in the nervous system, the cortex in the brain is the answer to the problems which haunt philosophy"* (Dewey 1925: 198).

Johnson and Lakoff in 'Philosophy in the Flesh – The Embodied Mind and its Challenge to Western Thought' (1999), illustrate how the Western philosophical tradition has mistakenly asked how the inside (i.e., thoughts, ideas, concepts) can represent the outside (i.e., the world), thus establishing the erroneous view that mind and body must be two ontologically different entities. In this regard the problem of meaning became an explanation of how disembodied "internal" ideas can represent "external" physical objects and events. After several centuries of a mind-body dichotomy, it is now considered that there is no way to bridge the gap between the inner and the outer.

> 'When "mind" and "body" are regarded as two fundamentally different kinds, no third mediating thing can exist that possesses both the metaphysical character of inner, mental things and simultaneously possesses the character of the outer, physical things. (Johnson & Rohrer, 2007: 17)

Given the advances in contemporary neurocognitive science and linguistics, Johnson et. al., (2007) considers that more than two millennia of a priori philosophical speculation about aspects of reason are over. Over those two millennia reason has been taken as the defining characteristic of humanity. Reason, according to Johnson et. al. (2007), includes not only our capacity for logical inference, but our ability to conduct inquiry, to solve problems, to evaluate, to criticize, to deliberate about our

behaviour and our actions, and to understand ourselves and others, and indeed the world at large. Johnson and Lakoff (1999) describe three major findings in cognitive science that have radically changed the tenets of Western philosophy, reason and consequently ourselves:

1. The mind is inherently embodied
2. Thought is mostly unconscious
3. Abstract concepts are largely metaphorical

> When taken together and considered in detail, these three findings from the science of the mind are inconsistent with central parts of Western philosophy. They require a thorough rethinking of the most popular current approaches, namely Anglo-American analytic philosophy and postmodernist philosophy. (Johnson, Lakoff, 1999: 3)

Johnson and Lakoff (1999: 4) assert that reason is not disembodied as it arises out of the nature of our brains. Indeed as a result of discoveries in cognitive science they claim that it is the same neural and cognitive mechanisms that allow for perception and movement that create our conceptual systems and modes of reason.

> Thus to understand reason we must understand the details of our visual system, our motor system, and the general mechanisms of neural binding. In summary, reason is not, in anyway, a transcendent feature of the universe or of disembodied mind. Instead it is shaped crucially by the particularities of our human bodies, by the remarkable details of the neural structure of our brains, and the specifics of our everyday functioning in the world. (Johnson, Lakoff, 1999: 4)

This claim has potential implications for increasing our understanding of visual art practice and for how practitioners make decisions, generate meaning and reflect on the processes in their studio work. Where our human reason and meaning are shaped by the specifics of our everyday functioning in the world, what can we say is specific about the intimate functions of visual art practice? How might theories of the embodied mind aid our understanding of the responses a practitioner has to the very real qualities of the materials and space he or she works in and with. It speaks of how the meaning a practitioner attributes to their work is as much built out of the experience of their immediate practice and past experiences as their notions of intentionality and conceptual agendas. Where rich meaning is embedded in practice gaining access to it is the problematic facing this thesis; how might a practitioner reflect upon the embodied experience of practice when thought is largely unconscious?

How might the following revaluations of reason change previously held convictions to the major tenets of Western Philosophy?

> - Reason is evolutionary, in that abstract reason builds on and makes use of forms of perceptual and motor inference present in 'lower'

animals. The result is a Darwinism of reason, a rational Darwinism. Reason even in its most abstract form, makes use of, rather than transcends, our animal nature.

- Reason is not "universal" in the transcendent sense. It is universal, however, in that it is a capacity shared universally by all human beings. What allows it to be shared are the commonalities that exist in the way our minds are embodied.
- Reason is not completely conscious, but mostly unconscious.
- Reason is not purely literal, but largely metaphorical and imaginative.
- Reason is not dispassionate, but emotionally engaged. (Johnson & Lakoff 1999: 7)

These views of reason and indeed what is now known about the mind through cognitive science are considered by Johnson and Lakoff (1999) to be radically at odds with classical philosophical views of what a person is. The outline they provide of how philosophical traditions are altered under this view is extensive, but valuable in the context of this study. I offer here a summary of the most important sections.

- There is no Cartesian dualistic person, with a mind separate from and independent of the body, sharing exactly the same disembodied transcendent reason with everyone else, and capable of knowing everything about his or her mind simply by self-reflection.
- There is no Kantian radically autonomous person, with absolute freedom and a transcendent reason that correctly dictates what is or isn't moral. Reason arising from the body, doesn't transcend the body.
- The utilitarian person, for whom rationality is an economic rationality—the maximization of utility—does not exist. Real humans beings are not for the most part, in conscious control of—or even consciously aware of—their reasoning. Most of their reason, besides, is based on various types of prototypes, framing and metaphors.
- The phenomenological person, who through phenomenological introspection alone can discover everything there is to know about the mind and the nature of experience, is a fiction. Although we can have a theory of a vast, rapidly and automatically operating cognitive unconscious, we have no direct conscious access to its operation and therefore most of conscious thought. Phenomenological reflection, though valuable in revealing the structure of experience, must be supplemented by empirical research in to the cognitive unconscious.
- There is no poststructuralist person—no completely decentred subject for whom all meaning is arbitrary, totally relative, and purely historically contingent unconstrained by body and brain. The grounding of our conceptual systems in shared embodiment and bodily experience creates a largely centred self, but not a monolithic self.
- There exists no Fregean person—as posed by analytic philosophy—for whom thought has been extruded from the body. That is, there is no real person whose embodiment plays no role in meaning, whose meaning is purely objective and defined by the external world, and whose language can fit the external world with no significant role played by the mind, brain, or body. Because our conceptual systems grow out of our bodies, meaning is grounded in and through our

bodies. That does not mean that truth is purely subjective or that there is so stable truth. Rather, our common embodiment allows for common, stable truths.

- There is no such thing as a computational person, whose mind is like computer software, able to work on any suitable computer or neural hardware—whose mind somehow derives meaning from taking meaningless symbols as input, manipulating them by rule, and giving meaningless symbols as output. Real people have embodied minds whose conceptual systems arise from, are shaped by, and are given meaning through living human bodies. The neural structures of our brains produce conceptual systems and linguistic structures that cannot be adequately accounted for by formal systems that only manipulate symbols.

- Finally the is no Chomskyan person, for whom language is pure syntax, pure form insulated from and independent of all meaning, context, perception, emotion, memory, attention, action, and the dynamic nature of communication. Moreover, human language is not a totally genetic innovation. Rather, central aspects of language arise evolutionarily from sensory, motor, and other neural systems that are present in "lower" animals. For scholars passionate about the Western philosophical tradition, the above dissection of the dominant contributions must be quite disconcerting. Certainly these decisive and assertive pronouncements have not gone without criticism.

> The findings they detail are of extreme importance, the arguments in support of them are challenging, innovative, and largely convincing, and their willingness to explicate their implications is laudable. But their explicit and oft-repeated expectation that the work of cognitive scientists will deeply change the practice of philosophy, "require our culture to abandon some of its deepest philosophical assumptions," (p. 3) and become "one of our most profound resources for self knowledge" (p. 551) is based on a questionable understanding of the foundations of philosophy, an apparently limited appreciation of the breadth and diversity of Western Thought, and, more importantly, on a vision of the role of science in culture that is at best somewhat naïve, and at worst a little dangerous (O'Donovan-Anderson, 2000). (Johnson & Lakoff 1999: 7)

However, Johnson and Lakoff (1999) have countered these claims by recognising all that the Western philosophical tradition has afforded us, whilst claiming that it is not possible to ignore the philosophical implications of the new findings to have emerged from cognitive science.

> Classical philosophical conceptions of the person have stirred our imaginations and taught us a great deal. But once we understand the importance of the cognitive unconscious, the embodiment of the mind, and metaphorical thought, we can never go back to a priori philosophizing about mind and language and or to philosophical ideas of what a person is that are inconsistent with what we are learning about the mind. (Johnson & Lakoff 1999: 7)

In taking such a radical approach to the range of philosophical doctrines listed above, the question remains as to what will fill the gap. Some critics have claimed

that Johnson and Lakoff (1999) have not contributed very much more than the early American Pragmatists James (1907) and Dewey (1933). I consider that the later sections bring in much evidence from cognitive science that simply wasn't available to James and Dewey. In this regard Johnson and Lakoff (1999) have furthered the work explored in the next section.

6.3 The Influence of American Pragmatism and the Unravelling of the Cognitive Unconscious

> Pragmatism's principle of continuity claims that abstract thought is not disembodied; rather, it must arise from our sensorimotor capacities and is constrained by the nature of our bodies, brains and environments. From an evolutionary perspective this means that we have not developed two separate logical and inferential systems, one for our bodily experiences and one for our abstract reasoning (as a pure logic). Instead, the logic of our bodily experience provides all the logic we need in order to perform every rational inference that we do. (Johnson, 2007: 179)

A specific rejection of mind/body dualism can certainly be traced back to the philosopher-psychologists known as the early American Pragmatist philosophers. William James and John Dewey, combined the best biology, psychology and neuroscience of their day with phenomenology. Their respective work, whilst published a century ago, has provided recent philosophers and theorists, such as Maturana & Varela (1980), Edelman (1987), Johnson & Lakoff (1999), with exemplary non-reductionist and non-representationalist models of embodied mind, and have to a large degree been vindicated by evidence emerging from contemporary neuro-cognitive science and linguistics (Johnson & Rohrer, 2007: 21).

Embodied Realism rejects that mind and body are ontologically distinct kinds. This opposes Fodor's (1987) claim that cognition and language are based on symbolic representations inside the mind of an organism, which refer to some physical thing in an outside world.

> What I am selling is the Representational Theory of Mind . . . At the heart of the theory is the postulation of a language of thought: an infinite set of 'mental representations' which function both as the immediate objects of propositional attitudes and as the domains of mental processes. (Fodor 1987: 16-17)

Johnson and Rohrer instead, consider the terms "body" and "mind" as convenient shorthand ways of identifying aspects of on going organism-environment interactions - and so cognition and language must be understood as arising from organic processes (Johnson & Rohrer, 2007: 17).

Just as the terms "body' and "mind" have been redefined in this context so the terms "cognition" and "embodiment" require analysis. Johnson and Rorher (2007) have

selected the following questions, each of which have been taken by theorists as emblematic of cognition *par excellence*.

> When a young child crawls toward the fire in the hearth and a mother snatches up the child before the child gets burned, is that cognition? When a team of British mathematicians decodes enemy ciphers during wartime, is that cognition? When ants carrying food back to their nest lay down chemical signals and thereby mark trails to a food source, is that cognition?

> Note the commonalities among these situations. In each case the body (both individual and social) is in peril. First, the wellbeing and continued successful functioning of the organism is at risk. Action must be undertaken to ensure the continued flourishing of the living, physical, individual body of the organism. To survive and flourish, the organism must make adjustments in its way of acting, both within its current environment and in its relations with other creatures. The child must be snatched from the imminent danger of the flames, the mathematicians desperately work to prevent their country from being overrun by the enemy, and the ants must find food and bring it back to the queen in order for the colony to survive. Second, note that in each case the cognition is social, composed of multiple organisms co-operating in response to current or anticipated problems posed by the environment. That environment is not merely physical but also includes the social "body" — whether the family, the nation or the ant colony — whose survival and flourishing is at risk. (Johnson & Rohrer, 2007: 18)

Cognition therefore, is considered to be both a result of, and a description of, the rich organism/environment interaction in its struggle for continued existence. Cognitive sciences are now considered to widely appreciate the importance of embodiment in cognition. There remains debate however, as to what "embodiment" actually means. Does embodiment describe a 'body' as a casually determined physical entity? Does embodiment describe the 'body' as a set of organic processes? Ought the emphasis to be placed rather on the felt experience of sensation and movement as explored by Phenomenologists such as Gaston Bachelard (1952) and Merleau-Ponty (1962)? Can the physical individual body be understood separately from the social networks and families without which it would not have been brought into existence and could not survive? Does the 'body' in 'embodiment' rather define a socially and culturally constructed artefact?

Johnson and Rorher (2007: 19) consider that each of these views contribute something toward the development of an adequate theory of embodied cognition, and furthermore that the proper understanding of 'embodiment' was first elaborated upon in the philosophical context of early American Pragmatism.

> As we see it, embodiment theory inherits several key tenets of how these Pragmatist philosophers viewed cognition:

> (1) Embodied cognition is the result of the evolutionary processes of variation, change and selection.

(2) Embodied cognition is situated within a dynamic on going organism environment relationship.

(3) Embodied cognition is problem-centred and it operates relative to the needs, interests, and values of organisms.

(4) Embodied cognition is not concerned with finding some allegedly perfect solution to a problem, but one that works well enough relative to the current situation.

(5) Embodied cognition is often social and carried out cooperatively by more than one individual organism. (Johnson & Rohrer, 2007: 19)

These 5 key tenets of a Pragmatically centred view of embodied cognition is in stark contrast to the view put forward by classical cognitive science, which maintains that cognition is the application of universal logical rules that govern the manipulation of "internal" mental symbols, symbols that are supposedly capable of representing states of affairs in the "external" world. (Johnson & Rohrer, 2007: 19)

The Representation Theory of Mind, which Fodor (1987) presents, requires internal representations in what he calls the 'language of thought' to become meaningful by being about a state of affairs in the world. As Fodor puts it his Representationalist theory requires:

[…] a theory that articulates, in nonsemantic and nonintentional terms, sufficient conditions for one bit of the world to be about (to express, represent, or be true of) another bit. (Fodor 1987: 98).

Evidently this internal/external separation erroneously assumes it could be possible that cognition can in anyway be detached from the nature and functioning of bodily organisms and the environments they inhabit. A position, which, as written previously, is now widely accepted amongst cognitive scientists to be utterly false.

The historical significance of Representationalism cannot be dismissed as it supported the theory of Functionalism. Functionalism was instrumental in helping to develop the first electronic calculators and general-purpose computers, which in turn gave rise to erroneous models of human cognitive function and the development of rationality. Its significance can be traced through the work of Alan Turing (1936) on the universal computing machines, as it became the primary metaphor for the functions of the human brain. Therefore the modelling of a specific intellectual operation, into a successfully labour-saving machine, in turn became a metaphor for understanding the intellectual function that inspired it, and later, mistakenly regarded as the key to understanding cognition in general. Newell and Simon (1976) for example presented the brain as a physical symbol system not unlike a Turing-style computing machine, ideas that are present in Simon's (1969)

Technical Rationality, the theory of reflective practice that Schön's (1983) Reflective Practitioner later advanced through a pragmatically centred approach. Johnson (2007) therefore considers that for classical cognitive science cognition is defined narrowly as a mathematical and logical computation with intrinsically meaningless internal symbols that can be supposedly placed in relation to aspects of the external world (Johnson & Rohrer, 2007: 20).

> The Pragmatist challenge to classical cognitive science should come as no surprise, since one of the Pragmatists' chief targets was the tendency within the philosophical tradition to assume that what demarcates "rational" humans from "lower" animals is the supposedly unique ability of humans to engage in symbolic representation between internal thoughts/ language and the external world. The remedy offered by the Pragmatists is based on their view that cognition is action, rather than mental mirroring of an external reality. Moreover, cognition is a particular kind of action - a response strategy that applies some measure of forethought in order to solve some practical real-world problem. (Johnson et. al., 2007: 20)

Johnson's et. al., (2007) contemporary view that pragmatism can be seen as offering a remedy to philosophical traditions is a defence of the pragmatist tradition made possible, in part, by recent advances in cognitive science. However, this apparent revival of pragmatist positions cannot be taken out of context to its earlier decline and the objections levelled at pragmatism in the first decade of the twentieth century. Nor can the revival of pragmatist positions be taken out of context to the work of Richard Rorty, who's writings through latter half of the twentieth century led to a reconsideration of pragmatism as a profound contribution to modern philosophy and an answer to the problems of modernism itself (Diggins, 1994: 407). Johnson's et. al., (2007: 20) consideration therefore, that Pragmatism and in particular the writings of John Dewey, despite a century of criticism, can still provide an appropriate philosophical framework for theories of the embodied mind requires a review of some of the objections commonly levelled at the pragmatist tradition. An account must also be offered with regard to how an individualist model of embodied cognition differs from Dewey's original focus on community, which has implications for how reflective practice in the visual arts might work in individual cases but also in the case of collective art practice.

6.4 Assessing the Appropriateness for the Use of Pragmatist Positions in the Development of Theories of the Embodied Mind

The following section will examine the common objections levelled at the pragmatist tradition, its decline, and revival, with a view to addressing the appropriateness for its use in the development of contemporary theories of the embodied mind. This leads to a suggestion that Dewey's understanding of situated cognition supports the approach toward the development of theories of embodied mind.

The rise of American Pragmatism is considered by Diggins (1994: 360) to have taken place in a post-Darwinian culture where nature replaced scripture, and philosophy separated from religion and moved toward scientific naturalism. It was a response to the loss of certainly caused by modernism. This loss of certainty was exemplified by the secularising of the methods of knowledge, through which pragmatism sought to question the authority of institutions whose legitimacy lay in historical origins. Taking science as a new authority, pragmatism, and Dewey in particular, turned to society to provide a cohesive basis of identity, meaning, and value (Diggins, 1994: 360). The work of John Dewey has endured and enjoyed something of a revival in recent years, however, the early work of Charles Sanders Pierce and William James who first established and promoted pragmatism.

> The pragmatist thinker, James explained, "turns his back resolutley and once and for all upon a lot of inveterate habits dear to the professional philosopher. He turns away from abstraction and insufficiency, from verbal solutions, from bad *a priori* reasons, from fixed principles, closed systems, and pretended absolutues and origins. He turns towards concreteness and adequacy, towards facts, towards action and towards power." (Diggins, 1994: 133)

Citing James and the radical departure from the 'inveterate habits of the professional philosopher' pragmatism represented, John Diggins (1994: 133) sets the stage for the criticism that followed, and the pragamatists' responses to them. Diggins explains how pragmatism was viewed as 'a philosophy of power and success at the expense of truth and morality, a philosophy that eliminated epistemology and thus left the modern mind with no access to the real, a philosophy taught and practiced by those who seemed to prefer the chaos of endless change to the coherence of purposeful order' (Diggins, 1994: 139). I agrue that it is this very emphasis on the endless change integral to the view that cognition is action, which has made aspects of pragamtism attractive to contempoary philosophers.

Much of the early criticism aimed at pragmatist positions was levelled at William James. Whilst initially celebrated by Lovejoy (1908) for bringing to philosophy what he described as the artist's freshness and purity of vision, it was 'The Thirteen Pragmatisms' (Lovejoy, 1908) that provided an enduring dissection of James's idea of truth still examined by contemporary thinkers. Despite initially impressing Lovejoy with his bold attempt to generate a new approach to the idea of truth, Lovejoy (1908) presented an argument that James had unknowingly put forward two different theories of truth with no single criterion of meaning to unite them (Diggins, 1994: 133). Bertrand Russell in 1907, critized James for mixing up truth with epistemology and G.E. Moore (1922) critized James's claim that truth can be made to happen simply by believing it (Diggins, 1994: 134). Despite the initial objections raised in the first and second decades of the twenieth century pragmatism claimed to overcome almost any difficultly encounted in a "problematic situation", (Diggins, 1994: 486) and was accepted as the dominent philosophly in

America up until the commencment of the Second World War. The decline of pragmatism through the Second World War was due to critics who claimed that it had rendered America vulnerable to fascism. Later however, it was considered pragmatism had enabled America to be impregnable to communism during the Cold War. Diggins (1994: 386) considers therefore that the image of pragmatism moves from weakness and vacillation to strength and flexibility, indicating something of its versatility.

In answer to some of the most astute critics of the pragmatists, such as the aforementioned Russell, and Lovejoy in addition to George Santayana, Diggins (1994: 251) questions the failure of such critics to study pragmatic ideas in light of the consequences of human behaviour.

> It seems strangely ironic that an intellectual historian or a philosopher would accept the theoretical claims of pragmatism without examining its actual operations in the daily world of experience. Such behaviour presupposes the very formalism that pragmatism sought to overcome—the fallacy of accepting at face value what a thinker says rather than what he does, and treating the propositions of philosophy as tantamount to their validity. (Diggins, 1994: 251)

James who at the time was regarded as America's most popular philosopher, was publicly defended by John Dewey, despite Dewey's serious misgivings about James's 'Will to Believe'. Indeed James also publicly defended Dewey and the Oxford trained philosopher F. C. S. Schiller whom James complained had "suffered a hailstorm of contempt and ridicule" (Diggins, 1994: 139). These shows of public support between the promient pragmatists however, covered the concern Dewey felt toward the direction James's was taking pragamatist philosophy.

> Dewey was more interested in establishing a valid criterion for knowing on the basis of doing rather than developing a stance for believing on the basis of feeling. To Dewey James's position seemed to rely on an emotional inwardness that had little reference to either public awareness or the uses of cool, reflective intelligence. (Diggins, 1994: 140)

Diggins (1994: 137) further isolates the distinctions between James's pragmatism and that of both Dewey and Charles Sanders Peirce, considering it too pluralistic, if not anarchistic, to give purpose and direction to thought advocating organised inquiry and cooperative intelliegence as a means of addressing social problems. Indeed whilst James focused on the self, Dewey focused on the self in relation to society.

> The best thing about Dewey, one may well feel, is that he did not, like Plato, pretend to be a "spectator of all time and enternity," but used philosophy (even that presumably highest and purest form of philosophy—metaphysics itself) as an instrument of social change. (Rorty, 1982: 74)

This theme will be taken up in the conclusion with an account of how Dewey's focus on community has been largely displaced in favour of an individualist model of

artistic practice and examines how reflective practice might work in the case of collective art practice. Taking this investigation of the appropriatness of the use of Deweyian positions as the basis for theories of embodied mind further here, it is worth looking at the writing of Rorty (1982) who shows how critisms of Dewey's earlier work became support for his later writing and how Dewey paved a course for future inquiry.

> I myself would join Riechenbach in dismissing classical Husserlian phenomenology, Bergson, Whitehead, the Dewey of *Experience and Nature,* the James of *Radical Empiricism,* neo-Thomist epistemological realism and a variety of other late nineteeth- and early twentieth-century systems. Bergson and Whitehead, and the bad ("metaphysical) parts of Dewey and James, seem to me merely weakened versions of idealism—attempts to answer "unscientifically" formulated epistemological questions about the "relation of subject and object" by "naïve generalizations and analogies" which emphasize "feeling" rather than "cognition." (Rorty, 1982: 214)

It was this transition from the philosophy of systems, expressive of the science of their time and offering pseudo-answers when no better answers were available, which Reichenbach (1951: 121-122) considers ends with Kant, toward an empirically responsible mode of philosophical inquiry (Johnson, 2007) that is characterised in the development of Dewey's writing. To be clear, pragmatism was grounded in Kant. What characterised Dewey however, was that having established a need to abandon traditional notions of rationality, objectivity, method, and truth, he emphasized that this move "beyond method" gives humanity the opportunity to grow up, to be free to make itself, rather then seeking direction from some imagined outside source (one of the ahistorical structures mentioned above) (Rorty, 1982: 204).

> The elaborate systems of science are born not of reason but of impulses at first sight and flickering; impulses to handle, to move about, to hunt, to uncover, to mix things separated and divide things combined, to talk and to listen. Method is their effectual organisation into continuous dispositions of inquiry, development, and testing […] Reason, the rational attitude, is the resulting disposition […] (Dewey, 1930: 196)

Richard Rorty has contributed greatly to the revival of pragmatism, but it is the application of Deweyan positions to twenty first century scientific inquiry that is of real interest in this thesis. Contemporary theories of embodied mind draw upon five main scientific disciplines, Neuroscience, Linguistics, Philosophy, Cognitive Psychology and Artificial Intelligence, and the departure from traditional philosophical inquiry exemplified in Dewey's writing has presented the opportunity for theories of embodied mind to examine our actual operations in the daily world of experience.

> James and Dewey offered us no guarantees. They simply pointed to the situation we stand in, now that both the Age of Faith and the Enlightenment seem beyond recovery. They grasped our time in thought. We did not change the course of the conversation in the way they suggested we might. Perhaps we are still unable to do so; perhaps we never shall be able to. But we can nevertheless honour James and Dewey for having offered what very few

philosophers have succeeded in giving us: a hint of how our lives might be changed. (Rorty, 1982: 175)

I would argue that now in the twenty first century that the 'hint' to which Rorty (1982; 175) refers, is being explicated through the works of Mark Johnson and George Lakoff (1999), and a number of other philosophers, linguists, and theorists including Maxine Sheets-Johnstone (1992), and Sean Gallagher (2005). The work being done by these writers persuades me of the existence of meaningful experience that is prior to all language or even propositional form in order to develop more adequate methods of reflection specific to visual art practice. When we do so, greater attention is given to our immediate encounter with reality rather than in any abstract system, therefore I argue that contemporary writers developing theories of the embodied mind are justified in referencing the later writing of John Dewey.

An exploration of how a human being has a meaningful encounter with reality requires a section dedicated to the leading theories regarding the organism/environment interaction. Out of these theories the suggestion that the brain uses the same nerve structures for both conceptualizing and sensory-motor activities alike is significant. It reflects the evolutionary economy of using the same nerve structures for more than one purpose. If true this would show how the bodies we have and what we do with them determine and shape our thoughts. To reframe the question posed earlier, does this suggest that what a practitioner 'does with their body' in visual art practice, shapes and determines their thought in relation to practice?

Many critics of Johnson and Lakoff's (1999) 'Philosophy in the Flesh', remarked at the lack of empirical evidence from the domain of cognitive science to support their claim. Johnson and Rohrer's paper 'We are Live Creatures' (2007), appears to be an attempt to answer those criticisms.

6.5 Neuroscience and its Contributions to Theories of the Embodied Mind

Having trained in the visual arts, it has taken substantial work to bring myself up to date about the neuroscience, neurobiology, and cognitive-linguistics that are informing theories of the embodied mind. The agenda for this thesis, as has been stated, was to review existing theories and deduce whether a synthesis of them would be beneficial, the following section therefore necessitates the use citations capable of conveying a condensed overview of the cognitive science of interest to this study, taken from the vast array of research that has been undertaken since the 1980's.

This overview begins with the Chilean biologist and philosopher Maturana and his student Francisco Varela, whose work in the 1980's was at the forefront of their field. The two were the first to define and employ the concept of 'autopoiesis'.

> An autopoietic machine is a machine organized (defined as a unity) as a network of processes of production (transformation and destruction) of components which: (i) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and (ii) constitute it (the machine) as a concrete unity in space in which they (the components) exist by specifying the topological domain of its realization as such a network. (Maturana, Varela, 1980: 78)

Aside from making important contributions to the field of evolution, Maturana is associated with an epistemology built upon empirical findings of neurobiology.

> If a living system enters into a cognitive interaction, its internal state is changed in a manner relevant to its maintenance, and it enters into a new interaction without loss of its identity. In an organism without a nervous system (or its functional equivalent) its interactions are of a chemical or physical nature (a molecule is absorbed and an enzymatic process is initiated; a photon is captured and a step in photosynthesis is carried out). For such an organism the relations holding between the physical events remain outside its domain of interactions. The nervous system enlarges the domain of interactions of the organism by making its internal states also modifiable in a relevant manner by 'pure relations', not only by physical events; the observer sees that the sensors of an animal (say, a cat) are modified by light, and that the animal (the cat) is modified by a visible entity (say, a bird). The sensors change through physical interactions: the absorption of light quanta; the animal is modified through its interactions with the relations that hold between the activated sensors that absorbed the light quanta at the sensory surface. The nervous system expands the cognitive domain of the living system by making possible interactions with 'pure relations'; it does not create cognition. (Maturana, Varela, 1980: 78)

Damasio, a leading cognitive scientist and nuero-anatomist, in his book 'The Feeling of What Happens: Body, Emotion, and the making of Consciousness' (1999), takes this idea further to describe how consciousness came into being.

> The Beginning of Consciousness - Once I could envision how the brain might put together the patterns that stand for an object and those that stand for the organism, I began considering the mechanisms that the brain may use to represent the relationship between the object and the organism. I was looking specifically for how the brain might represent the fact that when an organism is engaged in the processing of an object, the object causes the organism to react and, in so doing, change its state. [...] I propose that we become conscious when the organism's representation devices exhibit a specific kind of wordless knowledge - the knowledge that the organism's own state has been changed by an object - and when such knowledge occurs along with the salient representation of an object. The sense of self in the act of knowing an object is an infusion of new knowledge, continuously created within the brain as long as objects, actually present or recalled, interact with the organism and cause it to change.' (Damasio, 2002: 5)

Damasio's insight has been built through 25 years of research and observation of patients with various types of brain damage. His experience and findings are of course very different from my own. However, as a painter and researcher in the visual arts, and long before reading the work of Damasio, I harboured feelings that some part of my being is altered by the materials I work with, and that the work somehow embodies that change of state.

As a brief example, I found that painting into clear casting resin whilst the catalyst gradually transformed the liquid into a solid, engendered both a transformation in my physical ways of working and the meaning I attributed to the work. Initially the fluidity of the material allowed for 'fluid' movements, dynamic gestures, and interwoven lines taken from movement related studies. Later the more resistant solid surface required more aggressive techniques.

Many practitioners I have interviewed or researched do not consider their studio practice merely a means to an conceptual end, however the richness of the process in relation to the development of conceptual ideas is less well recognised or expanded upon. I may not at the time have referred to myself as an organism, but the artist/studio, artist/object, and artist/material interactions are essentially the same. My curiousity about the relationship between the studio environment, the media at my disposal, both chosen and found, the application of it, and the outcomes of the studio practice, i.e., my paintings, has been the major drive behind conducting this research. Building awareness of the felt experience of practice may well be aided by this phenomenological reflection, however, I concur with Johnson when he suggests that it needs to be supplemented with empirical research into the cognitive unconscious. This is a theme I will take up in the final chapters of this thesis. As my thesis has developed the cognitive science supporting the organism/environment relationship and the philosophical contexts surrounding the scientific discoveries have become central to unravelling my understanding of the visual art practices and the notion of reflection-in-action.

Preceding Damasio's claim by almost a century, Dewey's 'principle of continuity' suggests that there are no ontological gaps between the different levels of an organism's functioning. The organism's functioning requires the processing of objects and environments.

> "there is no breach of continuity between operations of inquiry and biological operations and physical operations. 'Continuity' [...] means that rational operations grow out of organic activities, without being identical with that from which they emerge". (Dewey 1938: 26)

A key claim, consistent in the work of all the aforementioned theorists, echoes and in part vindicates Dewey's principle of continuity. This claim illustrates the way organism environment couplings start with single-cellular organisms and develop

gradually through to more complex animals. Importantly across this vast span of single- to multi-cellular life the same adaptive processes of interactive co-ordination between a specific organism and recurring characteristics of its environment are displayed.

> But does that mean that we can trace human cognition all the way back to the sensorimotor behaviour of single-cellular organisms? On the face of it, this seems preposterous — viewed from an evolutionary biologist's perspective, there are clear differences in the size, complexity and structural differentiation of human beings as compared with single-cellular organisms like bacteria. Single-cellular organism behaviour is not ordinarily relevant to the behaviour of multi-cellular organisms — except insofar as there might be structural morphological analogies between the sensorimotor activity of single cellular organisms and particular sensorimotoric cells within the multicellular body. (Johnson & Rohrer, 2007: 24)

The organism/environment interactions of single to multi-cellular organisms may initially seem far removed from the study of reflection-in-action. I propose, however, that in order to unravel the complex interactions between the artist and their visual art practice, the matter of which the reflective method is focused upon revealing, a context needs to be established to help understand the complex interactions between a human being/organism and the object/environment. The incisive point here is that there are clearly distinguishable patterns between the simple and the complex. The context therefore, being set by the many theorists working on this issue, is one in which simple organism/environment interactions are explored in order to explain and understand how complex organisms, like ourselves, interact with our environments objects/tools and media. Whilst so complex as to possess the capacity to reflect upon these interactions, reflection alone cannot help to unravel our experience. In this I concur with Johnson.

> 'Phenomenological reflection, though valuable in revealing the structure of experience, must be supplemented by empirical research into the cognitive unconsciousness.' (Johnson, Lakoff, 1999: 5)

However, similarly cognitive science alone cannot unravel our experience. I concur therefore with Varela also that Phenomenological reflection, including the work of Merleau-Ponty (1962) and also Bachelard (1958), can offer valuable insight.

> We hold with Merleau-Ponty that Western scientific culture requires that we see our bodies both as physical structures and as lived, experiential structures-in short, as both "outer" and "inner," biological and phenomenological. These two sides of embodiment are obviously not opposed. Instead, we continuously circulate back and forth between them. Merleau-Ponty recognized that we cannot understand this circulation without a detailed investigation of its fundamental axis, namely, the embodiment of knowledge, cognition, and experience. For Merleau-Ponty, as for us, embodiment has this double sense: it encompasses both the body as a

lived, experiential structure and the body as the context or milieu of cognitive mechanisms. (Varela, Thompson, Rosch, 1993: 18)

The relationship between cognitive science and phenomenology in the explication of embodied cognition will be further explored in the final chapter of this thesis. Cognitive science and linguistics however, are not isolated in terms of the academic disciplines striving to explicate the role of the body in the development of rationality and consciousness, and unravel the implications of embodiment for the western philosophical tradition.

> The empirical evidence comes from studies in many different disciplines, all of which share a common concern, namely, they focus on phenomena where human understanding is required for an account of meaning and reason. Among the more important phenomena that have been explored, as challenging Objectivist assumptions, are the following [...]
> - Categorisation [...]
> - Framing of concepts [...]
> - Metaphor [...]
> - Polysemy [...]
> - Historical semantic change [...]
> - Non-western conceptual systems [...]
> - Growth of knowledge [...]
>
> The studies in any one of these areas are sufficient to radically question Objectivist views of meaning and rationality. Taken together, they are overwhelming. They create a crisis in the theory of meaning and rationality by showing us that we cannot preserve our deeply rooted Objectivist commitments. [...] (Johnson, 1987: 104-107)

Continuing with the findings of cognitive science in this section, Johnson (1987) cites evidence from comparative neurobiology of organism-environment coupling ranging from the amoeba all the way up to humans, and argues that in humans this coupling process becomes the basis of meaning and thought.

> Since the earliest episodes of ancient Greek philosophy, humans have been distinguished from "brute" animals and all lower organisms by their supposedly unique capacity for abstract conceptualization and reasoning. According to this view, human reason is what makes it possible for us to form abstract mental representations that stand for and point to states of affairs that are either external to us or are not currently present in our experience (i.e., are past or future). But the Pragmatists' Continuity Thesis denies the inner/outer dichotomy upon which Representationalist theories are based. Consequently, the problem for an embodied view of cognition is how to explain our marvellous human feats of abstraction, reasoning and symbolic interaction, yet without positing an ontological rupture between "lower" animals and humans. The key, once again, is the coupling (the interactive co-ordination) of an organism (here, a human one) and its environment. Recurring adaptive patterns of organism-environment interaction are the basis for our ability to survive and flourish. In humans, these patterns are no more "internal" representations than they are in other

creatures. Let us consider briefly some of the most basic kinds of structural couplings that make up a human being's experience of its world. (Johnson & Rohrer, 2007: 32)

In his 1987 book 'The Body in the Mind', Johnson explores the patterns of these on going interactions as image schemas that ground meaning in our embodiment and yet are not internal representations of an external reality. This leads to an account of an emergent rationality that is embodied, social and creative (Johnson & Rohrer, 2007). In this respect it is important to provide a concrete background for just how this is possible.

6.6 Organism-Environment Coupling

Maturana and Varela (1998) have been particularly active in this area. Their research in the following text traces the path from chemotaxis to the nervous system. This is followed by an account of how neural maps evolve into neural plasticity. Whilst extensive, I will summarise the main points here.

Firstly Maturana and Varela's (1998) argument is that central nervous systems evolved in multi-cellular organisms to co-ordinate sensorimotor activity (Maturana and Varela 1998: 142-163). This is deduced from examining how locomotion in single-cellular organisms is achieved by dynamically coupling the sensory and motoric surfaces of the cell membrane.

The first example given is of an amoeba when it surrounds a protozoan. The cells that compose its membranes respond to the chemicals that compose the protozoan, this response in turn causes the consistency of the amoeba's protoplasm to change. These changes cause the development of pseudopods with which amoeba, envelops the protozoan before feeding upon it.

Secondly an example is given of how certain kinds of bacteria have a tail-like structure called a flagellum. This is rotated like a propeller to give the bacteria movement. When a grain of sugar is added to a solution containing this bacterium, the sugar molecules cause chemical receptors to change the bacterium's membrane. Consequently the bacterium is seen to change the direction of rotation of its flagellar propeller moving it towards the sugar molecules. This process is called chemotaxis. In both of these cases the changes in the chemical environment causes sensory changes the cellular membrane and initiates movement.

> The key point here is that, without anything like an internal representation, single-cellular organisms engage in sensorimotor coordination in response to environmental changes. Even at this apparently primitive level, there is a finely tuned on going coupling of organism and environment. Multi-cellular organisms also accomplish their sensorimotor co ordination by means of changes in their cell membranes. However, the cellular specialization

afforded by a multi-cellular organism means that not every cell needs to perform the same functions. (Johnson & Rohrer, 2007: 25)

The third example taken from Maturana and Varela (1998) discusses a more complex, yet ancient metazoic organism, called the Hydra. The basic structure of the Hydra is described a two-layered tube with tentacles emanating from its mouth. The exterior layer is composed of muscle cells that run both around and down the length of the tubes. The interior layer of the tubes contains cells that secrete digestive fluids. By contracting muscle cells along the body the Hydra can change its shape and direction of locomotion. Neurons between the two layers of the cells can extend over the length of the entire organism and end in the muscle cells. As a link back to the less evolved multi-cellular organisms, the tail-like cellular projections on the Hydra, are evolutionarily speaking, the flagella. As the electrochemical state changes in smaller cellular projections, called the dendrites, the muscle cells contract.

> Like the Hydra opening its mouth as a reflexive part of bringing food to it with its tentacles, we humans think in order to act and we act as part of our thinking — cognition is action. But how is it that we humans can learn new behaviours, while the Hydra generally cannot? (Johnson & Rohrer, 2007: 25).

The answer to that question requires explanation of the difference between neural maps and neural plasticity.

> Although still surprisingly continuous with the Hydra, human cognition is a little more similar to what happens in frogs, owls and monkeys in that all of these organisms have nervous systems that include neural maps and adaptive neural plasticity. (Johnson & Rohrer, 2007: 26)

Maturana and Varela, responding to a neurobiological study in which the eye of a tadpole was carefully rotated 180 degrees before developing in to an adult frog conclude that for the frog:

> […] there is no such thing as up or down, front and back, in reference to an outside world, as it exists for the observer doing the study. (Maturana, Varela, 1998: 25—26).

The poor frog in the experiment was observed to extend its tongue to the opposite side of its visual field. Crucially repeated failure to catch the fly fails to change the frog's reaction to seeing the fly. The conclusion given is that the frog:

> […] acts entirely on the basis of the rewired neural connections between the retinal image and the tongue muscles. (Johnson & Rohrer, 2007)

Johnson and Rohrer consider that one of the most profound findings in neuroscience is that nervous systems exploit topological and topographic organization (Johnson & Rohrer, 2007). Research in this area points to the fact that organisms construct

neural maps. The existence and role neural maps play in the development of neural plasticity is foundational in terms of understanding the emergence of embodied cognition.

> In neural maps, adjacent neural cells (or small groups of neural cells) fire sequentially when a stimulus in adjacent positions within a sensory field moves. […] The spatial orientation of this topography is rotated in various ways. Thus visual right-to-left has become front-to-back and so on, but the topographic mapping between movement in the vertical visual plane and the plane of the retinotectal neural map remains consistent. Even though there is considerable spatial distortion in the neural map, the key relational structures are preserved. In some other cases, such as some auditory maps and colour maps, where the correspondences can be less about shape and position, the organization is more properly called topologic than topographic, but the organizing principle of the neural mapping of sensation still holds (Gaze and Sharma, 1970). (Johnson & Rohrer, 2007)

It is clear interventions as destructive as altering a frog's vision by 180 degrees, is very much outside of the realm of "normal" Darwinian deviation. Gaze and Sharma however, conclude that less destructive interventions are more likely to occur in nature in line with Darwin's theory of evolution by natural selection and mutation. In an attempt to simulate the kinds of partially the optic nerve of a goldfish was partially lacerated. The two found that the optic nerve regenerated to create complete retinal map in what remained of the tectum. This gave rise to the idea that the neural maps have a degree of plasticity. The degree to which such neural maps might be plastic therefore has been the subject of much recent study (Gaze, Sharma, 1970).

Whilst the destructive interventions noted above can disrupt neural maps, the adaptive nature of neural plasticity to environmental factors is of interest to this study on the grounds that this leads to an account of an emergent rationality that is embodied, social and creative (Johnson & Rohrer, 2007). Neural plasticity is considered to be particularly profound in more complex creatures whose brains possess cross-modal neural maps. The experiment conducted by Knudsen and colleagues (Knudsen 1998, 2002) involved making an owl wear glasses that changed its perception of the visual field. As with the frog in the previous example, owls have evolved a highly accurate method of hunting. Owls hear and locate their prey using minute differences in the time it takes for a sound to travel to one ear versus the other ear thus establishing the approximate position in the owl's retinotectal map. The owl can then visually confirm the exact location of its prey before it strikes.

> Knudsen and colleagues (Knudsen 1998, 2002) put prismatic glasses on adult and juvenile owls, which distorted the owls' vision by 23 degrees. After 8 weeks with glasses, adults raised normally never learned to compensate, but juveniles were able to learn to hunt accurately "showing that alternative learned and normal circuits can coexist in this network" (Knudsen 2002: 325). (Johnson & Rohrer, 2007: 28)

The important difference therefore between the cross-modal maps of more complex organisms such as the prism-reared owls, is the ability to receive enough reentrant neural connections from other sensory modalities to sustain the multiple branching neural arbors (Johnson & Rohrer, 2007: 28). The frog's single-modal retinotectal maps simply do not have the capacity to receive enough reentrant neural connections and therefore do not have the capacity for neural plasticity.

To continue the exploration of neural plasticity through to increasingly complex creatures and eventually to human beings Merzenich and colleagues (Merzenich et al. 1987; reviewed in Buonomano and Merzenich 1998) worked on neural plasticity in adult squirrel and owl monkeys. What links this research to the previous two examples, respectively of the frogs and the owls who grew dual arborizations, the monkeys exhibited a plasticity based on their brains' ability to select which parts of their neural arbors to use for various kinds of input (Johnson & Rohrer, 2007).

Technical as this sounds such research has developed understanding about the fundamental nature of being human. Just as the frogs, owls and monkeys have eyes, ears and all their other senses, which serve to structure the internal neural maps and the parameters of their capacity for neural plasticity, human beings have particularly complex sets of visual, auditory and somatosensory neural maps.

> The more obvious of these map perceptual space in fairly direct analogs - preserving topologies of pitch, the retinal field, colour, the parts of the body and so on ~ but subsequent maps preserve increasingly abstract topological structure (or even combinations of structure) such as object shape, edges, orientation, direction of motion and even the particular degree of the vertical or horizontal. Like the frog, we live in the world of our maps. Topologically speaking, our bodies are in our minds, in the sense that our sensorimotor maps provide the basis for conceptualization and reasoning. (Johnson et. al., 2007: 30)

We perceive the patterns of our moment-by-moment organism-environment interactions in image-like fashion, constantly seeking out various topological invariances in those patterns that prove useful to us (Johnson et. al., 2007). This finally leads us through to the human context. Our imagination and our reason are constituted by patterns of activation within these neural maps. However, Johnson et. al., (2007: 30) are particularly adamant that neural maps ought not to become misinterpreted as classical Representations.

> Some people might suppose that talk of neural "maps" would necessarily engender Representationalist theories of cognition. On this view, the map would be construed as an internal representation of some external reality. But the account we have been giving does not entail any of the traditional metaphysical dualisms that underlie Representationalist views — dichotomies such as inner/outer, subject/object, mind/body, self/world. Such dichotomies might describe aspects of organism-environment interactions from an observer's perspective, but they do not indicate different ontological

entities or structures. According to our interactionist view, maps and other structures of organism-environment co-ordination are prime examples of non-representational structures of meaning, understanding and thought. Maturana and Varela (1998: 125-126) make this important philosophical point quite clear. We must not read our scientific or philosophical perspectives (i.e., our theoretical stance) on cognition back into the experience itself that we are theorizing about. We must not uncritically assume that distinctions we make in explaining a certain cognitive experience are thereby part of the person's experience. To do so is to fall prey to what James termed the "Psychologist's Fallacy". In observing something scientifically, one must always consider the standpoint of the scientist in relation to the object of study. When we use terms such as "retinal map, pitch maps", "sensorimotor maps", "colour maps" and so forth to describe the operations of various neural arrays in a frog's nervous system, or in human nervous systems, we are doing so from our standpoint as observers and theorists who can see mappings between those neural structures and our own experience of the "external world". But for the frog, and for the human in the act of perceiving, that map is the basis for its experience of the world. The map constitutes the sensorimotor experience of a certain part of the frog's world. The frog's neural map itself has its origin not in the immediate mappings that we observers see in the moment, but in a longitudinal evolutionary and developmental process during which those neural connections were "selected for" by Darwinian or neo-Darwinian mechanisms. In short, what we (as scientists) theoretically recognize and describe as an organism's "maps" are not for that organism internal representations.

Rather, what we call sensorimotor and somatosensory maps (whether in multi-cellular organisms, monkeys, or humans) are for that organism precisely the structures of its experienced world! Consequently, we must be careful not to be misled by philosophers of mind and language who would treat these maps as internal representations of external realities, thereby surreptitiously introducing an "inner/outer" split that does not exist in reality for the organism. (Johnson et. al., 2007: 31) [Italics added]

The above citation, whilst lengthy, is the key to Johnson's et. al (1999) argument that theories of embodied mind challenge the philosophical traditions of western thought. Our sensorimotor and somatosensory maps structure our experience of our world. Yet these are largely invisible structures. Drew Leder in his book 'The Absent Body' (Leder, 1990) reminds us that we do not hear our ears or see our eyes, and questions why are we so frequently oblivious to our own bodies when they play such a central role in shaping our experience of the world. This problem is central to the human condition, and one, which has certainly affected the absence of the body in western philosophy. The condition is such that we are barely aware of our internal organs and the physiological processes that keep us alive and are largely unable to explain how we perform even the simplest of acts. For the act of reflection-in-action this is a pivotal issue. Practitioners can rarely elaborate upon their decision-making in the midst of practice for example, or translate into words the felt experience of making in a way that unravels their processes. This of course is the issue taken up by this thesis, how can the embodiment of practice, and the essentially embodied nature of reflection-in-action be made more accessible to practitioners wanting to

better understand their own practice? In the following section Johnson et. al., (2007) explore the ontological continuity and human thought and introduce image schemas and amodal perception. Ultimately the body need not stay entirely hidden.

> The character of our experience is delineated in large part by the nature of our bodies and brains, the kinds of environments we inhabit, and the values and purposes we have. The patterns of our on going interactions (or "enactions" as Varela, Rosch and Thompson (1991) have called them, to stress their active, dynamic character) define the contours of our world and make it possible for us to make sense of, reason about, and act reliably within this world. Thousands of times each day we see, manipulate and move into and out of containers, so containment is one of the most fundamental patterns of our experience. Because we have two legs and stand up within a gravitational field, we experience verticality and up-down orientation. Because the qualities (e.g., redness, softness, coolness, agitation, sharpness) of our experience vary continuously in intensity, there is a scalar vector in our world. For example, lights can grow brighter or dimmer, stoves get hotter or cooler, iced tea gets sweeter as we add sugar. We are subject to forces that move us, change our bodily states and constrain our actions, and all of these forces have characteristic patterns and qualities. We are bound inextricably to our world interactively (enactively) by means of these recurring patterns that are the very conditions for us to survive, grow and the qualities (e.g., redness, softness, coolness, agitation, sharpness) of our experience vary continuously in intensity, there is a scalar vector in our world. (Johnson et. al., 2007: 136)

The thought of such a state in which our experience is composed entirely of the moment-by-moment flux of sensory stimuli without structure and therefore utterly chaotic sounds quite alarming, and yet human experience of it has been documented in stroke patients. A recent example concerns the neuroanatomist Jill Bolte Taylor (2008) who at the age of 37 had a stroke in the left side of her brain, and remains the only recorded case of a neuroanatomist to have completely recovered from a severe brain haemorrhage. Consequently she was in a unique position to observe from the inside as her mind deteriorated over the course of 4 hours until she could not walk, talk, read, write, or draw from her memory until she eventually passed into unconsciousness. In her book '*My Stroke of Insight: A Brain Scientist's Personal Journey*' (Bolte Taylor, 2008), she shares how she progressively lost over the course of those few hours, the functions for categorizing, organizing, describing, judging and critically analyzing as the hemorrhage expanded in the left side of her brain and physically pressed upon the language centers. She considers her book to be about the 'beauty and resiliency of our human brain because of its innate ability to constantly adapt to change and recover function' (Johnson et. al., 2007), much like the frog, owl and monkey described in the previous sections, except in this case, the full recovery of her cerebral functions occurred over an 8 year period.

As an aside from the theme of neural plasticity and the regenerative possibilities following brain trauma, Bolte Taylor's (2008) descriptions of her state of being

during the moments when only the right side of her brain was functioning normally are equally fascinating and worth taking a moment to explore in relation to this study.

During the stroke Bolte Taylor reflectively expresses how her consciousness 'shifted into the present moment' (Bolte Taylor, 2008).

> As the hemorrhage in my brain grew larger and larger, I can relate the cognitive deficits I was experiencing to the underlying biology. As a neuroanatomist, I must say that I learned as much about my brain and how it functions during that stroke, as I had in all my years of academia. By the end of that morning, my consciousness shifted into a perception that I was at one with the universe. (Bolte Taylor, 2008)

Admittedly this is a rather grand if unquantifiable claim. However, the specific details in her descriptions in which she describes the felt experience of being solely in the right hemisphere are importantly still rooted in metaphorical projection, (a concept of Johnson and Lakoff's to be addressed shortly). The condition caused by her brain's inability to differentiate the tactile and spatial boundaries of her own body, for example, gave rise to what she describes as a 'sense of expansiveness' (Bolte Taylor, 2008). Living entirely in the right side of the brain of course would be utterly chaotic and counter productive to the organism's survival. The predominant human condition, whatever it is socially or culturally, is one that requires both hemispheres working in tandem.

> No matter how lateralized the brain can get, though, the two sides still work together. The pop psychology notion of a left brain and a right brain doesn't capture their intimate working relationship. The left hemisphere specializes in picking out the sounds that form words and working out the syntax of the words, for example, but it does not have a monopoly on language processing. The right hemisphere is actually more sensitive to the emotional features of language, tuning in to the slow rhythms of speech that carry intonation and stress. Neuroscientists know that the hemispheres work together and that they do so by communicating through the corpus callosum. But exactly how the hemispheres cooperate is not so clear. Perhaps paired regions take turns being dominant. That is known to happen in some animals. For instance, dolphins use this strategy to sleep and swim at the same time: One hemisphere remains active for hours, then fades while the other takes over. Bird brains switch as well. In order to sing, a songbird makes the two sides of its lungs open and close. The two hemispheres of the bird's brain take turns controlling the song, each dominating for a hundredth of a second.
>
> The intimate cooperation between the two hemispheres makes it all the more remarkable that a person can survive with just one a sign that the brain is far more malleable than we once thought. After a hemisphere is forced to manage on its own, it can rewire itself to handle all the tasks of a full brain. In fact, two hemispheres can cause more trouble than one if they cannot talk clearly to each other. Neuroscientists have linked some mental disorders,

including dyslexia and Alzheimer's, with a breakdown in left-right communication.

The two sides of the brain may be a legacy that we inherited from our wormlike ancestors. But their delicate balance of symmetry and specialization is now woven into the very essence of human nature. (Zimmer, 2009)

As a painter, I can certainly relate to the experience of being fully immersed in a visual and sensual domain and yet it is an experience reflectively reviewed by both hemispheres of my brain. Indeed in the context of the visual arts recent research into brain function in art students, explored the structural differences in relation to expertise. These measurable differences had previously been demonstrated in a number of domains including visual perception, spatial navigation, complex motor skills and musical ability, but had not yet been associated with representational skills in visual art.

In the current study a cohort of 44 graduate and post-graduate art students and non-art students completed drawing tasks. Scores on these tasks were then correlated with the regional grey and white matter volume in the cortical and subcortical structures. An increase in grey matter density in the left anterior cerebellum and the right medial frontal gyrus was observed in relation to observational drawing ability, whereas artistic training (art students vs. non-art students) was correlated with increased grey matter density in the right precuneus. This suggests that observational drawing ability relates to changes in structures pertaining to fine motor control and procedural memory, and that artistic training in addition is associated with enhancement of structures pertaining to visual imagery. The findings corroborate the findings of small-scale fMRI studies and provide insights into the properties of the developing artistic brain. (Chamberlain, McManus, Brunswick, Rankin, Riley, Kanai, 2014)

The study above, in addition to its primary objective, also disproved the largely held misconception that artists work solely in the right side of their brains. Immersion in the right hemisphere is a desirable consequence of gaining expertise in the most fundamental of visual art practices. It is worth noting, for example that drawing ability is a longstanding traditional prerequisite of entry into education in the visual arts regardless of whether the practitioners interests are purely conceptual and involves out sourcing the making process.

It appears reasonable however, to hypothesize that if the act of learning and gaining mastery in drawing physically changes the neural structure of the human brain, the structure itself will have some have some specific consequence in the way the practitioner conceptualises their world. Throughout history a select group of visual arts practitioners have been as equally revered for their unique visions and ideas as for their mastery over their chosen media. In Charles Harrison and Paul Wood's 'Art in Theory 1900 – 1990' (1992), art is presented as a story of changing ideas best told

chronologically. Examples abound through manifesto's and personal letters where the artists' conceptual ideas are tied uniquely to their practices as visual/conceptual artists. The relationship is intertwined and yet I would argue that it is not yet fully understood. Theories of embodied mind would have us consider how our experience is delineated by the nature of our bodies and brains. The most compelling of the theories to have emerged in recent years regarding how embodiment structures our mental processes and generates meaningful coherent experience out of the chaotic moment by moment flux of sensorial stimuli, explain how the white and grey matter, in the two hemispheres, and four lobes, of a typical human brain, deal with sensory experience.

6.7 Image Schematic Structures

Johnson (1987) and Lakoff (1987) use the term "image schemas" to refer to the stable recurring patterns of sensorimotor experience through which we engage with the world. Enabling us to understand, act and further our purposes.

> There are numerous sources of evidence for the existence of image schemas, ranging from experimental psychology to linguistics to developmental psychology. (Johnson & Rohrer, 2007: 33)

Johnson in both his 'The body in the mind' (1987) and 'the meaning of the body' (2007), analyses the evidence for the existence of image schematic structures.

> Creativity is possible, in part, because imagination gives us image-schematic structures and metaphoric and metonymic patterns by which we can extend and elaborate those schemata. [...] And, when it is metaphorically elaborated, it can structure many non-physical abstract domains. Metaphorical projection is a fundamental means by which we project structure, make new connections, and remould our experience.' (Johnson, 1987: xi - xiv)

The hypothesis that these image schemas are 'neurally embodied as patterns of activation in and between our topological neural maps' (Johnson et. al., 2007) requires that image schemas form part of our non-representational coupling with our world. In the same way that the neural maps of the frogs, owls and monkeys form image schemas that define their types of sensorimotor experience, image schematic structure is the basis for our understanding of all aspects of our perception and motor activities.

> An example from Lakoff and Nuñez (2000) illustrates this image-schematic basis of spatial concepts in humans. What we call our concept IN is defined for us by a CONTAINER image schema that consists generically of (1) a boundary that demarcates (2) an interior from (3) an exterior. When we say The car is in the garage, we understand the garage as a bounded space, we profile (Langacker, 1986) the interior of that space, and we regard the car as what cognitive linguists call a trajector within that space, with the garage (as

container) serving as a landmark in relation to which the trajector is located. […] As with much interdisciplinary research in the neurosciences, the evidence for this first emerged from intracranial neuronal recordings on monkeys and was later extended to humans via analogous neuroimaging studies. (Johnson et. al., 2007)

Within a growing body of research from developmental psychology the proposal has been put forward that infants are born with the inherent capacity for experiencing image-schematic structures.

> Stern (1985) described certain types of experiential structures that infants are able to detect, and he argues, first, that these capacities form the basis for meaning and the infant's sense of self; and, second, that these capacities continue to play a central role in meaning, understanding and thinking even in adults who are capable of propositional thinking. Let us briefly consider two of these basic structures: (1) cross-modal perception, and (2) vitality affect contours. […] Stern suggests that Infants thus appear to have an innate general capacity, which can be called amodal perception, to take information received in one sensory modality and somehow translate it into another sensory modality. [...] These abstract representations that the infant experiences are not sights and sounds and touches and nameable objects, but rather shapes, intensities and temporal patterns — the more "global" qualities of experience. (Johnson et. al., 2007)

When Johnson (2007) describes human meaning emerging as images, patterns qualities and feelings, it is in part a result of the inherent image schematic structures and what Stern (1985) calls amodal perception. This inherent structure of perception is not something adults grow out of. Rather it is pervasive in our every dealing with the world.

> When as adults we hear a musical composition building up to a crescendo, this causes increasing emotional tension that is released at the musical climax. The emotional salience of the vitality affect contours in image schemas shows that image schemas are not mere static "representations" (or "snapshots") of one moment in a topographic neural map (or maps). Instead, image schemas proceed dynamically in and through time. To summarize, image schemas can be characterized more formally as:
>
> (1) recurrent patterns of bodily experience,
> (2) "image"-like in that they preserve the topological structure of the perceptual whole, as evidenced by pattern-completion,
> (3) operating dynamically in and across time,
> (4) realized as activation patterns (or "contours") in and between topologic neural maps,
> (5) structures which link sensorimotor experience to conceptualization and language, and
> (6) structures which afford 'normal' pattern completions that can serve as a basis for inference. (Johnson et. al., 2007)

Image schemas constitute a preverbal and pre-reflective emergent level of meaning. They are patterns found in the topologic neural maps we share with other animals,

though we as humans have particular image schemas that are more or less peculiar to our types of bodies. However, even though image schemas typically operate without our conscious awareness of how they structure our experience, it is sometimes possible to become reflectively aware of the image-schematic structure through Conceptual Metaphor Theory.

6.8 Abstract Conceptualization, Reasoning, CMT (Conceptual Metaphor Theory), and Conceptual Blending

Dewey's 'Continuity Thesis' states that in order to explain how abstract thought works we must be able to move from:

- body-based meaning of spatial and perceptual experience, characterized by image schemas and affect contours

to:

- abstract conceptualization, reasoning and language use.

Johnson (2007) is optimistic that some of the central mechanisms of abstract thought are becoming better understood. Indeed the following statement confirming the continued development of this theory has in itself been used to help refine the theory.

> Consider the sentence 'We have a long way to go before our theory is finished'. Why can we use the phrase a long way to go, which is literally about distance in motion through space, to talk about the completion of a mental project (i.e., developing a theory)? The answer is that there is a conceptual metaphor PURPOSEFUL ACTIVITIES ARE JOURNEYS, via which some cultures understand progress toward some nonphysical goal as progress in moving toward a destination. The metaphor consists of the following conceptual mapping: The PURPOSEFUL ACTIVITIES ARE JOURNEYS METAPHOR. (Johnson et. al., 2007)

This introduces a particularly important structure Johnson and Lakoff (1980) call conceptual metaphor. This has been worked into Conceptual Metaphor Theory (CMT). A central aspect of CMT is that "abstract" concepts are defined by systematic mappings from bodily-based sensorimotor source domains onto abstract target domains.

Johnson (1987) proposes that all abstract conceptualization works via conceptual metaphor, conceptual metonymy and a few other principles of imaginative extension. However, in relation to this thesis CMT also offers itself as a method of reflection-on-action and -practice. The mapping of conceptual metaphors back onto the source domain of experience may offer visual arts practitioners a fresh way of

reflecting on the experience of making. When I write, 'I have a long way to go before my thesis will be finished' one of our culture's most pervasive metaphors for understanding the passage of time comes into play. The Conceptual Metaphor PURPOSEFUL ACTIVITIES ARE JOURNEYS mentioned above, is understood metaphorically as motion along a path to some location. In this metaphor, the observer moves along a time line. There are so many examples now that are being analysed.

> To date there is a rapidly growing body of metaphor analyses of key concepts in nearly every conceivable intellectual field and discipline, including the physical and biological sciences, economics, morality, politics, ethics, philosophy, anthropology, psychology, religion and more. For example, Lakoff and Nuñez (2000) have carried out extensive analyses of the fundamental metaphorical concepts that underlie mathematics, from simple models of addition all the way up to concepts of the Cartesian plane, infinity and differential equations. Winter (2001) analyses several key metaphors that define central legal concepts and are the basis for legal reasoning. Grady (1997) examines "primary metaphors" (such as PURPOSES ARE DESTINATIONS) that are combined systematically into more complex metaphors (such as PURPOSEFUL ACTIVITIES ARE JOURNEYS). The reason that conceptual metaphor is so important is that it is our primary means for abstract conceptualization and reasoning. (Johnson and Rohrer, 2007)

As suggested in chapter 2, the development of reflective ability has been continually evolving for all of human history, the recency of embodied cognition and the implications it has for furthering understanding needs to be understood in context.

> Recently several new sources of evidence have become available to explain the possible neural bases for the image-schematic mappings that operate in conceptual metaphors. The new evidence comes from both the patient based neurological literature and neuroimaging studies of normal adults. [...] Similarly, an fMRI neuroimaging study by Rohrer (2001b, 2005) shows that both literal and metaphoric sentences using hand terms (e.g., She grasped the apple and He grasped the theory) activate primary and secondary hand regions within the primary and secondary sensorimotor maps. After the presentation of the linguistic stimuli, Rohrer also mapped the hand somatic cortex of each study participant using a tactile hand-stroking task. A comparison between the tactile and the sentential conditions shows a high degree of overlap in the primary and secondary somatomotor cortex for both language tasks, cf. Figure 1. Lllerli Hand Sentences Metaphoric Hand Sentences. (Johnson and Rohrer, 2007)
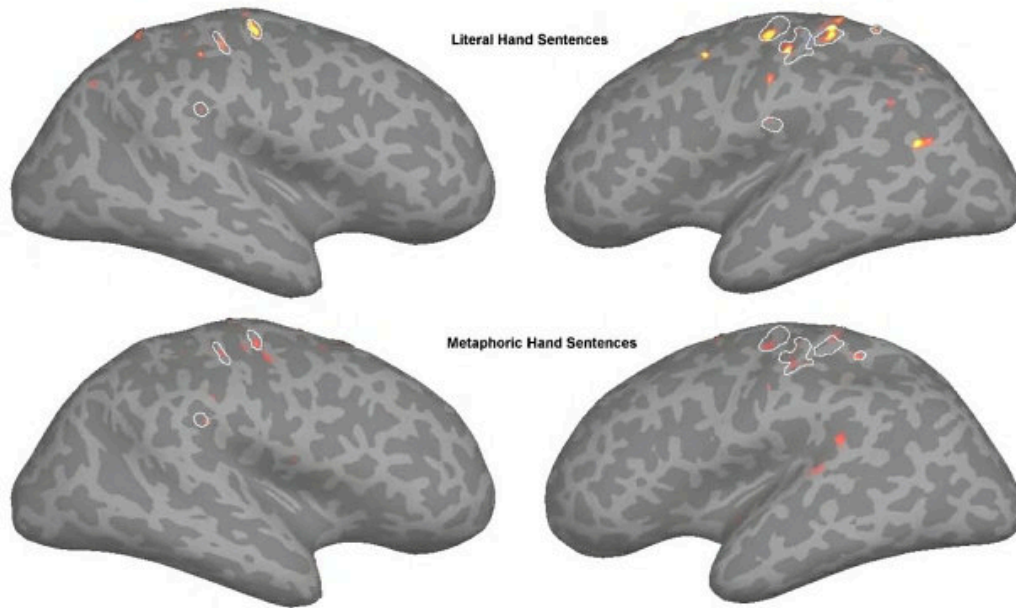
Figure 56: (Johnson and Rohrer, 2007) Figure 1. fMRI activation courses in response to literal and metaphoric action sentences.

These metaphor mappings are found in patterns motivated by image schematic constraints. This is something of a linguistic game but it is extremely important. I give a simple example of it here, which I discussed with Mark Johnson in 2007.

The following extracts are taken from an interview I conducted with Professor Mark Johnson, at the Experiential Knowledge Conference, University of Hertfordshire, England – 29th June 2007. It is included in this chapter on the methodological grounds that 1, it is presented as a primary source of qualitative research and 2, Johnson's theories of CMT had not dealt overtly with the consequences of the theory within visual art practice, a theme this interview attempts to address. Having referred to a series of images depicting stone balance structures Johnson responded by saying:

> Mark Johnson: By the way there's a metaphor of standing. Which is, you know, going to be operative here. The metaphor is existing is standing, or continuing to stand. And so when something is knocked over, it falls, so we talk about regime change, you know, it was toppled, it fell. And so the notion of standing up right is metaphorically a kind of, continuing in existence. Anyway that's one of the metaphors that would be relevant to our experience of those works.

> Andrew Gray: That certainly applies. When it got to talking to this old woman about the work we could just have easily been talking about existence, our conversation about the structures being about finding inner balance in ourselves and the relationship of that balance to other forces in life that have the potential to knock us off that balance, is just an example of the deeper, less obvious, structure of meaning making in which concrete qualities can be

projected metaphorically onto abstract domains. You have done extensive work on this and I wanted to talk to you to see whether I'm applying your ideas correctly. The balanced structure becomes a metaphorical projection of the human being. Gravity becomes a projection for inner balance. The sideways force, as a physical attribute could be a wind, or you know whatever…

MJ – Or you know, it can be a social force, or any metaphorical force.

Figure 57: Mapping physical attributes onto abstract conceptual domains

Balanced stone structure ⟶ Human being

Metaphorical projection

Gravity ⟶ Inner balance

Metaphorical projection

Sideways force:
Wind
Applied human force –
intentional or
accidental
Weakening of the
stone's composite
strength
⟶ External forces:
Change
Interference
Responsibilities
Illness/fatigue

Metaphorical projection
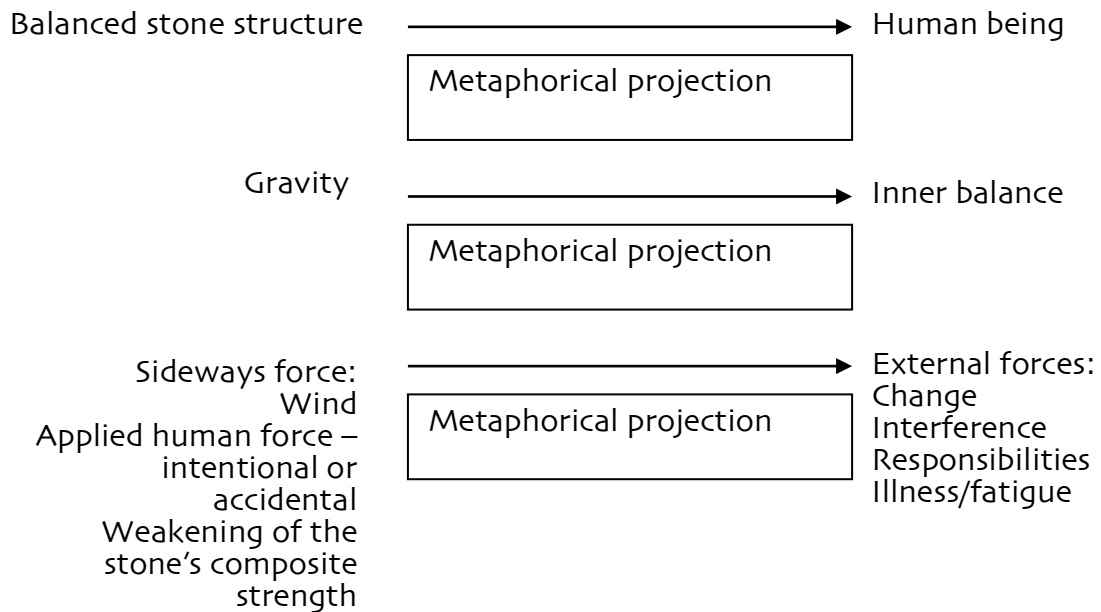
AG – These are the physical forces that can be mapped onto…

MJ – …any kind of metaphorical force, right. So social convention, or peer pressure or, many different metaphorical manifestations of force.

AG – Very often creative practitioners talk about the conceptual ideas *behind* the work are… or the conceptual ideas *in* the work are… what I'm suggesting would be beneficial for understanding visual art practice is if we were talking about what the conceptual ideas *projected out of* the work are. This leads me onto the aspects of this inquiry that are really interesting me. We talk about all human experience as having a structure. The structure of the physical experience, creates the parameters, the structure, through which we understand the experience. Going back to one of the things that I mentioned at your presentation yesterday. You described art making as being an exemplary example of human meaning making processes. Within visual art practice there are particular kinds of experiences that are generated out of dealing with matter without direct regard to its everyday functionality. I'm very interested in the kind of specific structures that are generated, and how creative practitioners internalise and metaphorically project those experiences, even unconsciously, into abstract domains. It would suggest that visual arts practitioners might owe as much of their creative conceptual ideas not only to their social, theoretical, and historical agendas to but to very physical qualities and processes in the act of making. Perhaps it is this process that enables visual art practice to be the exemplary example of human meaning making you describe.

MJ – Exactly. I'm completely on board with what you're saying. We look at the possibility of creativity as to not simply reproduce these templates or structures but the modest freedom we have to transform them in creative ways. I think that your basic idea is absolutely correct. Dewey says, look, what's so characteristic of art is the focus on the qualitative dimensions in the structure of materials and relationships of qualities. And the actual working through the possibilities of those. And I think that's what you are describing here and you are showing how that's a basis for projection in our, sense of ourselves, and then into a number of abstract, what we think of as abstract, conceptual domains. (Gray, 2007)

The capacity to internalize concrete embodied experience and project it metaphorically on to what we think of as abstract domains, presents itself a fundamental underlying structure of human meaning making. An underlying structure that operates largely unconsciously and it has taken years of data collection, empirical testing and analysis to discover. However, if visual arts practitioners are to benefit from focusing reflection on the underlying experience of practice, as Scrivener (2000: 18 - 19) suggests, then this inherent human capacity cannot be neglected.

This is the key point in the thesis at which I consider the reviewing of theories of reflective practice and theories of embodied mind, are synthesized. This is presented as an original contribution to knowledge in the context of this thesis. The focus of reflective methods on the underlying experience of practice can benefit from the rich account of embodied cognition, deepening understanding of the qualitative dimensions of practice. The development and integration of Embodied Reflective Practice would not, I propose be only useful for visual arts practitioners but for a greater understanding of visual art practice and appreciation.

[...] the value of an artwork lies in the ways it shows the meaning of experience and imaginatively explores how the world is and might be – primarily in a qualitative fashion. Therefore, art can be just as much a form of inquiry as is mathematics or the empirical sciences. The principal difference is that art focuses more intently on the qualitative dimensions of experience that we tend to overlook in our other intellectual activities, which, by the way, are characterized as the activities they are by their distinctive pervasive unifying qualities. The sciences seek to formulate generalizations over groups of phenomena and often need to abstract somewhat from the particular unifying quality of a situation, in order to focus on selected characteristics of a situation that seem salient and explanatorily robust. What distinguishes art proper, on Dewey's view, is the way it presents the qualitative dimensions of an experience, instead of only abstract features, such as causal relations.
The making of artworks is thus an on going exercise – an apprenticeship – in how to remake experience to enhance meaning. (Johnson, 2010: 150)

As stated by Johnson et. al. (1999: 7), this deep understanding cannot be arrived at purely through phenomenological reflection. I consider that the development and

application of an Embodied Reflective Practice would have to occur through modifications to andragogy. Certainly the work done by Schön (1983) and Scrivener (2000), has developed rigourous reflective methods that have been successfully applied in an academic andragogical context. The development of Embodied Reflective Practice, is considered supplementary to existing reflective methods with specific benefit to visual arts practitioners. The research agenda proposed for this degree was to review and synthesize existing theories, this I conclude has been achieved. However, as is often the case in research, more questions have been opened than answered. Questions remain as to the most beneficial methods by which theories of embodied mind can be integrated into existing theories of reflective practice. I have offered evidence that the use of image schematic structures can offer insight into the role the qualitative dimension of practice can play in the language used to describe it. However, this might be of most benefit for reflections-on-action. In relation to reflections-in-action developing the inherent human capacity to be attendant to the moment and aware of the pervasiveness qualities of the materials in shaping aspects of the experience and framing conceptual understanding may require further modifications to andragogy. Varela et. al. (1993) saw the need for cognitive science to develop a method for examining experience and proposed the mindfulness/awareness as a means of training the inherent human capacity for being present.

> Its purpose [mindfulness awareness practice] is to become mindful, to experience what one's mind is doing as it does it, to be present with one's mind. What relevance does this have for cognitive science? We believe that if cognitive science is to include human experience, it must have some method for exploring and knowing what human experience is. (Varela et. al. 1993: 23)

The question as to what relevance mindfulness training could have for cognitive science might also be aimed at reflective methods in visual art practice. Schön's (1983) conversational model of reflecting-in-action, hearing what the situation is saying, how it talks back to the practitioner, has been shown to be a metaphorical means of simplifying a complex cognitive process that is a useful reflective method for most practice situations. During the video documentation of my own studio practice, for example, I can be heard talking about 'my dialogue' with the work. However, when reflections-in-action are focused on the qualitative, embodied dimension of experience in visual art practice the conversational metaphor is inadequate. The notion of experiencing what one's mind is doing as it does it is alluring. If possible it could be extremely beneficial for supplementing the rigourous structure of existing reflective methods. The following chapter therefore has been included to take the questions developed through this thesis further as a recommendation for future research.

Before moving on to examine mindfulness however, I would like to close this chapter with reference to an interview I conducted with Professor A C Grayling,

which focused on contextualising theories of Embodied Mind in relation to a wider humanist debate.

> Andrew Gray: I'd like to ask whether you feel they (theories of embodied mind) could contribute to a humanistic debate or whether there's a place for a humanistic account of visual art practice, and whether it would be useful in the humanistic debate.

> A C Grayling: Well, so there are three separate things going on in parallel and they will have complex relations to one another. One is that in constituting a sort of an ethical outlook, the humanistic stance brings the body back into focus as the site of our experience and our actual needs and our interests and respecting it and tolerating it and making room for it and even celebrating it, would be an important part of humanistic ethics. […] In that sense humanism is predicated on the idea that we are physical beings in a physical world and that it's the constant relationship that we're in with our environment that makes us what we are - which is why so much of the way that we think about ourselves, certainly emotionally, probably also cognitively, has to do with our being spatial and material creatures. (Gray, 2014)

The transcript of this interview can be read in full in the Appendix.

CHAPTER 7 – MINDFULNESS – A METHOD FOR EXAMINING EXPERIENCE?

7.1 Questioning the Relevance of Mindfulness Training to the Further Development of a Model of Embodied Reflective Practice.

The primary objective of this thesis, as set out in the previous chapters, has been to review and synthesize existing theories of reflective practice and theories of the embodied mind, in specific relation to developing reflective methods in visual art practice. Whilst this objective has been addressed in Chapters 1 to 6, the final conclusions presented in Chapter 8, will clarify how this process constitutes an original contribution to knowledge. Before moving onto the concluding chapter I consider it necessary, on the basis that it may have implications for the direction of future research into the development of reflective methods, to address a speculative suggestion to have emerged out of theories of embodied mind, concerning the potential benefit of mindfulness training in the development of reflective practices.

> If the results of mindfulness/awareness practice are to bring one closer to one's ordinary experience rather than further from it, what can be the role of reflection? […] This question brings us to the methodological heart of the interaction between mindfulness/awareness meditation, phenomenology, and cognitive science. What we are suggesting is a change in the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection. By embodied, we mean reflection in which body and mind have been brought together. What this formulation intends to convey is that reflection is not just on experience, but reflection is a form of experience itself - and that reflective form of experience can be performed with mindfulness/ awareness. When reflection is done in that way, it can cut the chain of habitual thought patterns and preconceptions such that it can be an open-ended reflection, open to possibilities other than those contained in one's current representations of the life space. We call this form of reflection mindful, open-ended reflection. (Varela, et. al., 1993: 27)

The Western appropriation of Eastern introspective psychological practices, including what has been termed 'mindfulness' is a complex and as yet unresolved issue, and clearly not the main objective of this thesis. The speculative nature of this chapter therefore must be made explicit. However, Varela's, et. al., (1993: 27), proposal to reframe reflection from being considered an abstract, disembodied activity, to being viewed as an embodied (mindful), open-ended reflection, in which reflection is not 'on' experience, but 'is' experience, presents itself as a necessary avenue for future enquiry in the context of this thesis. Similarly Varela's, et. al., (1993: 27) notion that the role reflection plays in our lives brings us to the methodological heart of the interaction between mindfulness/awareness meditation, phenomenology, and cognitive science is clearly of contextual interest to this thesis. Finally, Varela's, et. al., (1993: 27) claim that if reflection is 'done' in that way, it can cut the chain of habitual thought patterns and preconceptions

suggests a potentially beneficial method, whose academic rigour has yet been thoroughly tested in the domain of Psychology where it has received the greatest academic examination.

Proving mindfulness training to be unbeneficial would have no negative consequences I can foresee, proving it to be beneficial however, could have significantly positive consequences for modifications to andragogy in visual art practice at a number of levels. It is not my purpose in this chapter to present a recommendation either way. However, I do consider it necessary to close this thesis with a review of some of the developments in mindfulness training across a number of disciplines, which could suggest further research opportunities and potential developments of an Embodied Reflective Practice.

This chapter is composed of four sections. The first theorises mindfulness, by providing a brief historical overview of the origins of mindfulness in Eastern introspective psychological practices and how it has been introduced and adapted by Western science, particularly psychology. The second section examines the development of a means of measuring mindfulness through psychological research in relation to the health benefits of stress reduction. The MAAS scale (Ryan & Brown, 2003) claims to provide evidence that subjects trained in mindfulness techniques score higher in the test. The third section looks at the development of Mindfulness-Based Reflective Practice (Korthagen and Vasalos, 2009), in education research, which tries to address superficiality in reflective methods by focusing training on cognitive, emotional, and motivational awareness. This method whilst framed as Mindfulness-Based Reflective Practice may be criticised for making little reference to the tradition of mindfulness as it is understood by either Western psychology or Eastern introspective psychological practices. The final section introduces primary sources and brings the personal perspectives of mindfulness practitioners. Detailed in this section are two interviews conducted specifically for this chapter. The first interview, with Dr. Linda Lehrhaupt, Managing Director of the European based Institute for Mindfulness-Based Approaches (MBA), explores two issues. The first questions whether mindfulness training is worthy of further research as a means for developing reflective methods in visual art practice. The second issue concerns whether for the visual art practitioner, notions of 'flow' (Csikszentmihalyi, 2009) within the practice situation can be considered a form of mindfulness, or rather a state of deep concentration combined with the process of discernment. This leads to the second interview with Professor Michael Rodriguez, an artist and lecturer in New York who made public his views that being attentive to his practice was in its self a kind of mindfulness during a radio broadcast, the transcript of which is available at: http://ctl.laguardia.edu/journal/v5/pdf/InTransit_Spring11_v5_fernandez.pdf (last accessed 29.9.14)

7.2 The Western Appropriation of Mindfulness

Since the 1970's in the West, empirical studies have been continuously revising a conceptual definition of what mindfulness is. However, accepted definitions in Western science, largely owe the term mindfulness and the techniques associated with it, to Eastern introspective psychological practices. Buddhist psychology in particularly, first made reference to the concept circa 500BCE (Black, 2011), although many philosophical and psychological traditions have emphasized the importance of the quality of consciousness for the maintenance and enhancement of well-being (Wilber, 2000).

> The relationship between the scientific psychology of the West and indigenous systems of psychology can take many forms, ranging from totally independent existence to complete integration. Buddhist psychology, like other indigenous psychologies, is prescientific, but it is so only in the narrow sense that it developed prior to, and outside the context of, modern Western science. It offers clearly testable hypotheses and therefore can be brought within the realm of scientific inquiry. (de Silva, 1997: 93)

The attempt to bring Eastern psychology within the realm of scientific inquiry is a complex issue. Padmal de Silva (1997: 94), writing in The Authority of Experience (Pickering, 1997), considers that the process of evaluating the notions and practices of Buddhist psychology is something that will be consistent with its eminently empiricist stance. Consequently the process of hypothesis testing will not be alien to Buddhism, which encourages enquiry and discourages dogmatic acceptance of theories and claims (de Silva, 1997: 94). de Silva (1997: 94), considering whether integration between Western and Eastern psychological practices is either possible or desirable, explains how Mikulas (1981: 331-342) advocates neither integration nor separation but rather synthesis in the generation of a new form of psychology.

> Mikulas, in discussing the issues of integration between Eastern and Western psychologies, has made the point that it is not a matter of whether the Eastern or the Western approach is 'better'. There are, he stresses, strengths and weaknesses in both; and the combinations of the two can be very powerful. Mikulas has discussed the interrelated domains of (a) biological, (b) behavioural, (c) personal and (d) transpersonal, and argues that any integrative or conjunctive psychology must include all four levels. It is clear that different pre-scientific or indigenous psychologies have different degrees of contribution to make to these domains. The same applies to modern Western psychology. The psychology of Buddhism can certainly contribute significantly to the development of a conjunctive psychology as envisaged by Mikulas. (de Silva, 1997: 94)

The argument that merely bringing Eastern psychology within the realm of Western psychology is turned around here to suggest that each has something valuable to contribute to the development of psychological practices. Mikulas (1981: 331-342) goes on to specify that of the four ingredients of conjunctive psychology Eastern psychology can be considered less advanced in only the domain of biology. With that in mind the introduction of Eastern psychological practices into Western

culture must be viewed not as lacking academic rigour but rather as practices whose value is still being assessed and researched. The Eastern psychological practices being promoted by Varela, et. al., (1993: 27) begin with the two main kinds of meditation practices.

> Two main kinds of meditation are practised in Buddhism: (1) samathi, mindfulness, bare and deliberate attention to the details of one's sensations, the resulting calm being an antidote to the evil of craving, and (2) vipassana, insight – attending to the arising, dwelling and ceasing of one's sensations, and to their interdependence, an antidote to the evil of ignorance. (Valentine, 1997: 249)

The development of a Western translation of these practices can be traced back to 1881 when the Pali Text Society, founded by T. W. Rhys Davids, translated into English the entire canon of Buddhist text, and the majority of the commentaries and expository works. However, is translation is considered to have been beset with problems of translation and interpretation (de Silva, 1997: 80). More recently the German-born Sri-Lanka-ordained Nyanaponika Thera, formerly Siegmund Feniger, who co-founded and was editor-in-chief of the Buddhist Publication Society from the 1950's until 1984, was a key figure in increasing exposure of mindful meditation in Europe. Nyanaponika (1972) described mindfulness as "the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception", a phrase, which taken out of context of Eastern psychological practices appears lacking in rigour. One of the most well-recognized Western definitions of mindfulness comes from Dr. Jon Kabat-Zinn, the founder of MBSR (Mindfulness-Based Stress Reduction) from which the term mindfulness science has emerged, which now includes MBCT (Mindfulness-Based Cognitive Therapy). He defined mindfulness as, "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994). Again for a text considered to be the landmark definition in regular use in the West, it lacks the rigour of a verifiable academic definition. Part of the problem here is the ambiguity surrounding how both the contexts of Western and Eastern psychological practices are being integrated. It is not the purpose of this thesis to analyze whether this particular definition can be verifiable and tested for how accurately it describes the human state of being 'mindful'. The speculative nature of this chapter may proceed however, with this in mind, should mindfulness training be considered an avenue of inquiry for future research in the development of reflective practices in the visual arts, this definition would require detailed scrutiny.

The root of the term Mindfulness is considered to have emerged from the Pali language, whereby *Sati* when combined with *Sampajana*, translates to mean awareness, circumspection, discernment, and retention (Shapiro, 2009).

> These linguistic renderings have been considered by scholars to suggest that mindfulness means to remember to pay attention to what is occurring in

one's immediate experience with care and discernment. (Shapiro & Carlson, 2009)

Consequently, given the historical context of the mindfulness tradition in Eastern introspective psychological, the introduction of the concept into the realm of Western science was gradual, largely due to the negative association that the meditation practices used to develop mindfulness were esoteric and attainable only by certain people who fostered religious beliefs (Black, 2011).

Extensive clinical studies particularly in psychology, but also significantly in the health sector, together with advances in scientific methods exploring human embodiment have dismantled many of these obstacles. Over the last decade particularly, researchers from a number of fields and institutions have dedicated attention to an empirically based operational definition of mindfulness. These definitions include:

1. An open and receptive attention to and awareness of what is occurring in the present moment (Ryan & Brown, 2003)
2. An awareness that arises through intentionally attending in an open, accepting, and discerning way to whatever is arising in the present moment (Shapiro & Carlson, 2009)
3. An attention that is receptive to the whole field of awareness and remains in an open state so that it can be directed to currently experienced sensations, thoughts, emotions, and memories (Jha, Krompinger, Baime, 2007)
4. Waking up from a life lived on automatic pilot and based in habitual responding (Siegel, 2007).
5. Clearly a common theme shared among all these definitions is a general receptivity and full engagement with the present moment (Black, 2011).

(Black, 2011)

In 2003, a series of psychometric development studies provided the first reliable measure of dispositional mindfulness called the Mindful Attention Awareness Scale (MAAS) (Ryan, Brown, 2003). Other measures have since been developed (Black, 2011), however, this chapter will deal specifically with the development and findings of Ryan and Brown's MAAS (2003).

The work of Ryan and Brown (2003) has helped mindfulness become widely accepted across a range of knowledge fields as an inherent quality of human consciousness, although certainly the capacity for being 'mindful' varies both within and between individuals.

> Recognizing that most everyone has the capacity to attend and to be aware, we nonetheless assume (a) that individuals differ in their propensity or willingness to be aware and to sustain attention to what is occurring in the present and (b) that this mindful capacity varies within persons, because it can be sharpened or dulled by a variety of factors. (Ryan & Brown, 2003)

Indeed, it may be the case that individuals with years of meditation training have been shown to score higher on clinical tests (Ryan & Brown, 2003) against the MAAS scale developed to measure psychometric properties (Mindful Attention Awareness Scale). However, the fact that mindfulness can be empirically assessed, frames the capacity for attention and awareness focused on the present moment, as a human quality that is entirely independent of religious, spiritual, or cultural beliefs. Mindfulness can therefore be said to be an important aspect of the embodied mind.

> Mindfulness is inherently a state of consciousness. Although awareness and attention to present events and experiences are given features of the human organism, these qualities can vary considerably, from heightened states of clarity and sensitivity to low levels, as in habitual, automatic, mindless, or blunted thought or action (Wallace, 1999).

Whilst John Dewey (1933) has been referenced extensively throughout this thesis it was his fellow American Pragmatist William James (1907: 237) who questioned the role of mindfulness in the average person, stating, "Compared to what we ought to be, we are only half awake". Mindfulness is considered to capture a quality of the conscious embodied mind that is characterized by clarity and vividness of current experience and functioning. Mindfulness may be compromised however as when individuals behave compulsively or automatically, without awareness of or attention to one's behaviour (Deci & Ryan, 2000). Furthermore a state of mindlessness, or less "awake" states in the Jamesian sense, can be defensively motivated, as when an individual refuses to acknowledge or attend to a thought, emotion, motive, or object of perception or in which the habitual or automatic functioning may be chronic for some individuals (Ryan & Brown, 2003). In this respect, mindfulness is now considered to play a key role in fostering informed and self-endorsed behavioral regulation, long been associated with well-being enhancement, through which individuals can disengage themselves from automatic thoughts, habits, and unhealthy behavior patterns (Ryan & Deci, 2000).

7.3 The Development of an Empirical Measurement of Mindfulness: Ryan and Brown's (2003) MAAS Construction, Factor Analyses, and Reliability Assessment

If mindfulness is considered a method for examining experience (Varela, et. al., 1993: 27), the MAAS scale might be presented as a method for examining mindfulness. A brief examination of the MAAS scale is included here for the purpose of reviewing a method designed to test levels of mindfulness, which may have implications for further research into whether the introduction of mindfulness instruction into reflective methods in visual art practice can be recommended.

Kirk Warren Brown and Richard M. Ryan, developed an empirical measurement of mindfulness, the MAAS scale, in part through a postdoctoral fellowship from the Social Sciences and Humanities Research Council of Canada, whilst working at the Department of Clinical and Social Sciences in Psychology, University of Rochester.

They state that their inspiration for the scale items used in the MAAS model came from several sources:

> […] our personal experience and knowledge of mindfulness (and mindless-ness), published writings on mindfulness and attention, and existing scales assessing conscious states of various kinds. Items were drafted to reflect the experience of mindfulness and mindlessness in general terms as well as in specific day-to-day circumstances, including variations in awareness of and attention to actions, interpersonal communication, thoughts, emotions, and physical states. (Ryan & Brown, 2003)

Beginning with a pool of 184 items, which were split up between direct and indirect assessment of mindfulness, where the latter reflected absence of mindlessness, a rigorous process of reducing the items that included several exclusion criteria was conducted across five stages. Ryan and Brown's (2003) intention was to capture the 'central, subjective experience of mindfulness as present attention and awareness', therefore items containing attitudinal components such as patience, trust and acceptance, were excluded. Items referring to motivational intent, what they call the "why" of awareness or attention were also excluded, as were items that could be consequences of mindful states such as calmness, emotional or physical well being. Their intention was to develop a scale for a general adult population.

Of the 184 items, 55 remained from the first round of testing, which involved a panel of experts. The 55 items were further reduced through a round of tests involving 313 undergraduate students. The final table includes just 15 questions, which were distributed across cognitive, emotional, physical, interpersonal, and general domains.

Figure 58: (Ryan & Brown, 2003: 826) Table 2 Means, Standard Deviations, Factor Loadings, and Item-Total Correlations for the Mindful Attention Awareness Scale

Scale item	M	SD	F	I-T
1. I could be experiencing some emotion and not be conscious of it until some time later.	4.02	1.12	.46	.45
2. I break or spill things because of carelessness, not paying attention, or thinking of something else.	4.13	1.47	.45	.42
3. I find it difficult to stay focused on what's happening in the present.	3.80	1.23	.51	.49
4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	3.41	1.27	.45	.39
5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	3.83	1.22	.27	.25
6. I forget a person's name almost as soon as I've been told it for the first time.	3.40	1.54	.33	.31
7. It seems I am "running on automatic" without much awareness of what I'm doing.	3.72	1.24	.78	.72
8. I rush through activities without being really attentive to them.	3.81	1.11	.74	.67
9. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.	3.74	1.15	.38	.38
10. I do jobs or tasks automatically, without being aware of what I'm doing.	3.70	1.20	.69	.61
11. I find myself listening to someone with one ear, doing something else at the same time.	3.52	1.16	.55	.49
12. I drive places on "automatic pilot" and then wonder why I went there.	4.36	1.42	.62	.57
13. I find myself preoccupied with the future or the past.	2.66	1.03	.28	.26
14. I find myself doing things without paying attention.	3.66	1.14	.77	.69
15. I snack without being aware that I'm eating.	4.11	1.42	.47	.41

Note. All scores are based on Sample A data ($N = 313$). Items were introduced by the following: "Below is a collection of statements about your everyday experience. Using the 1–6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be." The accompanying 6-point scale was 1 = *almost always*, 2 = *very frequently*, 3 = *somewhat frequently*, 4 = *somewhat infrequently*, 5 = *very infrequently*, and 6 = *almost never*. F = factor loadings; I-T = item-total correlations.

To the non-psychologist the statistical models by which the data was represented would require a great deal of explanation that I do not feel is necessary in this context. It suffices to say that the 'Mean' in the first column is the average of 313 participant responses, and that MAAS respondents were required to indicate how frequently they experienced each statement. They were asked to assign their answer a number based on a 6-point Likert (1932) scale where 1 meant (*almost always*) and 6 (*almost never*), where high scores represented more mindfulness.

There are a number of questions about these questions I feel it necessary to raise. From this series of questions how might a mindful person answer? I speculate those answers below and make some references to how those answers might relate to visual art practice in some situations:

1. *I experience an emotion as it occurs* (being attentive to emotional responses to the tacit aspects of visual art practice may be considered a far more appropriate way of describing the interaction between practitioner and artwork than a dialogue as in Schön's (1983) use of a conversational metaphor)

2. *I almost never break or spill things because of carelessness, not paying attention, or thinking of something else,* (whilst interviewing Laurence Karasek, he commented to seeing himself knock over a bottle of turpentine whilst in the midst mixing colour during an intensive panting session, by saying "Typical". There may be aspects of intense concentration in practice that do not lend themselves to a state of mindfulness. I will explore this further through a stone balancing example toward the end of this chapter)

3. *I am focused on what's happening in the present* (based on the case studies and my own experience of visual art practice, I would consider this state highly applicable)

4. *I pay attention to what I experience when I walk from place to place* (visual arts practitioners can be considered highly observant people who focus on the qualitative unity of experience when out and about in the world)

5. *I notice feelings of physical tension or discomfort as they occur* (the felt physical tension a visual arts practitioner feels in a practice situation might be considered a primary means by which action is continued or discontinued. From an embodied perspective one might speculate as to whether the feeling of physical tension might be considered the basis of the much debated 'sense of rightness', an aspect of practice that is evident in practice but notoriously difficult to quantify)

6. *I almost never forget a person's name as soon as I've been told it for the first time* (I am personally dubious about the ability of this quality to reflect mindfulness. It assumes that peoples' memories are set up in the same way. As a visual artist I find that I can remember visual qualities in great detail but names tend not to stick in my memory, whereas I have colleagues for whom the opposite is true. Does it mean that one is more mindful than the other?)

7. *I am almost never "running on automatic" without much awareness of what I'm doing.* (There may be moments in visual art practice when repetitive action may be considered advantageous, whether this leans toward a mindful or mindless state I cannot at present comment on)

8. I am attentive to the activities I perform. (certainly something I consider acutely true of the visual art practice situation)

9. I am almost never so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there. (In the practice situation each aspect and stage of practice must be attended to)

10. I am aware of what I'm doing when performing a task or job (to a large degree I would say yes absolutely, however, the visual arts practitioner must guard against complacency. It is when action-in-practice becomes habitual that the same mistakes are made repeatedly, or an aspect of practice is not adequately realized that one needs to employ a means of breaking habitual patterns and become more aware)

11. I give the person I'm listening to my full attention (All of the responses to these questions are speculative, however a response to this would require too broad a generalization to be useful)

12. I am fully aware of both the act of driving and the journey

13. I am almost never preoccupied with the future or the past (I understand the need not to neglect the present, however, I question whether anyone can be 'almost never' preoccupied with past and future. The example given in the previous chapter concerning Dr. Jill Bolte-Taylor who's stroke in the left side of her brain rendered her in a state of absolute present in which the functions of the brain to recall or predict where completely absent from her experience, with potentially terminal consequences, i.e., she couldn't seek medical assistance until those brief moments when she returned from what she affectionly referred to as 'La-La-Land'. Henri Bergson (2007) also characterized experience as the 'thickness of a moment' when past, present, and future are simultaneously in unison. In many respects this may be more reflective of awareness than mindfulness.

14. I am always paying attention whist I'm doing things (for the visual arts practitioner this state may well be considered a prerequisite for successful action)

15. I am aware when I'm eating (Here is a response to a question that poses issues for the visual arts practitioner. All of the response that run along the lines of being present and in the moment whilst doing things seem to marry up against the visual arts when considered in relation to the practice situation. However, to whether this state is continued through to other daily actions is entirely another matter. I have witnessed myself drifting off whilst eating alone, to entertain a whole range of thoughts, or what Gaston Bachelard would call reveries, only to return from the images in my head and find the plate empty. In contrast however, I can also be extremely attendant whilst eating)

What do these statements tell us about being mindful? How could these statements relate to a practitioner's mindfulness in visual art practice? Can the visual arts practitioner be considered mindful whilst engaged in visual arts practice? There have been no clinical trials to test this as yet. The MAAS scale has provided data indicating that subjects with mindfulness training score higher on the MAAS scale detail above. Would mindfulness training be beneficial in relation to reflective practices in the visual arts? It is an interesting question, which as yet has not received adequate attention. However, research concerning the introduction of mindfulness techniques into reflective methods in education has been carried out. The following section looks at Mindfulness-Based Reflective Practice (Korthagen, Vasalos, 2009) as an example for how mindfulness training may benefit reflective practice.

7.4 Mindfulness-Based Reflective Practice - An Adaptive Model of Reflection from Education

Korthagen and Vasalos from CETAR, VU University, Amsterdam & Institute for Multi-level learning (IML), set out in a conference paper in 2009, the issues reflective methods experienced in education as follows:

> Reflection as it is currently being used in professional settings and in educational programs for professional development, does not always lead to optimal learning or the intended professional development. Sometimes reflection seems to be used by practitioners as merely a technical tool generating quick, but often ineffective, solutions to problems that have been only superficially defined. If we look closely at how many practitioners reflect, we see that if there is any time for reflection at all, work pressure often leads to a focus on finding a 'quick fix' - a rapid solution for a practical problem - rather than shedding light on the underlying issues determining the situation at hand. While this may be an effective short-term measure in a hectic situation, there is a danger that one's professional development may eventually stagnate. As Schön (1987) argues, practitioners may unconsciously develop standard solutions fitting in with their personal perception of situations, so that the accompanying strategies become frozen. The practitioner will then no longer be in the habit of examining these strategies or the analyses once made of the problems they face. This means that more structured reflection is important in promoting deep learning and sound professional behavior. It also supports the development of a *growth competence* (Korthagen et al., 2001, p. 47): the ability to continue to develop professionally on the basis of internally directed learning.
> Dewey (1933) already emphasized the need for such careful and structured reflection as a basis for deep learning. In this paper, we will deepen this idea, and link it to the *person* of the professional. At the same time, we will bridge the gap between a kind of detached thinking about our actions and the actions themselves, bringing the concept of reflection closer to notions such as presence, awareness and mindfulness. (Korthagen, Vasalos, 2009: 2)

Calderhead and Gates (1993: 2) claim that the essence of reflection enables professionals "to analyze, discuss, evaluate and change their own practice", whilst this denotes reflection as a post event activity it does establish that in the work of practitioners, reflection is always linked to practice. For the purpose of this model of mindful, reflective practice, the relation between reflection and practice is presented simplistically as cyclic.

REFLECTION   PRACTICE
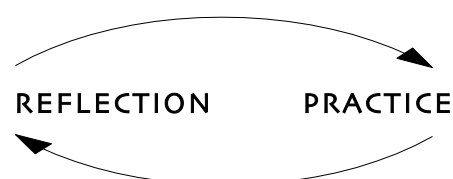
Figure 59: (Korthagen, Vasalos, 2009: 2) Cyclic relationship of reflection and practice

As presented throughout this thesis, the relationship between practice and reflection is far from simplistic. It is rather a highly complex cognitive process, interdependent on a vast array of factors and situations. However, in order to make this model work in a professional educational setting Kolb and Fry (1975), established four phases of reflective practice which have been the basis for a number of models of reflective practice: (1) experience, (2) reflective observation, (3) abstract conceptualization, and (4) active experimentation.

Korthagen and Vasalos (2009: 3) however, claim that Kolb and Fry's (1975) model, is better for describing the analytic processes needed for an understanding of practice than for enhancing personal effectiveness.

> This is firstly caused by the fact that the model overemphasizes the role of abstract concepts, at the cost of concrete and more individual notions and images determining the practitioner's behavior when dealing with practice (cf. Clandinin, 1985, and Connelly & Clandinin, 1984), which are often strongly rooted in his or her personal history (Carter & Doyle, 1996; Kelchtermans, 1993). As a consequence, a person may develop abstract concepts that help to understand practice without being able to develop a more fruitful relation with it. An example is the student teacher who understands concepts such as 'care' and 'trust' and their significance for the relationship with students in the classroom, but who fails to develop such relationships, because of an image of the classroom as 'a dangerous place to be' (something not unusual in novice teachers). (Korthagen, Vasalos, 2009: 3)

Korthagen and Vasalos (2009: 3) take issue with Kolb and Fry's model on the grounds that it over emphasizes cognitive analysis, a criticism echoed by Day (1999: 69) who concluded that the model

> [...] fails to take account of the need for developmental links between cognitive, emotional, social and personal development in the journey towards expertise in teaching. (Day, 1999: 69).

The emotional, social and personal contexts are important aspect of developing methods of reflective practice that Schön recognizes when describing the limitations to 'The Reflective Practioner' (1983). The central influence of a practitioner's personal needs (Deci & Ryan, 2000) and their emotions on everyday behaviour has been explicated in the domain of cognitive science.

In response to this central criticism Korthagen (1982, 1985) published an adaptation of the model of Kolb and Fry titled the ALACT model of reflection (1. Action, 2. Looking back on the action, 3. Awareness of essential aspects, 4. Creating alternative methods of action, and 5. Trial, which itself is a new action and thus the starting point of a new cycle).

It is important to note that I do not find the ALACT model useful in visual art practice, it is clearly set up specifically for student teachers and the mentors helping them to learn to reflect in classroom situations, however it is worth working through the development in this model in order to assess how it has been refined and adapted to encompass aspects of embodied experience as it may provide insight into how a more effective model of reflective practice in visual art could be developed.

Since its introduction the ALACT model has been used in teacher education for many years and in many teacher education programs throughout the world (Brandenburg, 2008, Hoel & Gudmundsdottir, 1999, and Jones, 2008). More specifically, having been developed in the Netherlands, it is at present the main reflection model in most programs of teacher education in that country and has been used in Australia, Belgium, Canada, Denmark, Finland, Germany, Israel, Norway, and the United States, either as an additional or as the key framework for promoting reflection in teachers, nurses, and other professional groups (Korthagen and Vasalos, 2009).

Figure 60: (Korthagen, 1982) ALACT model of reflection
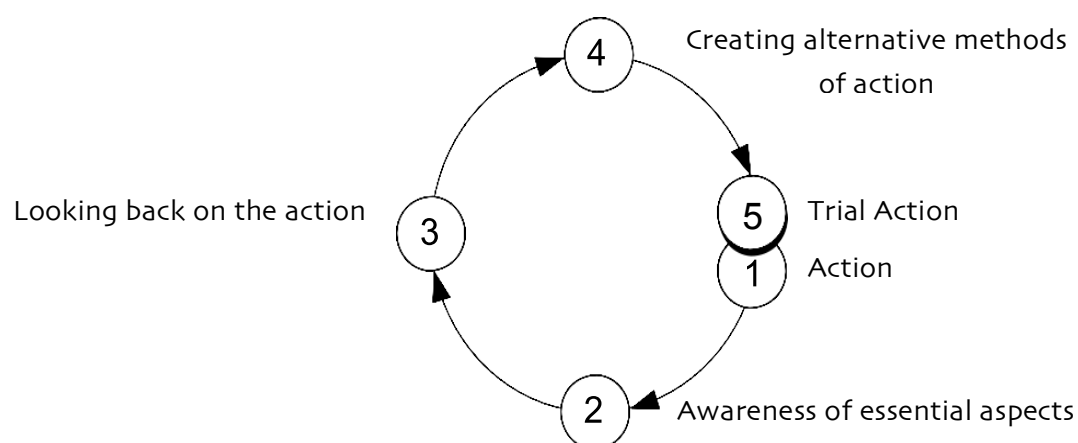
Korthagen and Vasalos, (2009) provide a case study of a student teacher working through this model with a mentor. The case illustrates that the process of reflection is less aimed at abstract conceptualization, and more on developing relational awareness. To develop such awareness, the student teacher has to become aware not only of their thoughts, but also of their emotions and needs, and how they influence behavior. In what might be considered an act of reflection-in-action on behalf of the mentor, Korthagen (2001) has elaborated phase 2 of the reflection process by means of the technique of 'the nine fields'.

0	What is the context?
1	What did you want?
2	What did you feel?
3	What did you think?
4	What did you do?
5	What did the other(s) want?
6	What did the other(s) feel?
7	What did the other(s) think?
8	What did the other(s) do?

Figure 61: (Korthagen, 2001) Table of Questions to Supplement the ALACT Model

Korthagen (2001) emphasizes that in the supervision of student teachers, it is not enough for supervisors to merely help them go through the ALACT model, which he calls 'helping to reflect', but rather that it is more important to help them to 'learn *how* to reflect'. It is considered that if teachers acquire this insight and the skills to go through the phases of the ALACT model on their own, they develop a *growth competence*: the ability to direct their own professional development. This can also help them to play an active role in future change processes in their work environment and thus promote their *innovative capacity* (Wubbels & Korthagen, 1990).

Addressing weaknesses in the model, Korthagen claims, perhaps subjectively, that failures in the model often related to the way in which the model was being used rather than with the model itself, furthermore he adds that any weakness is not so much inherent to the specific approach to reflection, but to the way the whole concept of reflection is commonly being conceptualized world-wide (Korthagen, Vasalos, 2009). This is rather a grand claim but significantly, one that is supported by theories of embodied mind (Johnson, Lakoff, 2007). Korthagen recommends that through close scrutiny of the weaknesses of ALACT essential issues in the way the concept of reflection is being used, also within other approaches, can be addressed.

The first of the weakness to be addressed is pivotal for it suggests that while reflecting through the five phases of ALACT, practitioners were found to still focus on finding quick solutions rather than the underlying phenomena in the practical situation under reflection.

> In such cases, phase 1 of the model is an experience that was dissatisfying, for
> example a discipline problem in a teacher's classroom, phase 2 (looking back) is
> nothing more than the conclusion that it was a bad experience, phase 3
> (awareness of essential aspects) is that the kids should have been more quiet,
> phase 4 (creating alternative methods of action) that stricter teacher behavior
> is needed. If in phase 5 (trial) such a 'reflection' appears not to work out well,
> student teachers often start to criticize the ALACT model for not being very

helpful. As we have already noted, such reactions to models for reflection are not confined to the ALACT model. Already many years ago, Hoy and Woolfolk (1989) concluded that students often consider reflection as impractical and unhelpful in solving their problems, while being unaware of the fact that this first of all has to do with the *quality* of their reflection (Korthagen, Vasalos, 2009)

The observation made by Hoy and Woolfolk in 1989 of students considering reflection as impractical and unhelpful is similar in some respects to my own experience of visual art practitioners operating outside of an academic framework. Like Korthagen, Schön (1983) questions the lack of intellectual effort applied by practitioners who rather blame the inadequacies of the reflective method.

> There is nothing in reflection, then, which leads necessarily to paralysis of action. The fear of paralysis may spring from worst-case analysis which ignores the opportunities for reflection within the action-present, from neglect of our ability to construct virtual worlds in which the pace of action can be slowed, from ignorance of double vision, from inability to imagine descriptions useful for action, or from an inappropriate dichotomy of thinking and doing. [...] In actual practice, practitioners do, without paralysis, reflect-in-action. The fear of a paralysis induced by reflection, like the belief in the indescribability of artistry, comes not from the experience of practice but from the lingering model of practical rationality, which is much in need of reflection. (Schön, 1983: 281)

Korthagen and Vasalos' first steps towards further improvement of their concept of reflection therefore, was the insight that the ALACT model was helpful as a process model, but that it does not support the practitioner in knowing *what* to reflect *on,* and that this can easily make the reflection somewhat superficial. The concern amongst educators was that a type of reflection, which focused only on previous and future behavior, could be counterproductive if it dealt with negative recurring problems. Levy & Mary (1986) consider that strong professional development processes ought to include the possibility of changes in the underlying sources of behavior, rather than constantly reviewing recurring behavior. This is what Schön (1987) argues, when suggesting practitioners may unconsciously develop standard solutions fitting in with their personal perception of situations, so that the accompanying strategies become frozen.

> When a practitioner makes sense of a situation he perceives to be unique, he *sees* it *as* something already present in his repertoire. To see *this* site as *that* one is not to subsume the first under a familiar category or rule. It is, rather, to see the unfamiliar, unique situation as both similar to and different from the familiar one, without at first being able to say similar or different with respect to what. The familiar situation functions as a precedent, or a metaphor, or... an exemplar for the unfamiliar one. (Schön 1983: 138)

Korthagen and Vasalos (2009) consider that in order for transformational changes to take place, deeper layers need to be touched upon and consequently

supplemented the ALACT model with a model describing possible contents of reflection at six different levels called 'The onion model', which is a variant of the Bateson model (Dilts, 1990, and Korthagen, 2004).

Figure 62: (Korthagen and Vasalos, 2005) The Onion Model

The Onion Model

Environment — What do I encounter? (What am I dealing with?)
Behaviour — What do I do?
Competencies — What am I competent at?
Beliefs — What do I believe?
Identity — Who am I (in my work)?
Mission — What inspires me?

(Korthagen & Vasalos 2005)
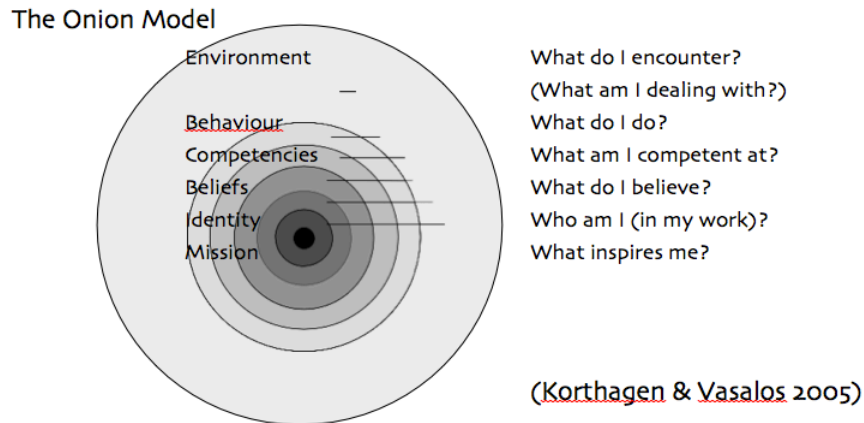
The Onion Model (Korthagen, & Vasalos, 2008) is presented as an attempt to illustrate how mindfulness can be incorporated into, and structure, reflective methods in education. By stimulating a connection between what Korthagen and Vasalos, (2008) call a student teacher's 'inner core' and their interaction with the outer world, subjects started to become more enthusiastic and motivated for the profession.

> We decided to start empirical studies into this phenomenon, and found that the process resulting from a stronger connection between the various onion levels could be framed in terms of the concept of *flow.* Flow has been described by Csikszentmihalyi (1990) as a state of being completely in the here-and-now, optimally connecting the demands of the situation with one's inner capacities. In other words, the onion model appeared not only an instrument for deepening the reflection process, but also for creating more flow in student teachers, and hence more enthusiasm for 'doing reflection', and for enhancing more effective teaching. (Korthagen and Vasalos, 2009)

Seligman and Csikszentmihalyi (2000: 7) developed positive psychology as a reaction to what they perceived as a tendency by psychologists to focus on pathology, weakness, and negative situations that required treatments.

> […] treatment is not just fixing what is broken; it is nurturing what is best. (Seligman and Csikszentmihalyi 2000: 7).

Their intention was to highlight the importance of people's personal strengths. These include creativity, courage, perseverance, kindness, and fairness (Seligman, 2002; Snyder & Lopez, 2007) and have come to be referred to as 'essential aspects'

(Almaas, 1986: 148). The research conducted in positive psychology over the last decade has focused on naming and categorizing what these essential aspects are. Almaas (1986) employs the term essential here to mean that they cannot be analyzed into more basic constituents. A claim that I propose can be challenged by theories of embodied mind and cognitive science. For the purpose of positive psychology however, the idea that people can use their personal qualities so that their actions are both effective and personally fulfilling became a compelling notion for Korthagen and Vasalos (2009) in the development of the ALACT model of reflective practice. Through considering the findings of Seligman and Csikszentmihalyi (2000) Korthagen and Vasalos (2009) considered that a further weakness in the way the ALACT model was often being used, was the tendency to focus on problematic aspects.

> This made us very aware of a second Phase 1 of the model, which means the experience to reflect on, often became synonymous to 'a problematic situation'. This is again a tendency that is not so much inherent only to our own approach, but which seems to surface in almost all approaches to reflection. People often have the habit of lingering longer with things that went wrong than with successes. A side-effect is that somehow this fosters a feeling of inadequacy in them. (Korthagen and Vasalos, 2009)

Fredrickson and Losada (2005) demonstrated that a focus on weakness and deficiencies leads to a narrowing of available action tendencies and that the person is inclined to think within the boundaries of the problematic framework, which is just what positive psychology hopes to avoid. Consequently Korthagen and Vasalos (2009) conclude that their notion of Core Reflection helps to link levels of their 'onion' model together to help student teachers get in touch with their personal strengths.

> A next step in the further development of our approach emerged through the insight that, to many practitioners but also to their educators, reflection is often synonymous with *thinking*, or - at best - structured thinking. Although the specification of phase 2 of the ALACT model presented in Figure 3, is helpful in bringing awareness of feelings and needs into the reflection process, it often leads to *thinking about feelings*, instead of what Damasio (1999: 279-295) calls *feeling the feelings.* (Korthagen and Vasalos, 2009)

It is interesting to see the model of Mindfulness-Based Reflective Practice incorporating recent research in neurobiology, which has yielded strong evidence for the close relations between cognition and emotion in humans in general (e.g. Immordino-Yang & Damasio, 2007).

> In short, our analysis led to the insight that a focus on strengths alone is not sufficient, but that what is needed is cognitive, emotional and motivational awareness of both one's strengths, and of one's *inner* obstacles to the

actualization of one's strengths. Of course, we realize that *external* obstacles (for example an unmotivated class) are also highly relevant and can trigger these internal obstacles (for example in the form of inhibiting beliefs or inhibiting self-concepts), but we believe that for self-directed professional growth to take place, the inner obstacles to the realization of one's full potential in particular deserve careful attention within the reflective process. (Korthagen and Vasalos, 2009: 538)

The role of mindfulness in reflective practice in education focuses on developing training methods that help bring a students teacher's cognitive, emotional, and motivational awareness into a reflective arena. However there is no mention of the three primary mindfulness training techniques that have emerged out of the MBSR and MBCT. These three training techniques are as follows:

1. Breathing meditation
2. Body scan
3. Mindful Yoga

With the lack of focus on mindfulness training techniques it might be argued Mindfulness-Based Reflective Practice is misleading. However, further research into the success of this research in education might become useful for future research into whether mindfulness techniques can be incorporated into reflective methods in visual art practice.

7.5 Personal and Professional Perspectives on the Practice, Teaching and Application of Mindfulness in Relation to Reflective Methods In Visual Art Practice

Whilst significant in their own fields, both the MAAS scale from the domain of Psychology and the educational model of MBRP, require indirect inferences to be made as to whether mindfulness training could be beneficial for developing the effectiveness of reflective methods in visual art practice. However, following through with Varela's et. al., (1993: 27) recommendation that the interaction between mindfulness/awareness meditation, phenomenology, and cognitive science can change the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection, begs the question as to whether mindfulness training can be recommended for visual art practice. To this end the following interview was conducted in order to collect primary qualitative data through which an expert in the field could be directly questioned. Dr. Linda Lehrhaupt is the Managing Director of the IMA (Institute for Mindfulness-Based Approaches) one of the few international companies running MBSR and teacher training courses across Europe.

The primary focus of the interview was to collate the professional opinions of a trained and experienced mindfulness practitioner to contrast the academic texts referenced in the previous two sections, whilst retaining scope for the interviewee responses to be open ended. The following extracts are taken from the complete interview, lasting approximately an hour, which can be read in full in the appendix.

> AG: [...] One of cognitive scientists whose work has recently become central to this research, is a guy called Varela. He has very much advocated that there's the methodological--

> LL: What's his name?

> AG: Francisco Varela.

> LL: He's one of the founders of the Mind and Life Institute. You're talking about the scientist from Paris, Francisco Varela?

> AG: Yes, indeed.

> LL: But he was also very important in the founding of the Mind and Life Institute, together with the other people, that launched the whole scientific exploration of mindfulness that's been going on now for the last 20, 25 years in a very strong way. But he died of something. So you're using Francisco Varela's theories? (Gray, 2014)

The common ground of Francisco Varela's involvement in the Life and Mind Institute, and the theories of embodied cognition, which has been very active in bringing cognitive science and Eastern mindfulness practices together, was noteworthy in the context of this thesis. The focus of the questioning however, turned toward the potential relation of mindfulness training to visual art practice.

> AG: So do you think that it is possible to be mindful and be practicing creatively?

> LL: Absolutely. I'm not an artist in that sense, but I would say... What I also notice a lot is that mindfulness for artists... Let me see, that it helps them to expand their range of what they take in, what stimulates them that they can use in their art rather than being so restricted by what they have done before or whatever. (Gray, 2014)

The reference here is that mindfulness training is beneficial in helping practitioners to be attentive to what they take in, to what stimulates them. There is no mention as to whether this can operate in the midst of practice or rather during reflections-on-action and –practice.

> AG: There seems to be a lot of emphasis on the notion that you can break habitual action once you become aware that it is habitual. That sounds to me like something that will be very useful for practitioners in terms of methods of

reflection in action. We are talking about trying to improve one's practice or trying to become more aware of what it is that we doing.

LL: It's definitely interrupting. It's a mindfulness-- the moment we become mindfully aware of something, you have gone from what we call auto-pilot to being in direct contact sense wise, or mental wise. That often doesn't last very long, but we can continually reawaken it and be present with it. So if you're really paying attention to how your holding a brush or whatever you're doing or you're playing music and you're really allowing that to be very present for you, I can imagine that would allow a whole new flow out, as it were, rather than the traditional or habitual thing that you'd be doing. We've trained at least five music teachers to be MBSR teachers. Of course, they were more interested in MBSR from the perspective of helping artists who are wounded. Either they have suffered injury from excessive playing or whatever - playing instruments or whatever, or suffering from the stress of constant performance, and things like that. But I can see how it might allow more creativity because people become-- by being in the moment, you also become more responsive to the moment. You're responsive to whatever is there.

AG: In terms of training for this, there was a comment made by the artist in New York who stated that being attentive to his practice was in itself a kind of mindfulness. I think that's okay to say but I wonder whether you have any thoughts on whether art practice can be considered training for becoming what is conventionally known as mindful. There was an example given that I'm sure you've come across. It is the story of "Zen in the Art of Archery", where the student fires the arrow perfectly by just coping the master's technical ability, this greatly offended the master archer because he hadn't arrived at how to fire the arrow himself through a personal process. The artist that I was talking to described how his experience of practice has cultivated a state of mindfulness that has been nurtured over a period of 20 years of practice, but he is also a teacher. When working with first year students taking studio drawing as an elective often for the first time, he works to get them to focus solely on the task for the two-hour duration of the class, to put their phones aside and just focus. If one can be mindful during art practice and indeed, if art practice can be considered a form of mindfulness, the question remains as to whether some of his young students get into that state? Is mindfulness a state that only years of practice can develop or would it be beneficial for students starting university to take a course in mindfulness.

LL: I think it would be fantastic. Mindfulness-based awareness programs are being integrated into medical schools, into nursing schools, into teacher training programs to train school teachers. It's being used in the police. It's being used in the military. It's actually, across the board now. There are programs of mindfulness training in many professions because it's seen to be very helpful not only for stress but also for making people more attuned to what's going on. For example, in some professions they've noticed there's better teamwork that results, there's less injuries that result. People become more skillful with how they work with their bodies in a difficult situation. For example, they trained firemen and policemen and emergency room workers in mindfulness, and found improvement in these things I just mentioned. It tends to loosen ones-- one becomes aware of oneself, not as an isolated phenomenon, but in relationship to others and to things.

AG: Could you expand upon some of the specific techniques, I've been talking about it quite abstractly. Say that we move on to try to introduce a course and how one trains people who have never considered themself to be mindful, to become so.

LL: We all have experiences in our life when we have been spontaneously mindful without necessarily being aware of it, usually in situations that call us

to be very present, for example, a birth or a death, or that kind of situation where we're moment-to-moment. Just really going with what's happening. But let's say when a cook, when a master chef or even someone's who's really paying attention to how they're cutting the vegetables and how they-- and they feel the knife as if it's part of their body and there's no separation between them and what they're doing. That doesn't mean that they lose the aware-- they don't lose themselves as so much that they lose their sense of their personality or their thoughts. But there is a very, very strong sensual sense of what's going on. So, the first--

AG: That sounds like it has a lot of parallels with visual art practice, the knife could be my paint brush.

LL: I'm sure it does. What's happening is that-- look, there's not too many things that are new under the sun. The different disciplines are basically talking about the same thing. But, they're just using different terminology, and everybody's trying to create their new theory. Everybody's trying to create their whatever that gets discussed for awhile. Yes. Are there descriptions of mindfulness in other terms that never use the word mindfulness, but nevertheless are talking about mindfulness? Of course. The way that we train-- the preliminary training and one of the central trainings to training mindfulness is what we call Mindfulness of Breathing. We direct students to become aware, first of all, of the physical sensations of breathing. Breath flowing into the body, flowing out of the body, and we ask them to find a point on their body where they feel, where they sense the breath most directly. That could be in the belly area, that could be in the chest area or it could be under the nostrils, under the nose. We ask them not to think about breathing, as much as they can actually feel the physical sensations. What of course happens is people can perhaps be really in touch with the breath for maybe two seconds. Then what they notice is that their mind beings to drift. They're no longer actually in contact with the sensations but they're planning or they're remembering or the mind is busy, or they're thinking various thoughts. Visual artists - people in the arts - tend to think in terms of pictures much more. But from the prospective of mindfulness, pictures are mental activities, that tend to also take us way from the direct physical sensation of what is going on in the moment, which is in this case breathing. So we teach people, we gave them the instruction that when you notice that you are no longer present with the breath, you are no longer sensing your physical sensations, then first of all notice that you have drifted away, and then with the conscious intention turn your attention, bring your awareness back to the physical sensations of breathing and sense next in breath and next out breath. And people practice with that. That the mind drifts off, it may drift off a hundred times in two minutes, or five minutes. That's not unusual. What we're doing, we talk about mindfulness as being a muscle. Just like when you into a fitness studio, you can't expect with the very first pumping iron, that you're going to be strong and fit, you have to slowly train the muscle of mindfulness. To begin with, it might just be for a second or two that you can really be present. But as time goes on, you can develop longer periods of being mindful. Now, there's a difference between mindfulness and concentration. That's important. Concentration, for example-- I'll illustrate the difference. Let's say, you're concentrating on your breath. You're really concentrating on your breath and then, you become aware of a thought, or you hear a sound, or you smell something in the air, you would have the sense that your concentration has been disturbed, and there would be a sense that one has to push out everything, and nothing should be there except simply the breath. In mindfulness practice, there is no such thing as a disturbance. Rather, it's more about things being in the foreground and in the background. For example, in the foreground of our awareness is mindfulness of breathing, and maybe 80 or 90% of our awareness is with the mindfulness of breathing, and then there may be is an awareness of a sound or this and that or whatever. We can let that be in the background and still maintain our focus on what's on the

foreground. But what's in the background is not disturbing, it's not experienced as disturbing. (Gray, 2014)

There is the issue that aspects of visual art practice resist a state of mindfulness. Specific aspects of the practice situation require extreme states of concentration. However, there are moments when the work can benefit from being viewed non-judgmentally.
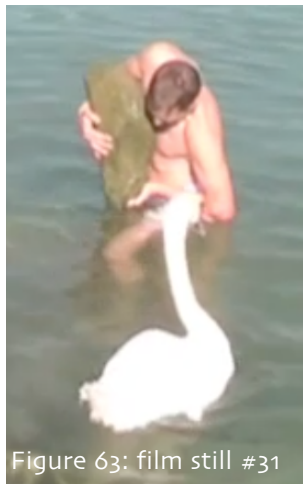
Figure 63: film still #31

Whilst discussing recently with a mindfulness instructor, I asked him to speculate as to what other ways there might be of training this inherent human capacity. He had no suggestions other than those offered through his courses. Pursuing this question further I shared with him the story of when I was stone balancing in the lake and found myself surrounded by swans to whom I was initially oblivious, until being startled by a hiss. The question was whether the deep focus that I clearly exhibited whilst balancing the stones could be considered a state of mindfulness, in the sense that it displayed an acute sense of being in the moment. He agreed with Linda Lehrhaupt that it was not mindfulness but rather a deep state of concentration. In mindfulness training, he explained, one can focus one's attention on an activity, and be utterly attendant to it whilst still being absolutely aware of what is going on around you to the point that if there was a sudden noise one wouldn't be shocked by it. This seemed initially to contradict the example Linda had shared with me during our interview, in which trained monks and novice meditation students where exposed to a series of loud sounds whilst an EEG recorded their brain activity. The monks' responses remained consistent to each noise throughout the experiment, where as the students became habitualized to the sound after a period of time.

Figure 64: film still # 32

I now understand this experiment in slightly different light. One might say that it served to illustrate that the cognitive mechanisms, through which certain non-life-threatening, non essential sensory stimuli become habitualized, that is, screened out from immediate sensory perception, are as inherent a quality as mindfulness is considered to be. Habitualization is an evolutionary survival trait, and many studies have explored it. This might suggest however, that mindfulness training can help to supress one inherent quality (habitualization) and enhance another (mindfulness).

He shared an example of when he plays the Conga drums, attaining a mindful state, whilst being aware of the players around him, enabled him to be more creative in the midst of performance. He was adamant that mindfulness training could help support visual arts practitioners but did not consider that visual arts practice could in itself be considered a state of mindfulness. The suggestion then seems to be that mindfulness is an inherent human capacity but that only training can activate it. One can be trained to be mindful and access that state in the midst of performance in a way that supports practice, but the practice itself cannot train a state of mindfulness.

Professor Michael Rodriguez, currently Chair of the Humanities Department LaGuardia Community College, New York, was a participant in a radio show titled Mindfulness in the Arts - A Conversation. The following extract is from an interview conducted with him in relation to his contributions during the radio show, the transcript of which can be found here: (http://ctl.laguardia.edu/journal/v5/pdf/InTransit_Spring11_v5_fernandez.pdf - last accessed 29.9.14)

> Andrew Gray: In the radio show about mindfulness in art the context was coming out of educational theory and you were being asked to discuss that as a department of tutors. Prior to this radio show had you ever considered mindfulness in the context of you work at all?

> Michael Rodrigeuz: Certainly the center for learning here was interested in mindfulness and learning but for my purposes during the radio show I was really talking primarily about mindfulness in the arts in my studio practice. For me mindfulness is really a by product of studio practice, or the goal of studio practice but I haven't really done a lot of research or work into mindfulness in terms of education or how it would benefit students. (Gray, 2014)

The full interview transcription can be referenced in the appendix. From both the radio broadcast and the interview there was a clear suggestion that aspects of visual art practice could be considered mindful states. However there remain many questions that only further research can answer. My proposal that a series of longitudinal studies exploring whether mindfulness training could help support practitioners in the visual arts, could have implications for andragogical modification at many levels. If successful the introduction of mindfulness training in visual arts education could enhance the natural capacity for reflection-in and –on –action and –practice. Likewise, given the recent trend toward the implementation of mindfulness training across many professions, research in the visual arts will need to carefully examine whether it is indeed appropriate and beneficial for visual art practice in part or whole, or risk making the same error of adopting a model of reflective practice designed for other practices.

CHAPTER 8 – DEVELOPING AN EMBODIED REFLECTIVE PRACTICE – REFLECTIONS ON RESEARCH AND MAIN CONCLUSIONS

8.1 Reflections on the Initial Development of this Thesis

The commencement of this research developed out of investigations into my own visual arts practice whilst enrolled on the MA (by Project) (2000 - 2002). Schön's 'The Reflective Practitioner' (1983), was introduced via Christopher Smith's research seminars in 2000. Despite my initial concerns that Schön's writings explored the process of reflection-in-action in design but did not extend to examples in visual art practice, I began adopting methods of reflecting-in- and –on –action and –practice throughout my Masters education. My initial use of this reflective method was beneficial for the purpose of enhancing my ability to report on and critically analyse my practice, however I continued to question the adequacy of the reflective methods I employed. This concern was supported by Scrivener's (2000: 5) assertion that whilst the distinctions between creative-production and problem-solving projects in design and technology are by no means black-and-white, they can nether-the-less be viewed as fundamentally different.

Upon completion of the Masters degree the benefits of continuing to develop reflective methods in my studio practice was reinforced by Scrivener's (2000: 18-19) argument that Schön's (1983) theory of design as reflective practice, provided concepts, which also helped to characterize creative production. Scrivener (2000: 19) made the distinction between creative production doctoral projects and everyday visual art and design making, which he also considered distinguishable from Bachelor and Master education. This distinction emphasized the additional requirements imposed on the student conducting doctoral research, which Scrivener (2000) maintained took the activity of reflection beyond the ordinary practice situation. Whilst not engaged in a creative production research project my personal and professional interest to continue the critical investigation of practice initiated through the MA (by Project), prompted me to adopt the sense of rigor associated with a doctoral research project. It was as Scrivener (2000: 11) points out a discipline, rather than a necessity.

8.2 Investigating Reflective Methods Through Practice – Reflections and Analysis of Studio Experiences Post-MA (By Project) – The Development of a Hypothesis and Application to PhD

I was drawn to Schön's (1983) assertion that reflection is not only central to the practitioner's ability to complete projects successfully, but also to their overall professional development, both of which I wanted to advance in the context of my own practice. Scrivener (2000: 12) however, noted that such reflection is largely

unremarkable to and unmarked by the practitioner and that furthermore, the importance of such events and how they have changed the practitioner may not be consciously registered. This was an obvious concern that I hoped to overcome. Scrivener (2000: 12) argued that practitioners could benefit if reflection was recorded and then reported on more systematically. This required reporting on the following operations, all of which were then to be reflected on, both with regard to their contribution to practice and their implications for future action and practice (Scrivener, 2000: 13):

- each surprise during working and its associated frame
- refuted theory of action
- surfaced tacit knowledge
- revised theory of action
- revised frame and subsequent action

Scrivener's (2000: 19) proposal that the description of creative production should be focused on these 'moments of reflection-in-action and –practice', led to further questions as to the nature of each of those 'moments' in relation to visual art practice. My initial attempts to move this process and reportage beyond where it had been during my Masters education, resulted in documenting my studio practice with video cameras and reviewing the material before the commencement of the next studio session. Furthermore, I began filming myself watching and commenting on myself working, this documentary method was first proposed to me by Christopher Smith during the MA (by Project) in 2001. As outlined in chapter 4, I began making use of this process in 2004, and it has since been developed as a research method in this thesis in relation to the case studies dealing with other practitioners' practices. Notably this research method has recently been developed and published in Paul Harper's doctoral thesis 'Talking and Doing: Communicating Crafting' (2013: 183).
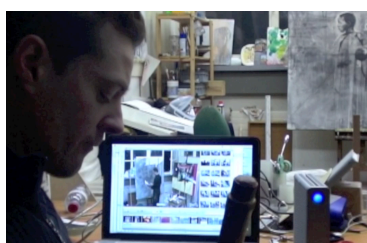
Figure 65: film still #33 6. Refer to Andrew Gray - Studio Documentary 1 - development of research method

I consider this cyclic reflective process of applying this documentary technique to my own practice before commencing this research degree played an important role in the development of the research method I have applied to the case studies on NRM. This process also brought to my attention the problem of reporting on my embodied experience of making and the relationship of these methods to phenomenological reflection.

Whilst Schön (1983) describes the role of tacit knowledge in competent practice as 'knowing-in-action and -practice', the notion of reporting on 'surfaced tacit knowledge' (Scrivener, 2000: 13), was evidently problematic. Through this felt perturbation I was left with the impression that this essential aspect of visual art practice was not being adequately inspected.

8.3 Reflections on Becoming a Researcher - Analysis of Research and the Development of a Conclusion

Upon commencing this research degree, I felt it necessary to not only return to Schön's 'The Reflective Practitioner' (1983) but to delve deeper into how the concept of reflection developed in order to better contextualize Schön's writings. The first chapters therefore dealt with establishing an epistemology of reflection and Schön's development of the 'The Reflective Practitioner' (1983) and sequels. I assessed that for reflections-on-action and –practice, Schön's (1983) model had been proven to be beneficial for framing and reframing practice situations, reflecting on habits of practice, past experience, conceptual agendas, and the background theories shaping practice. I also considered that Schön's (1983) notion of 'design as a reflective conversation with the situation', and 'learning as a reflective conversation with materials (Schön et. al., 1983), in which the situation is 'talking-back' to the practitioner in a nonverbal metaphorical sense, could be relevant for the visual arts practitioner, at certain points of the creative process. However, I questioned how this metaphor functioned. I returned to Scrivener's (2000: 2-7) distinctions between creative-production and problem-solving research projects, and his conclusion that there are fundamental differences between them. I considered it necessary therefore, to investigate examples of research projects in both visual art practice and design, in which reflective methods are rigorously applied.

Like Scrivener (2000: 10) my felt sense of visual art practice was at odds with Schön's scientific language of theory of action, logic, experimentation, hypothesis and experimental rigor, that seemed appropriate for design research, and like Scrivener (2000: 10) I did not have adequate alternatives to put in their place. I agreed with Scrivener's (2000: 18) assertion that the 'processes and characteristics' of this language had the potential to capture much of what I was observing in both the actions of my own visual art practice, and that of others. However, I concluded that this constituted a compromise that was unsatisfactory in relation to explicating the role of tacit, embodied, knowing-in-action, the possible resolution of which required further investigation through academic research. In order to investigate this I have examined what was distinct, firstly between the reflective practices in visual art practice and design, and secondly between what I termed, CRM and NRM.

Constructed Reflective Methods (CRM) – Case Studies 1 & 2

The term Constructed Reflection has been developed to describe methods of reflection designed to be academically rigorous. Two cases studies where chosen from a number of candidates. Initially I searched through completed PhD thesis in both art and design, however upon the recommendation of my main supervisor, I looked also at post-doctoral research and independent research projects that were academic in nature.

For the example of CRM in design, Owain Pedgley's doctoral thesis was chosen.

For the example of CRM in visual art practice the decision was taken to look at Beth Harland's involvement with the VIRP (Visual Intelligences Research Project). Whilst not a doctoral research project the VIRP epitomises the academic rigour that could be applied to reflective methods in visual art practice, whilst presenting the opportunity to explore what is distinct between visual art practice and design.

This thesis concludes that Owain Pedgey's use of the diary as a reflective tool and his use of Schön's (1983) theories of reflection-in-action, serves to illustrate the benefits of Schön's (1983) problem solving model of reflective practice in the field of design. Pedgley, (2007) describes how end-of-the-day diary entries (framed as reflections-on-action and –practice), helped to 'raise the level of alertness to own design activity (reflections-in-action and –practice), easing the grasping of some design issues and aiding decision-making' (Pedgley, 2007). In the case of the Beth Harland however, the attempts to systematize the process of documentation and reflection introduces a grey area between clear critical aims and the notion of 'moving towards an unknown' which is experiential in nature and does not conform to Schön's (1983) problem solving model of reflective practice. Scrivener's (2000: 18-19) recommendation that reflection in creative production ought to focus on the underlying experience of practice seems more appropriate. However the process of recording and documenting the underlying experience of practice in Harland's process of making Zone 15 (Harland, 2006) sets up a new problematic between revealing the clear critical aims through an innovative interactive series of textual and visual references, and obscuring the experiential process of 'moving towards an unknown' through the slickness of the flash presentation. Harland (2004) reflects on her process of making as a strategic and mechanical approach whilst maintaining her interest in the meaning engendered by the materials and its behaviour. In relation to working from visual reference material, described as fragmented digital reproductions that are hard to follow, Harland (2004) considers the process as a kind of mapping in which she looses her place and then finds it again, a process she considers very appropriate because of the experience. This process is lost in the Adobe Flash presentation of Zone, 15, albeit that novel representations are produced

as a result of the digital manipulation of the documentary images. The distinctions between the research through visual art practice typified in Harland's involvement in the VIRP and problem-solving research, is illustrated in something Harland (2004) calls 'moments of spill that occur in the process'. The relationship between the new meanings engendered through the materiality of the painting process and the strategic and mechanical approaches that guide the painting alludes to the relationship between thinking and making Fortnum (2007) states the VIRP was set up to explore. However, I do not consider that this relationship was fully explicated in this example. I wondered whether new meanings emerging from the materials ever disrupted or modified the strategies and mechanical application of them. In terms of how Harland (2004) thinks about reflection, she describes it as a process of 'moving into the work and back out of it' that goes on constantly, in addition to connecting her interest in theoretical and historical research. The Adobe Flash presentation documenting her work helps the viewer to connect to the influences which inspired, and are largely included in, the composition. However in relation to what happens when she 'moves into the work', and hence her reflections-in-action, it exhibits inherent issues in the form of presentation. Whilst the cross fading of still images taken at various stages of the making process creates novel intermediary stages that the painting was never physically in, as much as it reveals aspects of the sequence of compositional development it obscures much of the actual process of making.

Nevertheless these CRM case studies illustrate the distinctions between the reflective methods successfully employed in problem solving design research projects and those required to successfully explicate the underlying experience of practice in visual art practice. The aspect I deduced was particularly distinct however, concerns the personal meanings that emerge out of practice and the practitioners' ways of dealing with them. In design personal meaning is placed in the context of solving the problem of the design and producing an object that will perform a function. In visual art practice however, new meaning is dealt with very differently, and is framed in the context of a complex interpersonal relationship with the process of making and resulting artwork, which may contribute to human experience.

As I had discovered through my own visual arts practice, prior to commencing this research degree, there was a considerable distinction between the academic requirement to specify a research methodology and construct, apply, and reflect upon rigorous reflective methods, and the naturalistic, subconscious, and at times phenomenological reflections, applied in practice situations outside of academia. I felt however, that whilst I had developed experience of SRM, CRM, and NRM I consequently felt it necessary to explore these distinctions further.

Developing and employing a qualitative research method, in the form of the video documentaries, has been a quintessential aspect of becoming a researcher. The experience I gained in filming and editing techniques whilst an undergraduate at Newport Film School was certainly valuable but I conclude now that the process of recording my own studio practice prior to commencing this research degree was essential training for making it work with other practitioners.

The decision to employ the video documentaries as the primary research method for the collection of qualitative data in other practitioners' studios was taken, based on a methodological analysis and the recommendation of my leading supervisor. This required making use of my personal experiences of recording and reviewing video footage from my own studio practice. The analysis of the case studies has followed Scrivener's (2000: 18-19) recommendation that the underlying experience of practice should be a central focus of reflection.

With regard to the first case study presented with Andreas Reichlin, I was able to refine the research method significantly by learning from previous experiences. The logistical requirements of conducting the interview phases in a second language took considerable effort to overcome. However, in many respects I consider it beneficial that I was conducting the interview in Reichlin's mother tongue (German) as it taught me to limit my questions and encourage the interviewee via gestures and encouraging expressions. The case study was successfully split into three separate phases.

1. A passive phase in which Reichlin's studio practice is documented over a period of some hours
2. An interview phase in which he speaks conceptually about his work and both interviewer and interviewee engage in productive dialogue and response
3. A formal reviewing phase in which the interviewee reviews an extended edit of the raw footage, which made use of multiply angles in order to best capture the action. The interviewee is allowed to respond to the imagery, and pertinent questions are asked at appropriate moments

After the first studio recording it was clear that the method was beneficial and yielded rich qualitative data. Through analysis of this case study Schön's conversational metaphor is called into to question, and the generation of other structures can be seen as governing the act of creative making. In this thesis I have proposed care be taken with the conversational metaphor by referring to Schön's

paper on generative metaphor (1970) where he explores how a reliance upon an inappropriate metaphor can have negative consequences. Through this case study I have concluded that the conversational metaphor is an inappropriate metaphor that could have negative consequences. I conclude that the complex relationship between the qualitative engagement with materials and the development of conceptual ideas in Reichlin's practice are better explored through an attentiveness to the ways in which nonverbal qualities, images, and feelings are mapped onto abstract conceptual domains.

With Karasek I can reflect upon my role as an 'informed and sympathetic collaborator' (Harper, 2013: 180), and arrive at the conclusion that I was too eager to pose questions during certain moments of the interview. Looking through the transcript there are clear disparities between my actions and an oral history approach. Whilst it was not my intention to operate an oral history method I consider in retrospect that a balance between a passive approach and a forceful journalistic approach might have been beneficial. It is the fine balance between knowing when to pose a question and when to remain silent and rely upon the subject's responses. For example there are moments in the transcript when a question generated a rich response from the participant. However by contrast there were two occasions when my questioning cut Karasek off from a comment he was about to make. In retrospect I would have preferred to know what he was going to say in that moment. The edit could have had a longer review process and also the aesthetic quality of the camera angles and frame composition occasionally drew Karasek's attention from what he was doing on screen. However, I consider that over a significant majority of the interview process I performed adequately as an interviewer in many respects. The imagery was well filmed and edited, the filming process was conducted so as not to influence or distract Karasek's studio process. The interview location put Karasek at ease and the questions were pertinent with regard to elucidating themes central to this thesis whilst open enough to allow the subject to respond in his own way and words. Through this interview process valuable aspects of embodied practice and Karasek's relationship to reflective practice were revealed. A section of text highlighted in the analysis needs to be revisited in order to consider its implications for the conclusion.

> Laurence Karasek *[…] The body then automatically relates back your feeling to that point of action, which is the end of the brush […]* (Gray, 2006)

Here Karasek is reflecting about a cognitive process. It might be convenient to frame this comment as knowing-in-action, or a reflective conversation with a situation or materials, but I consider Karasek's description of how *the body* relates back *a feeling* to be richer. The conversational metaphor is a simplification of a complex cognitive non-verbal process, the question here is as to why it needs to be framed as a metaphorical conversation at all. Schön, et. al., (1983) maintain that it is not verbal.

It may provide a convenient structure to aid the understanding of reflective processes in some circumstances, but I propose it would be counterproductive and inappropriate in this context.

> *LK [...] the image you're painting from, runs all the way through the motor activity of your body into the physicality of the medium itself and the brush. So it becomes all one. There's no separation, the mind, the body, the pacing up and down on the floor, the verticality of the piece, the wall, the painting, its all part of the same physical existence. [...]* (Gray, 2006)

I consider this to be a significant account of visual arts practice. It suggests a multiplicity of embodied connections occurring in the flux of moment-by-moment perceptions. In Karasek's description of practice the mind, the body, the physicality of the media, spatial and temporal phenomena, all these aspects of practice become one existence during the visual arts practice situation. As a visual arts practitioner I can relate to that situation, as a researcher I can relate it to the other practitioners I have interacted with and relate it to the background theories of the embodied mind. There is simply no need to reduce this complex cognitive process by using a conversational metaphor. Rather I conclude that richer accounts of practice can be obtained by developing understanding of the embodied aspects of practice.

Parallel to my studio practice, and prior to conducting the studio documentaries, I was engaged in researching theories of the embodied mind to which I had been introduced whilst on the MA (by Project). Mark Johnson's 'The Body in the Mind' (1987), suggested possible avenues of inquiry into the way in which embodied experience and tacit knowing surfaces in conscious thought. My initial interest surrounded his work on image schematic structures and the linguistic evidence for metaphorical projection. These theories explored the ways in which embodied experience can be mapped through the language used to describe it. It introduced the idea that human experience itself structured the way in which experience is understood. Assessing the implications these theories had for a deeper understanding of the ways in which visual arts practitioners know- and reflect-in-action became integral to my investigation and was consequently integrated into the working title of this thesis.

8.4 Developing a Theoretical Understanding of the Wide Range of Research Contributing to Theories of the Embodied Mind

Coming from an art and design discipline the time dedicated to background reading across the broad range of knowledge fields embracing theories of embodied mind was necessarily extensive. It included linguistics, cognitive psychology, philosophy, artificial intelligence, and neuroscience. The selection bias, which omitted artificial intelligence, was based upon the hypothesis that theories of the embodied mind could help advance understanding of the tacit, embodied aspects of visual art

practice that surface through action. Indeed I deduced that the term 'embodied mind' not only encompassed empirical evidence across the knowledge fields listed above, but also Schön's (1983) notion of 'knowing-in-action' and Polyani's (1958) notion of 'tacit knowing', under one umbrella term.

According to Johnson et. al., (2007: 1) The philosophical tradition mistakenly asks how the inside (i.e. thoughts, ideas, concepts) can represent the outside (i.e., the world). This trap is a consequence of the view that mind and body must be two ontologically different entities and that on this view the problem of meaning is to explain how disembodied "internal" ideas can represent "external" physical objects and events (Johnson, et. al., 2007). Theories of the embodied mind have worked to dismantle other theories of cognition such as cognitivism, computationalism, and particularly Cartesian dualism. Johnson et. al., (1999) describe three major findings in cognitive science that have radically changed the tenets of Western philosophy, reason, and consequently ourselves:

1. The mind is inherently embodied
2. Thought is mostly unconscious
3. Abstract concepts are largely metaphorical

    When taken together and considered in detail, these three findings from the science of the mind are inconsistent with central parts of Western philosophy. They require a thorough rethinking of the most popular current approaches, namely Anglo-American analytic philosophy and postmodernist philosophy. (Johnson, et. al.,1999)

Theories concerning human meaning making have recently been subject to a philosophical shift away from Gottlob Frege's "Über Sinn und Bedeutung" in 1892, (Johnson, 2007) which claimed that human meaning was grounded in language, as it could not be reduced beyond concepts and prepositions. Johnson's (2007) assertion that human meaning traffics firstly as images, qualities, patterns and feelings before emerging into language was significantly influential in the development of my thinking.

As a researcher the potential I saw in the theories of Embodied Mind turned to focus on the implications of this assertion. I considered these four properties of pre-linguistic meaning in relation to visual art practice in more detail, both in terms of my own practice and the practices of others, and found them to be fundamentally central. I considered whether visual arts practitioners, engaged in the midst of action with visual and mental images, qualities of tools, materials and relations, patterns of action and the felt experience of making, could be considered to be developing meaning on a pre-linguistic level? Considering further that the experience of making could structure the way in which that pre-linguistic meaning

would emerge into verbal conscious thought and language, I began to look at Mark Johnson's (1987) theories of 'image schemata' and 'metaphorical projection' in more detail. These descriptions of cognitive functions where presented as a means of tracking the development of pre-linguistic meaning through non-verbal actions through metaphorical projections into language. In 2007 Mark Johnson visited London Metropolitan University to give a lecture, in the last two slides he presented the following 5 points:

- Meaning emerges from the structures, qualities, and felt direction of our embodied experience.
- Meaning is tied directly to sensory-motor processes, which have both structure and emotional valence.
- Abstract concepts are metaphorical extensions of sensory-motor meanings.
- Art employs all of the structures and processes of human meaning-making, and it does this often without abstract conceptual and propositional content.
- Art is the exemplary, consummatory presentation (enactment) of the possibilities of human meaning.

I considered the implications contained in these five points to be of great significance, not only for re-evaluating Schön's notion of knowing-in-action (1983) and consequently for reporting on 'surfaced tacit knowledge' (Scrivener, 2000: 13) but also for suggesting a method through which embodied experience of practice could be more thoroughly explored. Consequently I began experimenting with ways of mapping embodied experience into language using Johnson and Lakoff's (1999) methods.

8.5 Developing a Method for Applying Theories of Metaphorical Projection

The continued development of a means of mapping pre-linguistic meaning came from an unlikely source.

Figure 66: (Gray, 2005) Example of stone balance structures

I began to balance stones twelve years ago in Switzerland as a supplement to my studio practice (refer to video file 6 on the external hard drive accompanying this thesis). It was something I could do without tools or bought materials. It was

an activity I was compelled to do when I chanced upon a pile of stones outside of the studio and I had some spare time. Whilst working on the structures in Figure 68, by the lake in Zurich, an elderly woman came to question me as to what I was doing. My explanation was framed around the physical qualities of the structure and we discussed the qualities of fragility and strength the structures can simultaneously embody. Left alone they would stand until the stone eroded and therefore might be thought to embody great permanence, but given that even the slightest sideways force, such as a gust of wind, can topple the structure they can likewise be considered exceeding transient objects. In the context of our discussion however, she expressed that the balanced stones were a symbol for the struggle against external forces in her life and her drive to attain inner balance. The interview with Mark Johnson (Gray, 2007), in which this encounter was referenced in detail, can be read in the appendix.

The key analysis of this experience in relation to this research project, is that the conceptual ideas where in stark contrast to a material account I had been writing just some hours earlier.

This case inadvertently provided a very simple example of how conceptual ideas can emerge from the structures, qualities, and felt direction of our embodied experience (Johnson, 2007). The following schematics illustrate how the stone balance activity can be deconstructed to reveal metaphorical mapping.

Physical attributes ──────────────▶ Conceptual Ideas

Figure 67: Schematic mapping material practice onto conceptual ideas

Figure 68: Analysis of stone balance structure. Schematic #1 of 3

Both the physical attributes of gravity and the composite strength of the stones, can be mapped metaphorically onto conceptual domains relating to permanence.
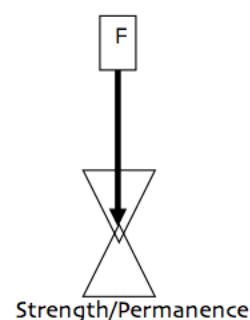
Figure 69: Analysis of stone balance structure. Schematic #2 of 3

Physical attributes of force pushing against the structure from the side cause the structure to collapse. The physical attribute of fragility can be mapped onto conceptual domains relating to temporal transience.
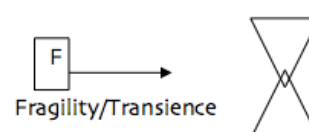
Figure 70: Analysis of stone balance structure. Schematic #3 of 3

The physical, temporal and spatial qualities of the materials and the structure are projected from its physical attributes, such as strength and fragility, into a conceptually blended space (Turner, 1996). In the blended space, the structures can embody both concepts simultaneously.
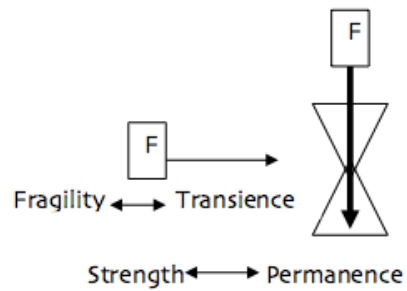
When the old woman and I spoke of strength and fragility, of permanence and transience, we were sharing our capacity to connect our experience of the object with a wider vocabulary of concepts. When we spoke of the structures as being 'a symbol of the struggle against the external forces in our lives and our drive to attain inner balance', we were performing far more complex projections and blends. Our communal understanding says something significant about an important feature of Dewey's pragmatism. Whilst Dewey's stress that cognition is action has been taken up by contemporary theorists such as Johnson et. al., (2007) to elucidate the individual experience of being, Dewey's use of philosophical inquiry to promote understanding of the individual within a community has received less attention. However, I consider that the processes of individual meaning making, the internalisation of physical embodied experience and the role it plays in shaping our ideas, is the very process that enables communities of people to share in the development of abstract concepts. We share the same physiological and perceptual hardware and social cultural contexts. I have personally experienced this in action working on community creative projects where the capacity to find a common understanding of themes in relation to the media was evident. In the same way that Dewey's pragmatism can be seen a foundational in the development of an embodied reflective practice in an individual context, so I contend his work on the community can be foundational in the development of reflective practices within community art projects. This however, is an area for future research and development.

My research into how conceptual ideas emerge as metaphorical projections in language from both the material process (the act of making, and the material qualities of the media) and the visual qualities of the resulting structure needed verification before I attempted to apply them to more complex practices. In 2007 Mark Johnson was invited to be the keynote at the Experiential Knowledge Conference organized by Chris Smith and Linden Reilly of London Metropolitan University, and Dr. Kristina Niedderer and Rob Godman of the University of Hertfordshire. This was a significant attempt at bringing theories of embodied mind into a discursive arena with visual art practice and design. This married with my research agendas, in the sense that I felt it necessary to gain primary sources from the theorists whose work, written around the fields of linguistics and philosophy, I

was attempting to use in relation to visual art practice. As stated in Chapter 6 Mark Johnson kindly agreed to be interviewed during the conference.

AG: […] I'm very interested in the kind of specific structures that are generated, and how visual arts practitioners internalise and metaphorically project those experiences, even unconsciously, into abstract domains. It would suggest that visual arts practitioners might owe as much of their creative conceptual ideas not only to their social, theoretical, and historical agendas to but to physical qualities and processes in the act of making. One of the artists I interviewed described it as, the mind, the body, the pacing up and down on the floor, the verticality of the piece, the wall, the painting, being all part of the same physical existence. Perhaps it is this process that enables visual art practice to be the exemplary example of human meaning making you describe.

MJ: Exactly. I'm completely on board with what you're saying. We look at the possibility of creativity as to not simply reproduce these templates or structures but the modest freedom we have to transform them in creative ways. I think that your basic idea is absolutely correct. Dewey says, look, what's so characteristic of art is the focus on the qualitative dimensions in the structure of materials and relationships of qualities. And the actual working through the possibilities of those. And I think that's what you are describing here and you are showing how that's a basis for projection in our sense of ourselves, and then into a number of abstract, what we think of as abstract, conceptual domains.

[…]

AG – It's the physicality of the materials, your relationship to the tools…and the environment in which you're working that the conceptual ideas can also grow out of…

MJ – Precisely, I think that's right, you're saying it just right it seems to me. All of those things you've mentioned are, your constraints shaping the possibilities of meaning, of carrying a situation, of developing a situation in a certain way, and what you're doing is enacting that. I mean, what you've described are ways of knowing. And its not like there's more that has to be said it seems to me. We just have to get over the idea that there's this municipal concept, knowing, knowledge, that it is, you know a concept handed down to us in its traditional form with a whole bunch of problematic assumptions. So that's where we have to go at this. You talked about this process, an active process, and it is an intelligent engagement with these materials and their qualities and their relations. It's an inquiry of sorts seeking to see what's possible and when its creative its transformative in seeing what's possible for us. And I think the key is just to, get people to see that that is a way of knowing, and not then to say how does it get translated into conceptual knowledge because that gives it second-class citizenship. I mean it doesn't have to become knowledge. We can ask what goes on there feeds into our, you know, abstraction. That's my work, what I'm focused on. If we're trying to validate it, translate it into a certain conceptual, propositional framework, I think that's not the way to go. I suggest that the way to go is to validate it at the level of 'this already is' a knowing. But in order to do that we have to challenge the traditionally received views about knowledge, and the kind of transcendent 'god's eye view' of universal

concepts. I mean, what Dewey said... science evolves certain abstractive modes where symbolic processes are brought into play, that in a sense, remove us from the more immediate engagement with the qualitative enactment of art. And seeking generalizations over the phenomena, that's what science does. Sometimes the generalizations are in the form of universal laws, but not exclusively. That's another story. That's a form of knowing, but there is a cost to that, the cost is that it pulls away from the qualitative engagement with the materials, which is so critical to art's way of being in the world it seems to me. (Gray, 2007)

The conclusion from this dialogue suggests that the cost of attempting to translate embodied experience through the scientific language of reflection-in-action has the potential to distance the visual arts practitioner from the qualitative engagement with the materials. This supports the view that Schön's et. al., (1983) conversational metaphor, simplifies accounts of qualitative engagement with materials, which is as Johnson (Gray, 2007) suggests critical to visual art practice. This was evidenced in the case study with Laurence Karasek, for whom the revelation that the mind, body, and physicality of the media become one in the midst of practice was an important concept. In Johnson's (Gray, 2007) view, this engagement ought to be considered a form of knowing that feeds into our capacity to abstract from concrete embodied experience.

Varela et al. (1999: 27) proposes that reflection is not *on* experience but *is* experience and that such a reflective form of experience can be performed with mindfulness/ awareness. This claim has led to the speculation that mindfulness training may be beneficial within the visual arts practice situation, as it has been proven to be in a range of other professions. This thesis has made it explicit however, that extensive further research would be required in order to validate whether the introduction of mindfulness training into visual arts education, or any modifications to andragogy its introduction might engender, could indeed be beneficial.

8.6 Main Conclusions: The Synthesis Between Theories of Reflective Practice and Theories of Embodied Mind – A Contribution to Knowledge

In this thesis I have argued for the potential to advance aspects of Schön's theory of reflection-in-action (1983), in relation to visual art practice, by incorporating recent theories of embodied mind. I consider this to have been achieved and furthermore conclude that the findings, which recommend modifications to the way in which reflective methods in visual art practice are approached, have the potential to be beneficial for visual art practitioners and to visual art practice. The process of bringing these peer reviewed theories of high methodological value, together in an original context, is offered as an original contribution to knowledge.

This thesis concludes that Schön's (1983) model of reflective practice has been shown to be beneficial in a wide range of practice situations, across a range of disciplines. The conversational metaphor (Schön, 1983) presented under the headings 'design as a reflective conversation with a situation' (Schön, 1983: 76-104) and 'learning as a reflective conversation with materials' (Schön et. al., 1983: 68-73), can likewise be a useful simplification of a complex cognitive process in a wide range of practice situations where the embodied aspects of practice are not of central importance. However, based on the qualitative data collected through the case studies, the conclusion is drawn that by taking into account embodied aspects of practice, such as the qualitative engagement with the materials and the generation of non-verbal, pre-linguistic meaning, which are of critical importance, a reliance on the need to reduce the reflective experience of the process of making to a conversational metaphor is removed, and richer embodied accounts of the relationship between the practice situation and the conceptual ideas can be generated. Johnson's (2007) assertion that visual art practitioners' qualitative engagements be considered a form of knowing supports Karasek's description of practice (Gray, 2006) in which, the mind, the body, and the physicality of the material and environment become one experience in the practice situation.

> So, the key point here is not that art is a form of *knowing how*, which is to be distinguished from sciences acts of *knowing that*. Both art and science are about the transformation of experience to enrich meaning, open up new connections, and help us harmonize our experiences. Art may focus more intently on the qualitative unity of the experience (the work), while science focuses more on causal relations and connections, but both of them are transformative modes of inquiry. (Johnson, 2010)

I have proposed that the process of focusing attention on the underlying experience of visual arts practice, as Scrivener (2000: 18-19) recommends, is aided when connections between the physical act of creative making, and the conceptual ideas that grow out of that process are examined and mapped in direct relation to each other.

I propose this richer account of reflection, which attempts to penetrate non-verbal levels of meaning, which are considered pre-linguistic (Johnson, 2007), be referred to as Embodied Reflective Practice when used in relation to the visual arts. This specifically requires analysis of the connections between the nonverbal tacit meaning, emergent through practice, and verbally articulated meaning describing the development of practitioners' conceptual ideas. I propose that this analytical method shall be based on the process of metaphorical mapping developed by Johnson (1987), examples of which have been detailed in this thesis. The further development of this analytical method explored through Figures 67-70, and endorsed by Johnson (Gray, 2007), is put forward as a future research opportunity.

I have made explicit in this thesis that the potential to advance aspects of Schön's (1983) reflective methods in relation to visual art practice, is presented as supplementary to the main work in 'The Reflective Practitioner'. This thesis therefore supports both Scrivener's (2000: 18) recommendation that Schön's (1983) theory of reflective practice can bring structure and rigour to art and design research projects, and that focusing reflection on the underlying experience of practice can be beneficial, when processes do not lend themselves to a problem solving model of reflective practice.

In conclusion this thesis has put forward a case that a focus on the underlying experience of practice can be enriched by the development of an Embodied Reflective Practice, which encourages visual arts practitioners to be attendant to the embodied nature of reflection-in-action.

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Appendix

The following section presents the full transcripts of the interviews referenced in the thesis.

1. Case Study 3: Andreas Reichlin - Studio documentary filmed August 2008 – Follow up interview filmed August 2009

Stage 1 Interview

Andrew Gray: Do you find you can work for 2, 3 hours without pause?

Andreas Reichlin : 5 or 6 hours, no problem.

AG: I find that when the work is going well then I have no feeling for the time.

AR: Yes, you have no feeling for the time. You say 'the flow', when you are in it. But there are also days when I cannot even work for one hour, then I need to go away because it doesn't work, or I clean the studio. But the creativity is here.

AG: I find that when I'm in this 'flow', even through the studio is in chaos I can find whatever I need, it's like a dance.

AR: Exactly, But it happens often with me that when I'm working my head is already involved with the next work. How do I do it with the next work. That is quite interesting. When I have a new idea I put what I'm doing aside and I make a small model from the new work, very spontaneously. I have to realize the ideas immediately.

AG: Do you always make a model or do you sometimes go straight to the large sculpture?

AR: Sometimes I make a model but not always. I have ordered new plates (points to the back of the studio) with this I have not made a small model I just start.

Interview 2: post-practice interview

[later standing beside a sculpture in the garden]

AR: The inner part of the heart (demonstrates sweeping gesture curving his hands from his chest out in front of him) is made like this – (Spoken in English) this is the inside – this is the inside (referring to concave areas of the sculpture that are facing outwards)
The inside comes outside –
(spoken in German) that is the idea and the philosophy – I know it only in Russian, that is the 'д у ш а ' (dousha)', that is the name (of the sculpture) 'dousha' and that's why there's also the contact. (touches the sculpture)

(moments later - beside another sculpture) This one is actually the same as the other, without this opening. This here is together (on the other sculpture – gestures across the garden)

AG: Was this piece a whole circle?

AR: With this sculpture not. It was a flat plate, which was pressed into the form.

AG: Do you make this yourself or did a firm make it for you?

AR: A company makes it. I will show you, over there you can see those plates, but they are flat. Those works, they are solid pieces (moving over to smaller scale works)

AR: In the solid metal you see that the character of the steel is different than those over there, it's a different character.

AG: Here it is polished, but here not?

AR: There I never make anything, only here, here, and here, and here neither. Can you see it. This is perfect, perfectly polished. And only put together like this and here welded. Very simple, but highly complex.

AG: This piece was originally a whole cylinder, and this angle, and here was cut and the middle piece flipped vertically.

AR: These two pieces are the top and this piece is the bottom (referring to the middle section).

AG: And the pieces always fit back together, that is the geometry of the cylinder and it is always 360 degrees.

AR: Except this one I'm working on now, that is more. This is 360 (gestures the initial shape) and another piece more comes in. This is for me... I mean this work symbolizes love.

AG: That totals more than a whole circle?

AR Yes, something more comes into it. When you are in love there is always someone else involved, a second person comes in from outside and that's why it is more than a circle.

Interview 3: Later beside a solid metal sculpture

AG: Once you have made the model and then you move to the larger piece, you encounter this problem, this machine, this new process, this quality in the polishing, does a new concept emerge through the process, through the material, the time you have, the space you have, your experience of the work? The metal is hot, sharp, heavy, you expend so mush energy, do all these processes change the idea from the original model?

AR: You mean whether the form changes? I think not, no, I think.... I have a very clear vision how I'd like to do it. Then comes only the craftwork to realize it. And the problem is that when you have a small model you can make it very spontaneously, very quickly, it is complete, it is correct, it is right.

AG: It's not so much work?

AR: Exactly, and if you are working one month or two months on the same sculpture then it means that you have to bring during the whole time the same quality as you brought in, in 5 or 6 hours (making the small model). And this is very difficult, that the large sculptures have the same power, spontaneity, and clarity. You see I'm working already a long time on this, I work, and work, and that it has this lightness this calmness, that it is self evident (Selbstverständlichkeit) You don't need to ask what for and why, its logical, it is just normal, it is just here.

AG: It is a huge contrast, this piece here is very quiet, its very stable, and the experience of the piece is a calm experience, but the practice to make it is the total opposite.

AR: Exactly!

AG: It is loud and heavy…

AR: …and hot

AG: ..and hot, and I have seen when you work that you make small pauses as if it's a reward, of as if the stillness in your pause is the quality you wish the sculpture eventually to have.

AR: I find that really beautiful what you have just said. I have never been aware of that. The work is loud, extremely, with the machines and other things, and the sculpture is quiet. You don't feel the work anymore. It is quiet, still. This is a totally new aspect.

AG: With this, that is only a physical quality…

AR: Exactly.

AG: …but what can we make with this physical, with this metaphor – It is what we make with this metaphor, I mean for you the circle metaphor, this is the inner part, this is the outer part, it is, but when we say that is a symbol or a metaphor for life then we come to another…

AR: another level.

AG: For me it is a very interesting question – what comes first – ok this is the quality, and for me, I can work with this quality and bring it to a metaphor for life, or do I have an idea, a concept of life and I must find something that displays that

quality? Does the material and the process lead to the idea, or does the idea find the material and the process?

AR: I think it is both. It is really both.

AG: I think that could be a good place to finish, because the camera is telling me the battery is finished.

AR: (laughs) Bye.

AG: Thank you very much.

Stage 3 Interview

August 2009

AR: I know now, but at the time I had completely forgotten, just forgotten, that you where there, I was so into the work.

AG: Here I find it is like chess. You want to make this here, but you must think 'what will happen when that piece comes up'

AR: That is the eye in the sculpture, the camera was filming my head, I'm thinking then I moved, and there was the eye. (laughs)… You know the problem here is these pieces are not yet welded, not yet complete, I have to lift the bottom piece up, (demonstrates it breaking)

AG: Ah, you must take that away later?

AR: Exactly, That's why I have to weld this now, even though I must take it away again later. 'What happens when I lift this piece up', 'The other piece breaks apart' – It's a shame. This is what I was thinking

AG: Yes, 'how much must you fix it…'

AR: As little as possible because I must cut it again.

AG: That is just with your feeling? You must have a lot of experience with metal to understand how little you can afford to fix it without it breaking.

AR: That is somehow, (points to his heart) feeling

AG How long have you worked with metal?

AR: When did I begin to work with metal, about 10 years, not so long.

AR: You know it would be great to, for example, for an exhibition, if you see the work, just this sculpture, you just see only that… but when you close your eyes, you know you hear just the audio. That fascinates me now!

AG: You'd play just the soundtrack from the process, no images.

AR: You told me something which I have never forgotten, you told me, I work in such noise, emissions, with such a lot of noise, always (points to ears), When the work is finished the sculpture is silent. That's what you told me. I'll never forget this. That was amazing. It was when we spoke here a year ago. I could imagine to place a sculpture in a room where you hear only the sound of its making, its development. Do you understand? The sound of the process, Just the sound, not visual. The sound of the chains, the power tools… For once no music, just this sound. With really good speakers, good quality recording. That is really cool. I will do that at the next exhibition!

AG: (turns the light down on the computer screen – both AG & AR
listen to the audio)

AR: It's really exciting (listening to the audio with no images) It's the essence.

AG: (light brought back up).

AR: (looking at the image again) Here it's beautiful…

AG: Have you ever produced drawings?

AR: Yes, a little bit, Life drawing - I was in Paris for 6 months to do that. Only life-drawing. I draw just a little bit. In fact it's a shame. You have to live my forms, for me they are very difficult to draw. I prefer to translate 'that' directly into the form.

AG: For me a sculpture ought always to be seen whilst in motion, you can't see it only from one angle.

AR: It is always three-dimensional. (looking back to the screen) Now it comes good (looking away from the screen). It is so interesting to see this from the outside. (looking back to the screen) That's not good there.

AG: Why?

AR: I have the feeling that that piece must go up more. But it could be ok. I don't see it exactly here yet. Here this piece should be like this (demonstrates on screen). It's difficult to see from here, (after studying the screen intently) For me it was the most complicated work that I have ever done. It's so complex. You said it right before, it's like a chess game. You have really to think very far ahead to be able to construct them.

AG: It is interesting also... This piece (pointing to the inner most curve) is really deep inside. With your concept, that which is on the inside of the sculpture represents what is inside us. It is the most vulnerable part of ourselves, and so the most intimate part of the sculpture.

AR: Exactly, its so fragile –

AG: Mankind has so many possibilities when we can take a symbol from cold, hard, metal, which can get really hot, its heavy, its sharp, and yet it can represent the most vulnerable part of you.

AR: The soul.

AG: I find it to be a very different language.

AR: (referring to his actions on screen) Now its good. Do you see this small adjustment to make it curve upwards? Do you see it now, I'm pulling? This is so exciting – I've never seen such a film! This is the first time [I've watched myself working]

AG: So you must cut this away?

AR: (gesturing a twisting motion with his hands) The upper piece is like this, so the back part must twist more. It has to have more power.

AG: How do you define what is the right form from the form that feels wrong?

AR: You can see it with these forms (gestures the angle of the curve in front of the screen). This a principle of the forms. If you twist one side this way the other has to go in the opposite direction. When it's straight it is somehow dead. It is cut. If it twists its like it's like it's grown.

AG: Organic?

AR: Exactly, Grown, like a plant. It's totally normal. You can feel it now it has to be like this, in this form.

AG: When you have a solid metal cylinder and you cut the diagonal, cut it then rotate it, you immediately have the form. It's not so much work. But with this process you must find the forms.

AR: Exactly, you have to construct it.

AG: How is that, if you have, say, ten times longer to produce the piece, but is it a better experience for you? I mean this curve is not natural, you must find it.

AR: Yes, I understand.

AG: Does it present you with more possibilities?

AR: I think it is another chance, with this work some things are harder and some things are easier. With the solid metal, this part is easier but this is far more complex. With this work I always learn things for the work with solid metal.

AG: With the solid work you have only one chance with this work you have more chances to play with it.

AR: Exactly.

AG: (Stops the film, and refers to a gesture made by AR, in which he models the shape of a form he is marking for being cut with his hands) What is that?

AR: There? That's the inside. The soul – did I do that before?

AG: You made it one time with your hand like this, (gesturing the motion), then you made it now like this (gesturing again).

AR: Ok. There I'm trying to formulate the thoughts that I have. To bring them into a form, a connecting platform, connecting the plastic and my thoughts. It's like drawing in space, it is the form so I can feel how it has to function. So the form is correct. I think that is the point.

AG: For the practical work, this gesturing with the hand has no direct function, as such. The metal work itself doesn't come further. But for the body, to make this (gesturing the form), what you said, 'drawing in space', it's a way to take the form.

AR: Exactly, it's a way to take the form. When I feel it like that in the space I can eliminate the mistakes. If I don't make this, then it is much more work to repair the mistake. Here I can just feel it. It's like a sketch.

AG: If it was possible to cut the metal only with your hand…

AR: That would be cool. I think that would be a dream.

(Guests arrive and the interview in brought to a close.)

2. Case Study 4: Laurence Karasek transcription

Laurence begins watching himself work.

LK: This is all part of the process, when I think about my painting, I don't usually, since I'm alone in the studio, talk. So this will be an interesting articulation of my thinking without actually having to paint. Which is another commitment and obligation. So it's a commentary on a commentary. So is a rather learning thing for me, an informative, instructive thing for me to do. I'm happy about that so go ahead.

Documentary is played – duration 20mins

AG: This I find interesting.

LK (speaking on video about a painting of the lake in Zug): The painting the blue one I just did, I got the feeling from the painting that I wanted to dive in and swim and stuff. It must have reflected something in its appearance. So are you filming?

LK: I look entirely eccentric [laughs]

------- 1 min ----------

AG: How is it starting on that kind of fresh, virgin paper?

LK: Terrible, its totally difficult. Enormous, problematic. That's a nice detail.

AG: So here you are trying to visualize the lines before you make them?

LK: No they signify, a structure that I'm perversely creating with different colours and lines and so on, which is in turn an abstraction, because I'm not a camera, so I'm doing it in fragments, with one stroke after another. So its an interpretive process actually. When I try to structure the form of the image of the flowers, of the space and the form of the flowers structured on the surface of the paper, it's the way that its connected, every part is connected to the other and as I'm doing it there are certain masses of form accumilations of form that I feel, like stacking of things, or constrasts of types of forms, or connections or groups, actually groupings of forms, so that they form clusters, they form associations and they have a compositional structure that I'm trying to resolve, but not frontally, its in fragments as one brush stroke or line at a time. Its trying to do the whole thing in one moment.

AG: The story about the flowers, I somehow kind of got the feeling that the photograph wasn't important at all, it was arbitrary, it was just a means, a viechle, to get started.

LK: Yes, actually you are correct, its just a starting point, to have a subject to translate from. Rather than working as an abstract expressionist works, which is you know, subconscious level, with action, with action of paint and gravity, arm action, action painting it was called. Lots of swinging of arms, lots of running up and down the length of the canvass, lots of physicality. I trying to have the same kind of freshness of the moment. But at that moment an indication of structure and space also . so flatness is also a replication of a special concept. So the lines are – Here I'm fairly, I notice that my body language is fairly intense.

AG: there's a lot of swaying back and forth.

LK: Yes. It's quite a dance. And now I feel a need for paint, so I'm mixing paint.

AG: You feel a *need* for paint?

LK: Yeah, a need for liquid or paint or something, I have that desire.

AG: Its an interesting way of describing this, that it is a need, a must. It suggests that there's some kind of a sense of rightness, and that painting is now the right thing to do.

LK: Yes, it's a self generating rule system, of restriction and limitation, versus fullness, and the lushous flowing sensual paint and all that. If you can imagine a conceptual feast that is being eaten with a tiny spoon [laughs], this is basically the sensation I have. I have this enormous complex structure which I understand, which is dynamic, dynamic in the classic sense of having energy and connection, but at the same time its also structural in a chemical way of this relating to that and that relating to this. This is a good shot I like this silhouette.

AG: It was interesting because you could see the expression on your face, you couldn't see the way the image was being built. One comment I was going to make, The way the image is being built out here, [points to screen] its almost organic in some way. A kind of a tree like structure, there's no marks going down here until there're marks here to support it – its almost like its going out of this. And once this becomes more stable able to carry the weight of the line down there then you start to move into the space.

LK: Yes, there's a stacking of form here, a stacking that begins here and moves up. Its true, its like when they build a bridge they start with the ends they build out and

build out until the can meet in the middle. Its true its kind of like that. I'm impressed how compulsive I seem, driven and compulsive. It's no wonder I get paint in my finger nails, [laughs] its totally, you can't avoid being completely involved in the sensuality of the paint.

AG: Could you say something of that compulsion, that need to… be doing this, just to be doing this.

LK: Well, its obvious isn't it, it's a desire for perfection, a desire to be perfect, A desire to have a representation of life in one work, as much as its possible to incorporate your understanding and knowledge of life. My conversation is now a bit taken up with the visual effect of this film. As I'm drawing here, I see, I remember how it was. There's an urgency here that I find quite alarming.

AG: The dry brush here, doing that because you wanted the effect of it, or because you needed to make the mark and somehow to pause and reload the brush would be…

LK: No, no, I like the effect of the dry brush very much. [Watching himself mixing paint on the table and knocking something over] Typical.

AG: Typical? Why is that typical?

LK: To knock something over. So, you can draw very quickly with a dry brush, like a pencil almost.

AG: I'm interested in this here, you're looking for something here, and (clicks fingers) you're going off to get what you need, do you find that within your studio space you have a very intimate relationship to the location of all of your materials and tools.

LK: Yes I'm organized, I have my storage of my paint over there and on the table I have what I need for the immediate purpose. So here I'm really loading up the brush I'm going quite fast with the urgency of the idea that's compelling and driving me right now, what I'm going to do with this colour. It looks like I need more fluid, so I'm going to poor some in.

Scene changes – Laurence looks bemused.

AG: we're jumping ahead in time right now.

LK: Oh.

AG: Essentially the whole painting builds up over an hour. You can see you've already made a lot more marks. This movement with the hand, are you aware of doing that?

LK: Not so much. I'm aware of the fact that its extremely intense, I want to make sure I don't succumb to accidental or casual lines, although they look accidental they're not. They're very deliberate, I want to… [cut off by interviewers question]

AG: This whole process here now, we were discussing this before, you're struggling with this area of the painting…

LK: Well, there's always a part of the painting which is problematic, more difficult and its usually the left hand side for some reason.

AG: Did that mark satisfy that problem?

LK: Yes, this mark counter balances this darker area here. It releaves the pressure of this, as a compensation for that dark area, filled in area, I'm trying to draw form, and trying to avoid drawing form.

AG: There's almost this kind of… [click fingers – scene shows LK modeling the movement of the line without drawing it]

LK: Well, I'm trying to feel my way through the form there I'm trying…

AG: Do you find that that helps you come to terms with that form when you play it out in the motion of the body first?

LK: Yes, yes.

AG: So its like sculpted in space before you make the mark?

LK: Yes, it actually is. Pretty much. Its very much a physical [pause] thinking process.

AG: I'm interested in these metaphors, where you're relieving the pressure of a space, relieving the pressure over here by counter balancing – in the same way that if you needed to relieve the pressure of having too much wind in your bowles, you need to belch of something, where you bring your body back into balance. (inarticulate question that sent LK off on a tangent – would have liked to articulate that it is the way we project embodied experience into abstract domians)

226

LK: Yeah (sounding unconvinced) I mean, it's a way of contrasts and dynamic contrasts where you have different things that balance each other out, so it's a dynamic action. So you can accept what it is without changing it by doing something else. It's a very important concept actually, accepting what it is without fussing over it so that you can deal with the reality of the moment by taking another action which then explains and defines the thing that you're having a problem with which is perhaps the work or something that isn't quite right (is LK taking about generative metaphor here?) you can actually interpret that phenomenon in an external, by going out of the problem, by going external, to an external expression of it that is different and way from it.

That was a good shot where you had the close up, I had no idea what you were doing with the camera.

[LK points at the screen – but question is asked)

AG: I'm interested in this relationship between the painting and the photograph. There's this continual marrying between… the choreography of the painting… you are engaged with the tool and the material, the stepping back continually, step back, mark, step back, mark, and also in that the photograph, mark, step back, there was a kind of continuity to the way you were structuring, layering…

LK: Yeah, well it has to do with the body language of which the paintbrush, or oil stick or pencil, is a part, it's the end of your arm, so you have a feeling of what you want to do that runs through your body. The body then automatically relates back your feeling to that point of action which is the end of the brush so the ideas, actually this quite an interesting revelation in a way because the ideas that you want to create, that you conceive of , you feel when you look at your painting, the image you're painting from, run all the way through the motor activity of your body into the physicality of the medium itself and the brush. So it becomes all one. There's no separation, the mind , the body, the pacing up and down on the floor, the verticality of the piece, the wall, the painting, its all part of the same physical existence.

Is that the end of it?

AG: It passed very quickly, didn't it?

LK: Yes, why did you cut so much of it out actually? Was it repetitive?

AG: Well I wasn't sure how long we'd have for the interview, and 20 minutes seemed a concise section..

LK: It passed very quickly, from the hour you spent filming me, seemed like 2 minutes.

AG: Indeed.

LK: Because they is no time, its just the idea, you know, the idea that body's forth, like language itself, you have no idea where language comes from, it just comes out of you and the ideas follow the words, here the visual ideas follow your body, your mind, your thinking, your feeling, all these are put together, and become, if you're lucky, an expressive statement, if you're very lucky it works out. If you're in tune with what you're doing. Its like an athletic performance it can be quite beautiful and truthful. Given all the factors. The image that comes to mind, is a person riding a horse for example, how complex that is, and they jump over a fence or something and they control the horse, there's no difference between the rider of the horse, the horse's mind the rider's mind, they're all one. And they're all in relationship to whatever it is they're doing. It's like this there's no difference between my mind and my body here. My mind is my body, my body is my mind. The painting is me, the idea and the painting become one.

AG: Do you hold with the idea that, you're setting out a certain agenda, and you're engaging in a certain activity, and you have your rule sets that limit, but that its not that the act of painting is a slave to the conceptual idea, there's a relationship there where the actually act of painting itself is feeding the conceptual ideas.

LK: Absolutely, because you have to be in the moment. This kind of painting which is physical, and phenomenological in a sense, as it has to do with the surface and how the paint runs at certain times, or drips or something. Its all part of the mesh of feelings, of ideas, of sensations. I might just as well be building a sculpture here for example, its the same physicality, painting is extremely physical, I wouldn't say totally physical, but it certainly has a physical reality as much as any other physical reality that existence has. And although you're working on a flat surface , you're working on a three dimensional flat surface if you know what I mean, that exists in space. So the flat surface of the painting, allows you to have imagination through it, so you go through it, as you go through it, you imagination, you're guiding it, from the other side, from the fornt of the canvass the visual side of the canvass, with your body, with your actions.

AG: So you see it more as a three dimensional space, than a flat surface?

LK: Yes. Totally. Totally as a three-dimensional experience, even through you are using a flat surface and you're using a point or a brush or something to do it, and you're using flat colours and so on. It's all part of an extension of your experience. I notice that the painting becomes an extension of my body language, and my body

language becomes an extension of the painting. And it becomes very intense because I feel very intensely about my work. My body becomes all tense and I start to work in a rhythmic way that is a reflection of the rhythmic strokes and the pattern of stroking and so on, of application, that I'm actually performing, it's a performance piece. That's why I find this film so interesting, because its actually a performance piece that we're seeing here not just the painting, and out of it comes a framed painting in the end. But actually it's a record of an action, an actual physical action. I had my students one time find out what their patterns of behavior were by dipping their feet in paint and walking back and forth in the kitchen, and they developed certain patterns of behaviour between the fridge and the sink and so on. For an hour long, it was an actual representation of something that had happened physically over a period of time. So time is also important in painting, and the annihilation of time in the painting is what happens because the artist feels no time, because he leaves his normal body outside of the studio. Are we watching it again?

AG: I'd like to get onto some more formal questions.

LK: Sure, go ahead, ask me any question you like.

AG: I'd like to ask what reflection-in action actually means for you, although its such a dire question somehow. But I'm quite interested in how you negotiate that space, whether you are even aware that there is a process of refinement going on, what you think about reflecting on your work what do you do?

LK: I had my answer already before you used the word dire. No its not dire, its difficult. There's a tremendous sense of responsibility you have with an on going piece, for example, you started filming when there was an hour or two of earlier work from the previous day. And it was quite good I thought, I liked it. It's quite a responsibility to make it better or continue it. So reflection is a sense of perfectionism that you carry, that you have to carry as an artist. You reflect upon. Is it perfect, and that's the under riding reflection in making an art piece is, you know, perfectionism, perfect statements each time over the complexity of structuring the work. The reflection-in-action would be something like a commentary, if I was making a commentary, like is this too big, is this right here. It's kind of like as I used to do when I was teaching my students drawing,. How big is this, what direction, what angle, I was talking out loud, and if I was talking out loud here, I would be thinking like that, I would be saying, is this where it ought to be and does this express the feeling I have, is this connected, and there's an intensity I see in things, I observe and I see an intensity there, does it reflect an intensity.

AG: Is that kind of questioning coming out in words?

LK: No. Its not coming out as words its just in my head. I'm not saying them but I'm thinking, As you think, you know, is this big enough, is this where it ought to be, is the angle of it right, how about the colour, was that a good brush stroke, did that work, does it work with the other brush strokes, and this kind of thing. And it's a relational thinking is the reflection, which is always the case with an artist they're thinking about the relationships they're building. It's relational thinking, that's what reflection is. Is it this, is it this, can I do this, can I do this. Is the colour right is the form right, its reflecting on the relationships between the parts. There's very little that's done, actually done that doesn't have an existence somehow, materially, physically, some effect on time or space, some manifestation, so.

AG: Is that a kind of post-event activity then…

LK: No, no, it goes…

AG: … so that you make a mark, then ask the question whether it works, then make another, then asks another question, is it after the event, or whether that thought process, or feeling process is occurring as you make the mark?

LK: No it occurs as you're making them. Does this go there, or there, then you step back and see if it does go there or there, and sometimes it doesn't, sometimes, many times they're corrections. This whole thing was built on, recreating and restating and finally, you get to know the image you're working with so well, that it comes together, it becomes familiar, the patterns, the forms and so on, the composition of it become very familiar to you and you get to know it and so it becomes in a way, more resolved as you get to know it, although this way of working there never really is a resolution. You don't want a resolution of the ritualistic kind; you want a resolution of the expressive and emotional kind. That says this is a truthful statement of how you feel about what you're looking at and observing, does it replicate your idea. And of course you don't know that exactly, because you don't know what the outcome is going to be, although following a line of restraints, restrictions, and patterns and rules and regulations that you impose upon yourself, eventually a stream, a sequence of work comes out, that's predictable.

AG: That familiarity that you have with the work, if you're looking at it as a three dimensional space, not a two dimensional space, but where the layering is quite physically three-dimensional, as you are almost swimming amongst the lines and putting things behind. When you are engaged with one particular area, even though you are continually stepping back, there's a certain kind of vibrancy to the lines, as if they are a living part of the action. Where as once the lines have been made and you step back perhaps some hours after the activity, does that vibrancy fade from the lines, do they become flat? I don't know if that explains what I want to say.

LK: No, they become objectified Andrew, they become objectified, I mean I could maintain this kind of intensity I'd go crazy, I'm just working on this thing. So then in reflection, later you look at it, if it works, you feel like it works, or it doesn't work. You know oftentimes I find I'll pick up the paint brush and I'm into it again, and I didn't mean to do all of it, I just wanted to do a little bit here, and sometimes paintings get completely repainted, like the red one of the lake series, was completely repainted, all over, everything pretty much. But that's the reflection you get when you're not working, of looking at other peoples paintings, of looking at your own paintings objectively, does it work.

AG: [standing up and taking a book] For example, if we look at the work of Brice Marsden, are you familiar with his work.

LK: A little bit yes.

AG: Or perhaps looking at this image, by Gerhard Richter, I can never engage in this painting in the same way that he did when he was working, I view this as a two dimensional image. Whereas for him, in the same way that yours is a living space.

LK: Yes. That's right you can never go back. Once enough time has gone by you can't go back, or get into it, besides you've changed. The interesting thing about, Gerhard Richter is that he's simultaneously working in a photographic style, and this scrapped surface style, and he can work with glass, and people say, well, what's wrong with the guy, but when he's with glass, he's not with paint so when he's working photographically he's working photographically, so. If people want consistency of style they want to know how it was done so they can depend on it. So I think that if you wanted to sell this drawing you could use this videotape to show how it was done, they would understand it and want to buy it,

AG: Do you feel a need for that, a potential for that?

LK: I do, yeah I do. I think the more knowledge you bring to your vision, the more understanding you have the better. I think its essential to have knowledge and understanding if you look at something.
Interview ends.

3. Case study 5 - Interview with Patrick Simms performance artist and puppeteer

Conducted at the artist's studio in Barcelona [The following interview is illustrated with video still images from the interview, which is not presented amongst the primary case studies in the thesis.]

AG: I think the most immediate thing, is that out of all the puppets here the majority of them have skeletal heads. The significance of the use of skeletal heads… having the flesh stripped away from them?

PS: Well there is the obvious metaphor of the puppet being neither alive nor dead. For starters in this story they live in the land of the dead. But in terms of searching for material or form for the idea, I tried to use images and combinations that allude to this sort of middle zone between living and dead. So we have a lot of taxidermy, and sort spanning the whole expanse of things that where alive and are dead now, and things that where dead and will soon be alive.

AG: So do you think it could be said that the skeletal forms are coming out of that physical attribute of the puppet as an object that is inanimate, but is given life through gesture and movement?

PS: With this show anyways, there's much less scenery and props, its much more empty. And when I create a character I try to make them carry their scenery with them, like in their costume or their form or their attribute or the props that they carry with them. They carry with them all of their scenery so that its not necessary to… it's a way of combining many different stories and spheres, and you rely upon each character to bring their whole universe with them. As they are coming into it it's much more economical to have all these little worlds combining and mixing in one space.

AG: Does it start as an economical, practical necessity, within the performance, that they bring certain attributes of their environment with them, rather than having to change the set and if so what kind of ideas spiral out of that in terms of the characters?

PS: I think that in the conceptual story, there are many narratives woven into one. Well for one thing, the characters are complete unto themselves, so that even if you just allude to one character as being representative of this sphere or this sphere, hopefully you can create an immediacy of that sphere in the physical embodiment of the puppet but also in terms of mixing ideas as well. It's a combination of this immediate completeness of the character and its ability to mix with other characters, other spheres of thought.

So in terms of the skeletal forms, there is an immediacy to it, but it also cuts right down to the bone of the story. Also I tried to avoid any kind of rhetoric, anything extra unless that's the subject. Unless the subject is rhetoric, unless the subject is decadence unless the subject is extravagance, I try to keep it as… Although every character is a kind of monster, is a kind of hybrid of other worlds also, so each character represents a mixture of worlds also, so they combine. A lot of the characters have animal characteristics. Many of them started from animal skulls as a head; there is a rat, an owl…

AG: We where talking before about that kind of cyclic relationship between the character, the concept of the character and the puppet that embodies that concept, and the making of it and how that changes the

concept of the character, and how the concept of the character informs the making of the character and so on. Do you have any specific examples of where the concept of the character was very strong but the making of the puppet changed the concept of the character?

PS: This is a crocodile dominatrix, and she represents, from the third act of the last show, which is a lamentations regret of this woman Eleanor Butcher Bishop, she regrets not having wept at her son's funeral, so she evokes this crocodile goddess whose responsible for bringing tears to her eyes. So with the metaphor of the crocodile tears, she sort of became the totem animal of this act. Through this very false ceremony some other truth is revealed. She does it through these mechanisms of evoking this crocodile goddess who's waving onions around and trying to make her cry for this photo shoot. Eleanor regrets not crying at her son's funeral so she's exhumed him and got all the paparazzi to come in and take a picture of her, and must have a tear in her eye for this reburial. So she evokes this crocodile goddess who's the totem of crocodile tears, of false sentiment. In terms of the costume, the dominatrix aspect was false role-playing, this willing game of suffering…

AG: Do you sketch out any of the character concepts before you start making them?

PS: Mostly kind of maps, connections of drawings and word play, she very much started with the idea of crocodile tears.

AG: Do word play and metaphor come up quite a lot in the design of the characters?

PS: The first act of the last show starts with a rustic bunch of hill-billies. This guy is made from an owl's skull. He's kind of the wise old moonshining freemason owl

who's just fallen off the back of the turnip truck. In American slang that's like being born yesterday. This wagon comes in full of turnips and he falls of the back of it, so we play a lot with very literal references, almost to the cliché extent. Like the title of this show is the Armature of the Absolute, that's taken from an Alfred Jarry quote who said that 'cliché is the armature of the absolute'. So this show brings together all the clichés about what we know about Alfred Jarry's life. So to take those clichés and present them literally, for example from Deluze's concept of folds and rhizomes he refers to the ultimate nomadic spirit as being old man river, from an old Paul Robeson song 'you don't plant taters, you don't plant cotton, and those who do are soon forgotten, but old man river just keeps rolling along. This puppet is supposed to look like Paul Roberson, but he's also a boxing sweet potato. He's this embodiment of this Deluze's concept of old man river - folds and rhizomes, and he's a boxing sweet potato that sings a song about how he can never partake in the fruits of his own labour.

AG: So if we say to some degree that metaphors and inferences are drawn from references that are literally translated into the puppets, which become a sort of starting point. At what point do the inferences from those puppets take it further into other conceptual domains?

PS: It's really when they come into contact with each other, when one sphere of thought comes together with another. Sometimes its done kind of arbitrarily, so we could take him and all his attributes and what he was born from and say what would happen for example if he came together with him from this sphere of thought and how they might overlap and touch.

AG: So not only do the puppets carry their environments with them, but also the universe of concepts that surround them come into contact as well. So you have these concepts

interacting and the kind of conceptual blending between them, to the extent that there's a kind of union between them.

PS: This is a recurring theme in the last shows, where there have been two or three scenes of cottice per show, either between and animal and a person, an object and a person or a machine. Some kind of cottice that spawns a new thought that is often monstrous. The birth of the archaeopteryx, for example, from Ubu's ass. Vockinson's mechanical duck shit is poured into the sewers and Ubu's henchmen dredge it out. Ubu licks the bowl they've filled clean then gets indigestion, keeling over he has this very difficult birth and shits out the archaeopteryx. But it doesn't stop there because the archaeopteryx then mates with the mechanical duck to produce yet another type of offspring in the form of an egg, and Ubu tries to absorb this new sphere of thought, we see him eating it but it immediately passing through him as he's imperturbable to any kind of thought as Jarry explains.

AG: So if we look at some sort of strategy, some way of working, you're developing your creative decision making whilst you're producing the show, do you find that when the puppets come together and there is a particular interaction and each of the puppets embody their own set of values and crystallised ideas, that through the union of those ideas you are able to get a sense of the interaction that is produced, and that the product of the interaction then impacts upon your decision-making as to how the scene develops?

PS: Yes very much so. A lot of that has to do with rearranging and trying out all kinds of different combinations. There's some concept in the beginning that needs to be, some goal that needs to be achieved at the end. The elements are in place, we know where to begin, we know where to end and we know the elements in between but it is their arrangement that is often a process of experimentation and recombination. So two characters come together and form a very clear concept that can relate virtually with the next concept that comes along chronologically. The following scene always must begin with where the last scene crystallised, between the combinations of these two already crystalline spheres.

AG: One question that I have: there are always going to be a myriad of conceptual ideas both literal and metaphorical that come out of the interaction of puppets, the development of scenes and the over all concept of the show. That will involve a huge selection process of which ideas to take forward and which ideas to drop. It's a difficult question, but to what degree are the selection processes made on a conceptual basis or a practical basis, through what the puppet can do and what is possible within a given scene?

PS: Sometimes it's the case that the conceptual choice is preferred over the practical choice. Sometimes that may result in something not flowing together on the stage in terms of practicality and technical possibilities. Sometimes its absolutely essentially that that element is there whether it disrupts the flow or not and that's when it becomes very clear (cutting gesture with the hand) that there's a break in the thought. There are breaks in the flow as well and it just becomes a very obvious time that when there's a seizure between any of these spheres, that it won't happen, that's when its time to completely transform the flow and rhythm of the following scene. It's very clearly a break. Literally interpreted its when two characters are forced into a ring together, and maybe they in the outside world have nothing to do with one another, but when they're put inside this ring they have to battle it out just to see what happens, often times it causes the flow of the show to completely transform (hands peddle backwards) and go in another direction. Often when there is a failure in a machine, or a time when two characters, two spheres don't marry so easily it often erupts in violence. Or total chaos.

AG: Do you see any aspects of your decision making in other spheres out side of puppetry either with the writing or in your life in general which somehow draw upon the creative decision making processes that you engage in as a play write, director, puppeteer. So there are certain engagements of drawing literal inferences metaphorically into abstract domains, the interactions of the concepts embodied in the puppets, within the puppet world that give rise to certain thought processes. That when you're going forward into a next show that your thought processes are derivative … does that make sense as a question? I'm not sure I articulated it very well.

PS: Well. I've never had any sort of artistic training, and I don't really make distinctions between disciplines, writing, photography, painting, sculpture, for me I found out a while ago that the puppet theatre allowed me to incorporate all of my interests, writing, drawing, sculpting, performing, music, so its all fair game really and in terms of the ideas, the media that we choose to use, follows from the idea more or less. A lot of the next projects are written, well not written in a finalised form but conceptually the subjects have been chosen and it depends on what media to use. Whether its to research antique photography for doing a scene of Larisa – an 1889 funeral we need to have a feel for the kind of photographic techniques they would use, so we'd research photographic techniques, its all done with magnesium flashes, photo lighting techniques…

AG: And this would bring in a whole flood of other images and references?

PS: Exactly. We know it's a photo scene but it breaks open new possibilities and combinations. The more complete the research is… but drawing the line somewhere. I always look for the exception in the media, some quirky element.

AG: I'm very interested in this relationship between the ideas and the practice and it seems to me that there's some kind of relationship between your ability to operate amongst a number of disciplines creatively that you don't give a distinction between, but you're operating with different tools, different media and different approaches and the relationship between that practice and your ability to bring ideas, conceptual ideas together from lots of different domains with out necessarily drawing distinctions, and allowing things to come through. They are metaphorically very similar (PS – Yes) where as one is dealing with the realm of thoughts, ideas and language, and the other is dealing with material interactions. How to actually map one onto another or see the relationship is very difficult and I'm not so sure how to do that, but I'd be very much interested on any thoughts to have on that to take it forward, not necessarily now but in the future,

PS: There are quite a few examples in the other show of the materials chosen, where the material has influenced… because it yes in the end it is a combination of all of these disciplines of art. And in the end it does come down to a temporal staging of a theatre play. There is a set of rules. I'll have to show you from the other show the physical materials from each of the puppets that are partly chosen because of the ideas because I had a very good idea of the characters of this show because I'd done a lot of research on Alfred Jarry (through the PhD) so the characters were chosen before any of the puppets were made. So it's a very different way of working, so it was all about the concept, it was all in the head, I didn't start with any new material, except for the baboon skull. And also I wanted to do this show with a lot of metal mesh and latex and its all very expense and we don't have any money, but luckily as we arrived here in Barcelona in this squatted factory, well its rented now but it was squatted. This factory used to produce latex and we found barrels of it to use for free. Lots of metal of course. I wanted to use copper but we could afford that.

4. Interview Professor Mark Johnson

Conducted at the Experiential Knowledge Conference, University of Hertfordshire, England – 29th June 2007

Note 1. [This discussion takes the form of a tutorial, with Mark Johnson offering thoughts on my work rather than on his own work. The opening section of this text is therefore explanatory, as I outline the topic of discussion. As the context for my research project may already be known to some readers, the explanatory section is indicated as coming to a close with the following symbol (*), and may be skipped over to where Mark Johnson begins to respond to the context of the discussion.]

Transcription:

Andrew Gray: Firstly, I'd like to thank you for taking the time to join me here. The point of departure for my research project, is looking at notions of reflection-in-action, based on the theories of D. A. Schön. And looking at his theories of reflection-in-action as being not particularly appropriate to creative practice.

Mark Johnson: I have to confess that I know Schön's earlier work but I haven't read the reflective practitioner. His earlier work was on generative metaphor, and was very good, but I haven't followed his recent work.

AG: I'm beginning to look at the implications of a bodily basis of meaning for better understanding art practice given the huge amount of physical activity that's involved in creative practice.
For me a refined model of reflection-in-action will accommodate embodied experience. Now it is an issue for me how that is going to be documented, how we can be attendant to…

MJ: to that…

AG: …one of the things you mentioned that Dewey said, was the notion of being attendant in the moment, to what is now becoming known as embodied experience, and to be aware of that experience. I've been conducting interviews with art practitioners to try to find evidence of that happening. One of the things I'd find when interviewing a practitioner is that I'd immediately get a conceptual account of the work.

MJ: Oh, yes

AG: Then if I dug a little deeper I'd get a material account. There seems to be a gap, in many cases between what they are actually doing and what they think they are doing. I feel that having a means of reflection-in-action that looked at embodied practice would be beneficial. I tried to find some simple examples of a distinction between a material account and a conceptual account and this is one of things I wanted to show you…

[The following images are brought up onto the screen]

MJ: By the way last summer I was up in Long Island, someone had done this, like twenty of them, just out along the shore, and there's a road that runs out there, it was amazing, you know we stopped and took photos. I mean that's truly remarkable. Wow. This is stuff you've done?

AG: Yes, I've been balancing stones for the last seven years.

MJ: How is that even possible [laughs] that's incredible to me. Ok, go ahead I'm sorry.

AG: Thank you. As an activity balancing stones is more of a hobby than an artistic endeavour, I saw it once and decided to have a go myself. It was something that I could do outside of the studio that didn't require the use of tools, it didn't require the use of materials. It's just wherever there happened to be some stones and I had some time on my hands. So I didn't go into it with any background conceptual agendas.

MJ: Right.

AG: It wasn't central to my art practice. I was carving glass and painting in the studio. However, these images were taken in Zurich some months ago, and an old lady came up to me and started talking to me about them. It turned out that she was an ex-mountaineer and so she had a certain relationship with stone and wanted to know how it was possible. I had to stop myself because I immediately started talking about it in a conceptual way. The work as being a synthesis of fragility and strength of permanence and transience and this started being projected onto other things. She left with the idea that the structures were some kind of symbol for how we try to attain inner balance in our lives but there always forces trying to throw us off, she gave examples in her life where she had been balanced but then an event would throw that balance off.

MJ: Hmm, the fragility, the contingency. Yeah.

AG: Now this struck me as significant because about half an hour before she arrived on the scene I was writing a material account. And the material account was looking at things like, the choice of location, which is always on the highest point, the potential for triangulation. Looking for imperfections in the stone, holes balance on points, points in holes. The choice of stone, is dependant on the surface, is dependant on its potential to balance, its composite strength etc. Then the qualities like shape and colour…

MJ: the texture…

AG: … came in last. Only after the other agendas had been satisfied.

MJ: I see

AG: As a practitioner it was these agendas that I was dealing with. So the material account was looking at the practical activity of making, what I was engaged in what I was doing. Because this was not central to my art practice, it was absolutely clear to me that the material practice came before the conceptual ideas. And so it became a very simple example of how the conceptual ideas can be metaphorical projections of the act of making. So I began to question how the physical qualities of stone, the vertical force of gravity and the side ways forces like wind could come to be mapped onto conceptual ideas like strength and fragility.

[The following diagrams were displayed and referred to]

Fig. 1

F

Strength/Permanence

Physical attributes

Fig. 2

F →

Fragility/Transience

Physical attributes

Fig. 3

F

F →

Fragility ← → Transience

Concepts

Strength ← → Permanence

Concepts

Key

F = Force

= Balanced structure
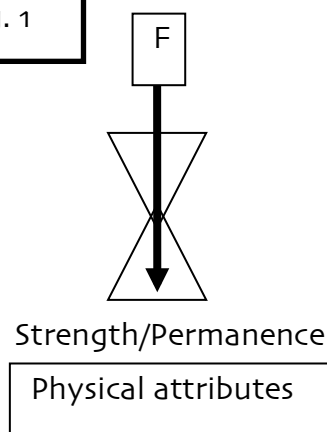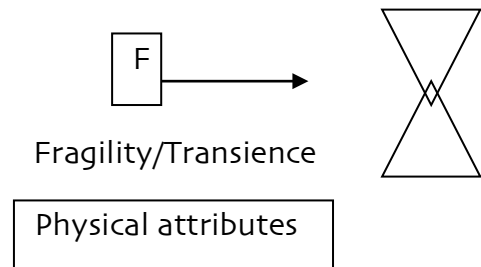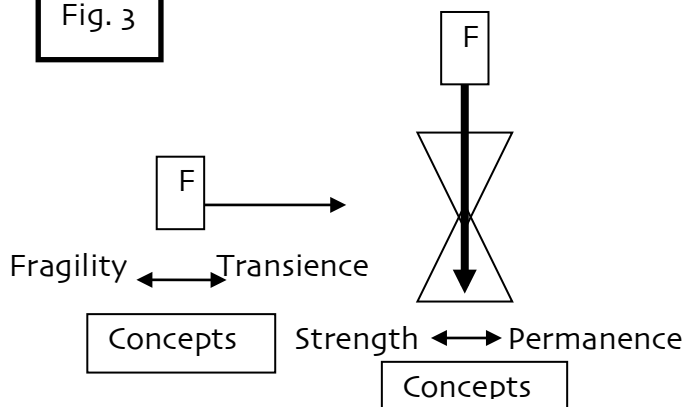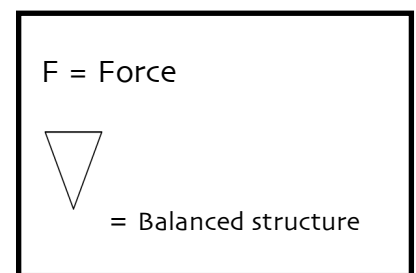
AG: Strength is a physical attribute and refers to the composition of a material which is hundreds of millions of years old and will not erode for a long time to come, gravity as the force acting upon the stones is taken as being something of a permanent feature of this world and indeed the universe, so even without a background theory of geology or gravity it is not hard to assume that the stones would stand until unaltered with. We can therefore infer the abstract concept of permanence from the concrete qualities of the structure. Fragility is a physical attribute of the structure. It takes only the slightest side ways force for the stones to become extremely fragile. We can therefore infer the abstract concept of transience from the concrete physical qualities of the structure. But they can't be both at the same time. It's strong until it's made fragile.

MJ: Right

AG: But then, [Referring to Fig. 3], within a kind of a blended space, I refer to the

work of Mark Turner and his idea of conceptual blending, the physical attributes of strength and fragility become the concepts of permanence and transience, and whilst in the structure they can only be one thing or the other, they can be both simultaneously in our minds.

MJ: By the way there's a metaphor of standing. Which is, you know, going to be operative here. The metaphor is existing is standing, or continuing to stand. And so when something is knocked over, it falls, so we talk about regime change, you know, it was toppled, it fell. And so the notion of standing up right is metaphorically a kind of, continuing in existence. Anyway that's one of the metaphors that would be relevant to our experience of those works.

AG: That certainly applies. When it got on to talking to this old woman about the work we could just have easily been talking about existence, our conversation about the structures being about finding inner balance in ourselves and the relationship of that balance to other forces in life that have the potential to knock us off that balance, is just an example of the deeper, less obvious, structure of meaning making in which concrete qualities can be projected metaphorically onto abstract domains. You have done extensive work on this and I wanted to talk to you to see whether I'm applying your ideas correctly. The balanced structure becomes a metaphorical projection of the human being. Gravity becomes a projection for inner balance. The sideways force, as a physical attribute could be a wind, or you know whatever…

MJ: Or you know, it can be a social force, or any metaphorical force.

Fig. 4

Balanced stone structure ⟶ Human being

Metaphorical projection

Gravity ⟶ Inner balance

Metaphorical projection

Sideways force:
Wind
Applied human force – intentional or accidental
Weakening of the stone's composite strength

⟶ External forces:
Change
Interference
Responsibilities
Illness/fatigue

Metaphorical projection

forces that can be mapped onto…

MJ: …any kind of metaphorical force, right. So social convention, or peer pressure or, many different metaphorical manifestations of force.

AG: Very often creative practitioners talk about the conceptual ideas *behind* the work are… or the conceptual ideas *in* the work are… what I'm suggesting would be beneficial for understanding visual art practice is if we were talking about what the conceptual ideas *projected out of* the work are. This leads me onto the aspects of this inquiry that are really interesting me. We talk about all human experience as having a structure. The structure of the physical experience, creates the parameters, the structure, through which we understand the experience. Going back to one of the things that I mentioned at your presentation yesterday. You described art making as being an exemplary example of human meaning making processes. Within visual art practice there are particular kinds of experiences that are generated out of dealing with matter without direct regard to its everyday functionality. I'm very interested in the kind of specific structures that are generated, and how creative practitioners internalise and metaphorically project those experiences, even unconsciously, into abstract domains. It would suggest that visual arts practitioners might owe as much of their creative conceptual ideas not only to their social, theoretical, and historical agendas to but to very physical qualities and processes in the act of making. Perhaps it is this process that enables visual art practice to be the exemplary example of human meaning making you describe.

MJ: Exactly. I'm completely on board with what you're saying. We look at the possibility of creativity as to not simply reproduce these templates or structures but the modest freedom we have to transform them in creative ways. I think that your basic idea is absolutely correct. Dewey says, look, what's so characteristic of art is the focus on the qualitative dimensions in the structure of materials and relationships of qualities. And the actual working through the possibilities of those. And I think that's what you are describing here and you are showing how that's a basis for projection in our, sense of ourselves, and then into a number of abstract, what we think of as abstract, conceptual domains, but its all, thinking.

AG: To find evidence of this is problematic within art practice. One of the things I'm trying to develop is ways that you can evidence how the material process of making is influencing the conceptual ideas. Within your work you've looked extensively at human embodied experience and how that's structured language, and how physical experience can be projected into abstract domains. I wondered whether you'd given any thought to what kind of structures might be generated out of visual art practice and how they can be metaphorically projected into a practitioner's conceptual ideas, knowing or understanding of practice.

MJ: Well. Boy. First off I want to say. Creativity is not the suspension of constraint. I mean creativity is not an act radical freedom. Because there's no such

thing as radical freedom. OK. So first off it is true that some things get transformed and that novelty emerges. And I consider that to be the problem to give an account of how that novelty is possible. So we may be on the same page about this. But you don't throw out the rule, it's with the technique…

AG: It's the physicality of the materials, your relationship to the tools…

MJ: Right

AG: and the environment in which you're working that the conceptual ideas can also grow out of…

MJ: Precisely, I think that's right, you're saying it just right it seems to me. All of those things you've mentioned are, your constraints shaping the possibilities of meaning, of carrying a situation, of developing a situation in a certain way, and what you're doing is enacting that. I mean, what you've described are ways of knowing. And its not like there's more that has to be said it seems to me. We just have to get over the idea that there's this municipal concept, knowing, knowledge, that it is, you know a concept handed down to us in its traditional form with a whole bunch of problematic assumptions. So that's where we have to go at this. You talked about this process, an active process, and it is an intelligent engagement with these materials and their qualities and their relations. It's an inquiry of sorts seeking to see what's possible and when its creative its transformative in seeing what's possible for us. And I think the key is just to, get people to see that that is a way of knowing, and not then to say how does it get translated into conceptual knowledge because that gives it second-class citizenship. I mean it doesn't have to become knowledge. We can ask what goes on there feeds into our, you know, abstraction. That's my work, what I'm focused on. If we're trying to validate it, translate it into a certain conceptual, propositional framework, I think that's not the way to go. I suggest that the way to go is to validate it at the level of 'this already is' a knowing. But in order to do that we have to challenge the traditionally received views about knowledge, and the kind of transcendent 'god's eye view' of universal concepts. I mean, what Dewey said… science evolves certain abstractive modes where symbolic, you know, processes are brought into play, that in a sense, remove us from the more immediate engagement with the qualitative enactment of art. And seeking generalisations over the phenomena, that's what science does. Sometimes the generalisations are in the form of universal laws, but not exclusively. That's another story. That's a form of knowing, but there is a cost to that, the cost is that it pulls away from the qualitative engagement with the materials, which is so critical to art's way of being in the world it seems to me. I mean I don't want to translate, or say this is useful for, I want to say that it's a mode of knowing itself

and there are various uses we have for these various modes of knowing, and they do not do the same thing, they are not inter-translatable. So I was trying to answer the question. Ok, how does this translate into, or whatever the words are, into conceptual knowledge.

AG: One of the things I'd like to propose is that our embodied experience of making, structures our understanding of it.

MJ: I agree.

AG: But when we talk about what Dewey said, that we are seeking to be aware of these things, to be attendant in the moment…

MJ: That's true, that's true.

AG: … it seems easier said than done. If a creative practitioner was to say, I'm really interested in a method of reflection that'd help me understand more about my practice, but how do I go about doing that. There is the question of, yeah how? I'd like to be able to answer that. Personally I feel my practice is far more enjoyable now that I am becoming aware, to a certain degree, of how my conceptual ideas are growing out of my material practice, but how do you define a method for other to do that?

MJ: Well, we have various ways, and I mean there are various levels of explanation, and that's another thing we have to get our heads around, is that there are different conceptions of explanation, for different purposes, and they all do the same thing and they're not reducible one to the other. And so, one of the ways we claim to understand is by generalising over phenomena. And so, when we do that we use symbols, typically linguistic symbols that are supposed to activate concepts for us, and so we try to get some sort of conceptual analysis of what's going on there, and its not a substitute for the activity. It's a second level reflective, interrogation of what was going on in the process, and you know, we're notoriously bad at doing that but we can try. And I think that's one of the things that cognitive scientists do, and so there's going to be a neural explanation, that's only one level, they'll be phenomenological explanations, there are cognitive linguistic explanations, and so, I think, the point is not to think that the reflection on that process is itself the knowledge. It's one way of understanding what's going on there, but it does not substitute for the doing of it. We know that dam well, you know. And so there's the doing of it and the engagement with materials and then there's reflection on how aspects of these experiences can be appropriated as the basis, or lets say how they highlight some of the experiential basis for, like the fragility business and how that can be projected metaphorically.

And I mean, I think that's marvellous, I really like that. On one level I don't see a problem and on another I see the problem. We can talk about this using different modes of explanation, and each of them is enlightening in its own way relative to what you think an explanation has to do. Well, some people say that the purpose of explanation is to predict. Well that's one purpose but that's not the only value we have, one thing is that we want to understand something, well what does it mean to understand, and then you have to go into that. And so there are different ways to approach the experience of making. I mean your understanding of where this whole approach is coming from and how it works, I think you ought to feel quite confident about that, and there's lots of good work emerging.

AG: I think the development of practice-based and practice-led research over the last 15 years has encouraged creative practitioners to take responsibility for the theorization of creative practice, and I think that's encouraging. There a definitely benefits, insights that creative practitioners can share. Certainly your work has been central for the last five years, also Gaston Bachelard and I'm looking at Mark Turner and his work on conceptual blending…

MJ: And you might think about Raymond Gibbs, Psychologist, he's got this new book out on Embodied cognition and it's very interesting. He's a person I'm enthusiastic about because he comes at it from the point of view of the psychologist.

AG: Excellent. I'd like to thank you very much for your time and insight.

MJ: I'm sorry we didn't have more time.

AG: It's been a privilege.

MJ: So, if this develops keep in touch. Tell me what's coming out of this. But what you've done here, the way you've laid it out, you know, what you showed me, was very clear, and you know it shows how there can be metaphorical mapping between each domain. I think that's exactly what you need to do, you have to be specific about it and you have to show for example, how some experience of physical fragility can get articulated in terms of psychological fragility, or existential fragility, or emotional fragility, or things like that. And I also admire you for being able to balance those stones. There was one there that looked impossible, I mean it couldn't possibly be. I mean there had to be a little nick in that one stone. Absolutely amazing, I love it.

AG: Thank you very much Mark.

5. Interview with Dr Linda Lehrhaupt

Linda Lehrhaupt, Ph.D. is the Founder and Director of the Institute for Mindfulness-Based Approaches. She began teaching Mindfulness-Based Stress Reduction (MBSR) in 1993 and has been training MBSR & MBCT teachers since 2002. She is certified from the Center for Mindfulness (CFM). She is the Co-Author of Mindfulness-Based Stress Reduction: An MBSR Course Book (2014).

Linda Lehrhaupt: I did read [your email] very briefly about all this and that and one thing or another-- just fire away and we'll see what happens.

Andrew Gray: Again all the theoretical stuff that surrounds it is all very dry. I was very excited to speak with you because it would give a little bit of color, a bit of personality to this theme.

LL: I am an academic too. I have a PhD behind my name so I know what it is. I understand the necessity but I will answer your questions as best as I can and then we'll see what happens.

AG: In terms of the questions I wanted to keep it fairly open and I'm more than happy for it to be a more open conversation really just to get your experiences of mindfulness-based approaches and your experiences of teaching them. There are a few formal questions that we can use to kick us off and see where we go from there.

LL: Can I just ask you, what are you doing at PhD in? What subject was it?

AG: It's visual arts actually. It hasn't taken the form of visual arts in terms of a practice-based submission, but it's practice-led research in a sense that I am a visual artist and there's been a drive in recent years to have practitioners theorizing practice as opposed to leaving it up to theorists.

LL: You need to talk to my husband. He attended the Düsseldorf Art Academy. He graduated in the late 1970s with an equivalent of an MFA in Fine Arts. He was studying at the time with these very famous people like-- you may know them in German - Katharina Fritsch and Thomas Schütte. They were all together as students. We even have student pieces from these people that today are very famous.

AG: Did he continue as a practitioner?

LL: He did in the sense that he decided to study landscape architecture. So, after he left the academy he was working for a bit as an artist. Then he felt that he wanted to bring his art into landscape architecture. In 1985 he began studying landscape architecture and for over 25 years, he's worked as a landscape architect bringing also art into the garden. Here at La Matilde when you come you will see that there's a lot of land art and he's continuing to develop that. He does paint, he paints a lot on his iPad now. He really discovered the iPad. He's done some landscape things and stuff but he became really involved in landscape architecture. Again that's for him applied art. We just learned art. I think it's best you talk to him about it and he is a bit intellectual so [chuckles] he is very different from me. That might satisfy your intellectual. But he doesn't practice mindfulness so I can't connect you with him about that.

AG: I look forward to speaking with him very much. In terms of the PhD and the background of what am doing there. There were a series of theories that came out about how practitioners, whether they are teachers or psychologists or town planners or whatever, reflect in action. These theories were—

LL: Can I ask you a question? What do you mean by practitioners?

AG: People who practice.

LL: Practice what?

AG: For example, you would be a practitioner in terms of that you are a teacher of mindfulness-based approaches.

LL: So you're using the word "practitioner" to describe people who actually do something, rather than theorize about it or write about it.

AG: Indeed. This was a theory about how practitioners reflect in action. It was very well received in education. It was very well received in psychology and other disciplines. It began to be used in visual art practice. It became institutionalized in education, and there was a drive to have students take courses in being reflective practitioners to create a generation of practitioners who will be reflective. There was some concern about it being used in visual arts. It seemed to be applicable to design practice. But in creative production, in art practice, there were a number of things which I felt didn't fit. Schön talked about practitioners having a 'reflective conversation with the situation'. That they reframe situations and by doing that they are able to improve their practices. In creative practice, that kind or reflective conversation doesn't really happen, or it

happens in non verbal level. I have been attempting to improve his practice by doing a narrative review by bringing another set of theories to bear upon his theory in an attempt to expand it. These theories concern the embodied mind, which have been coming out of cognitive science over the last 20 years or so. One of cognitive scientist whose work has recently become central to my thesis, is a guy called Varela. He has very much advocated that there's the methodological—

LL: What's his name?

AG: Francisco Varela.

LL: He's one of the founders of the Mind and Life Institute. You're talking about the scientist from Paris, Francisco Varela?

AG: Yes, indeed and worked together with Humberto Maturana.

LL: But he was also very important in the founding of the Mind and Life Institute, together with the other people, that launched the whole scientific exploration of mindfulness that's been going on now for the last 20, 25 years in a very strong way. But he died of something. So you're using Francisco Varela's theories?

AG: Yes, and he considered that the methodological heart of looking at how reflection could be used to analyze experience was to bring together cognitive science, mindfulness meditation, and phenomenological reflection. So with the phenomenological reflection and the cognitive science side of things, what Varela called neurophenomenology, I have a lot of academic material that I can draw upon, but the mindfulness-based approaches, these are things which are now new to me, but something that I would like to bring into the thesis. So really, I'm just trying to not only deal with the academic side of mindfulness, because there is quite a lot of literature out there, but to have a conversation with somebody who has been integral in introducing it, developing it, teaching it, experiencing it yourself, and to share with you some of your thoughts about how you think it can be applied, how it's being applied.

We could start with the three primary components in the eight-week course that Kabat-Zinn developed that were being used. Those three were the theoretical materials on relaxation, and body-mind connections. The experiential practice of that, and then the group processes and the problem-solving relating to impediments of effective practice. What are those theoretical materials relating to relaxation and the mind body connections to you as a teacher?

LL: The first important thing is that MBSR has nothing to do with relaxation. Mindfulness has nothing to do with trying to induce a state of relaxation, because that is actually often the mind state or state of awareness that will be present in a relaxation is not the same as a mindful state. MBSR is a skills training in training people to practice and cultivate mindful attention. If people come expecting to relax, they're actually looking for a different kind of state, which is nice, but it has nothing to do with cultivating the kind of the skills and things that they'll need to be able to engage in mindful reflection about their life, and also to be able to cultivate a stance of non-judgmental awareness about the things in their life. So, I would be careful about using the word "relaxation." We never use the word. We never say that mindful-based programs are relaxation programs. They are not. They are awareness training programs. Now, someone as a result of doing an exercise may experience relaxation, but that is not our pedagogic intention. Furthermore, we also have to work a lot with-- because what practitioners-- what students mean by "relaxation" is what often could be described as they just want to zone out. They don't really want to be in contact with their physical sensations, with their emotions, with what we call the four foundations of mindfulness. You should look into reading a little bit about the four foundations of mindfulness, which is mindfulness of the body, of the breast, of emotions and thoughts and of mind states.

AG: The word relaxation was perhaps a bit misleading. In the psychological papers I was reading they did state very clearly that there was an eight-week program that was conducted in the clinical area with cancer patients. It was based on the MBSR. Perhaps they had included a few things the MBSR don't. But in terms of mind-body connections, that's something very much that you would be looking to cultivate and the people taking the course.

LL: Of course, but even the terminology mind-body connection is a misnomer, if you really want to get into it. This is a terminology that was developed out of this Cartesian idea about mind and body, as if they're separate. From the perspective of mindfulness, mind and body are not separate.

AG: That's supported by all the theories of embodied mind of which Varela is very much a part.

LL: Yes, of course. Remember, mindfulness-based stress reduction is a stress reduction program. So, one of the theoretical aspects of it is how could the practice of mindfulness help people to reduce stress? It has to do with both the Lazarus and his theories of stress. I always explain it very simply to my students. It's not the situation or the event or the person that causes us to experience stress. It is our perception of the

event. If we can shift how we perceive a situation or people or whatever, then we can also shift our relationship to it and it will not cause stress in the way it might normally do. But in order to be able to shift ones perspective, one has to first be aware of what one is experiencing and what one is thinking. One has to be in touch-- there are naturally automatic reactions that we may experience in a particular situation. But for example, if we can see – let's say someone says something to us and our heart is beating faster, we might break out in chills. There may be all sorts of physical reactions that are showing us we may experience tightness of chest or something gets caught into our throat, and we begin to recognize these as, "Oh, okay, I'm experiencing stress." Normally, the stress reaction is so automatic that there's no way of intervening. But if we begin to attune in to ourselves, in the mind-body connection, if we attune more to our states of emotions or the thoughts that are going in on our mind, we can begin to for example, on a thought level, we can question something. We can say, "Well, is this person really meaning to insult me? Maybe I'm taking this too personal. Maybe this has nothing to do with me." This is a way of then, through mindfulness, through being aware that one can, so to speak, have a certain objective distance. Is what I'm saying helpful to you, or do you already know this?

AG: Absolutely. I think the stress reduction side of mindfulness-based approaches is very interesting. It provides very visceral examples of what mindfulness is. Perhaps the focus, in some ways, should be on the mindfulness-based approaches, generally. As you are no doubt aware, the field is really taking off at the moment. It's not just mindfulness-based stress reduction. You also have mindfulness-based cognitive therapy. You have now in education mindful-based reflective practice. There's a whole host of other things that are beginning with mindfulness-based. In terms of your institution, it's mindfulness-based approaches. I wonder whether you could expand on mindfulness generally without it being specifically applicable to stress reduction or anything else for that matter, but people's lives in general. Then we can discuss how it might be applied to other fields and how you feel about that also.

LL: The definition of mindfulness that I work with is basically the one Jon Kabat-Zinn and basically everybody else bases their definition on. Mindfulness is a kind of awareness that happens when we pay attention on purpose in the present moment, non-judgmentally.

AG: Indeed, I've read that.

LL: I memorized this, so this is not mine. It's important to stick with the sources. That is quality. It is a state of awareness that results as we pay attention, on purpose, in the present moment, non-judgmentally and we've also added the phrase with kindness.

AG: I am very interested in discussing what that state actually is. I was interviewing a creative practitioner just a few moments ago in New York who had been involved in a radio program whose theme was the relationship of mindfulness to visual art practice. I was interested in some of his thoughts in relation to that. He describes a space that he creates for himself in his art studio that attracts him to go back and continue practicing creatively. That state of mind has parallels with being present in the moment. Whether I could say it is non-judgmental or not, I don't know, because when I'm working on a painting there are judgments being formed about a particular qualities and processes.

LL: There's a difference between-- what you're describing is what I would call discernment. In other words, do I use this color paint, or that color paint, or whatever? This is, I hate to say it, in Buddhist teaching order in the Abidharma psychology, we are teaching-- that is the process of discernment, which allows one to make choices, which allows one to work somewhat analytically. But it is not the same as what we mean by judgments, which are much more about applying one's likes and dislikes in a way which is exclusionary rather than creating a field where one can, let's say, can make choices. It's a different kind of mental process.

AG: So do you think that it is possible to be mindful and be practicing creatively?

LL: Absolutely. I'm not an artist in that sense, but I would say... What I also notice a lot is that mindfulness for artists... Let me see, that it helps them to expand their range of what they take in, what stimulates them that they can use in their art rather than being so restricted by what they have done before or whatever.

AG: There seems to be a lot of emphasis on the notion that you can break habitual action once you become aware that it is habitual. That sounds to me like something that will be very useful for practitioners in terms of methods of reflection in action. We are talking about trying to improve one's practice or trying to become more aware of what it is that we doing.

LL: It's definitely interrupting. It's a mindfulness-- the moment we become mindfully aware of something, you have gone from what we call auto-pilot to being in direct contact sense wise, or mental wise. That often doesn't last very long, but we can continually reawaken it and be present with it. So if you're really paying attention to how your holding a brush or whatever you're doing or you're playing music and you're really allowing that to be very present for you, I can imagine that would allow a whole new flow out, as it were, rather than the traditional or habitual thing that you'd be doing. We've trained at least five music teachers to be MBSR teachers. Of course, they

were more interested in MBSR from the perspective of helping artists who are wounded. Either they have suffered injury from excessive playing or whatever - playing instruments or whatever, or suffering from the stress of constant performance, and things like that. But I can see how it might allow more creativity because people become-- by being in the moment, you also become more responsive to the moment. You're responsive to whatever is there.

AG: In terms of training for this, there was a comment made by the artist in New York who stated that being attentive to his practice was in itself a kind of mindfulness. I think that's okay to say but I wonder whether you have any thoughts on whether art practice can be considered training for becoming what is conventionally known as mindful. There was an example given that I'm sure you've come across. It is the story of "Zen in the Art of Archery", where the student fires the arrow perfectly by just coping the master's technical ability, this greatly offended the master archer because he hadn't arrived at how to fire the arrow himself through a personal process. The artist that I was talking to described how his experience of practice has cultivated a state of mindfulness that has been nurtured over a period of 20 years of practice, but he is also a teacher. When working with first year students taking studio drawing as an elective often for the first time, he works to get them to focus solely on the task for the two-hour duration of the class, to put their phones aside and just focus. If one can be mindful during art practice and indeed, if art practice can be considered a form of mindfulness, the question remains as to whether some of his young students to get into that state? Is mindfulness a state that only years of practice can develop or would it be beneficial for students starting university to take a course in mindfulness.

LL: I think it would be fantastic. Mindfulness-based awareness programs are being integrated into medical schools, into nursing schools, into teacher training programs to train school teachers. It's being used in the police. It's being used in the military. It's actually, across the board now. There are programs of mindfulness training in many professions because it's seen to be very helpful not only for stress but also for making people more attuned to what's going on. For example, in some professions they've noticed there's better teamwork that results, there's less injuries that result. People become more skillful with how they work with their bodies in a difficult situation. For example, they trained firemen and policemen and emergency room workers in mindfulness, and found improvement in these things I just mentioned. It tends to loosen ones-- one becomes aware of oneself, not as an isolated phenomenon, but in relationship to others and to things.

AG: Could you expand upon some of the specific techniques, I've been talking about it quite abstractly. Say that we move on to try to introduce a course and how one trains people who have never considered themself to be mindful, to become so.

LL: We all have experiences in our life when we have been spontaneously mindful without necessarily being aware of it, usually in situations that call us to be very present, for example, a birth or a death, or that kind of situation where we're moment-to-moment. Just really going with what's happening. But let's say when a cook, when a master chef or even someone's who's really paying attention to how they're cutting the vegetables and how they-- and they feel the knife as if it's part of their body and there's no separation between them and what they're doing. That doesn't mean that they lose the aware-- they don't lose themselves as so much that they lose their sense of their personality or their thoughts. But there is a very, very strong sensual sense of what's going on. So, the first—

AG: That sounds like it has a lot of parallels with creative practice, the knife could be my paint brush.

LL: I'm sure it does. What's happening is that-- look, there's not too many things that are new under the sun. The different disciplines are basically talking about the same thing.

AG: Yes. I agree.

LL: But, they're just using different terminology, and everybody's trying to create their new theory. Everybody's trying to create their whatever that gets discussed for a while. Yes. Are there descriptions of mindfulness in other terms that never use the word mindfulness, but nevertheless are talking about mindfulness? Of course. The way that we train-- the preliminary training and one of the central trainings to training mindfulness is what we call Mindfulness of Breathing. We direct students to become aware, first of all, of the physical sensations of breathing. Breath flowing into the body, flowing out of the body, and we ask them to find a point on their body where they feel, where they sense the breath most directly. That could be in the belly area, that could be in the chest area or it could be under the nostrils, under the nose. We ask them not to think about breathing, as much as they can actually feel the physical sensations. What of course happens is people can perhaps be really in touch with the breath for maybe two seconds. Then what they notice is that their mind beings to drift. They're no longer actually in contact with the sensations but they're planning or they're remembering or the mind is busy, or they're thinking various thoughts. Visual artists - people in the arts - tend to think in terms of pictures much more. But from the prospective of mindfulness, pictures are mental activities, that tend to also take us way from the direct physical sensation of what is going on in the moment, which is in this case breathing. So we teach people, we gave them the instruction that when you notice that

you are no longer present with the breath, you are no longer sensing your physical sensations, then first of all notice that you have drifted away, and then with the conscious intention turn your attention, bring your awareness back to the physical sensations of breathing and sense next in breath and next out breath. And people practice with that. That the mind drifts off, it may drift off a hundred times in two minutes, or five minutes. That's not unusual. What we're doing, we talk about mindfulness as being a muscle. Just like when you go into a fitness studio, you can't expect with the very first pumping iron, that you're going to be strong and fit, you have to slowly train the muscle of mindfulness. To begin with, it might just be for a second or two that you can really be present. But as time goes on, you can develop longer periods of being mindful. Now, there's a difference between mindfulness and concentration. That's important. Concentration, for example-- I'll illustrate the difference. Let's say, you're concentrating on your breath. You're really concentrating on your breath and then, you become aware of a thought, or you hear a sound, or you smell something in the air, you would have the sense that your concentration has been disturbed, and there would be a sense that one has to push out everything, and nothing should be there except simply the breath. In mindfulness practice, there is no such thing as a disturbance. Rather, it's more about things being in the foreground and in the background. For example, in the foreground of our awareness is mindfulness of breathing, and maybe 80 or 90% of our awareness is with the mindfulness of breathing, and then there may be is an awareness of a sound or this and that or whatever. We can let that be in the background and still maintain our focus on what's on the foreground. But what's in the background is not disturbing, it's not experienced as disturbing.

AG: That then would become a more advanced level of the capacity to be mindful. Albeit that mindfulness is considered an inherent human capacity. But you can take that heightened or improved capacity to mindful out into your daily activity.

LL: Absolutely, it's a tool. It's not esoteric bullshit. Mindfulness is a mental tool that we can use in any aspect of our life. The problem is, I have to tell you this also, that most of the people that are writing about mindfulness have never practiced. A lot of people who are writing have not practiced. I got news for you, I know some people who have written books on mindfulness who personally do not practice. You can create a whole world in your mind. What you're doing now is looking for all these mental connections and you're doing a practice which is based on comparing various things of what you heard, and trying to make bridges between them. And that's fine, but it is completely mental.

AG: I'm very conscious of that.

LL: I'm not being critical, I'm just saying what it is. If you would practice yourself mindfulness, even if you practice mindfulness of breathing for a little bit, you would even, in that short session begin to see what is going on.

AG: I looked to the website that you recommended to me, Inside LA, and did the few of the guided meditations to get a feel of it before we had our conversation.

LL: That's cool. That's very good.

AG: Again I think I certainly need to be very aware of the fact that I'm writing about this without having a lot of experience of formal mindfulness training. I am however interested in the idea that visual art practice can in itself be a form of mindfulness. In this sense I could consider myself to be quite experienced. I refer to your example of the chef with a knife, which could be in my case a painter with a brush. I would like to share with you one particular experience that I'm not sure qualifies as mindfulness. I'm curious as to your thoughts on what kind of states this is as it may help to clarify what is distinct about mindfulness in creative practice.

LL: It's okay. Just do it.

AG: A couple of years ago, I was doing a documentary about a sculptor on a lake in Switzerland. I was preparing to film him in a studio that day but he had been delayed and I had to wait around for a few hours. Now, one of the things that I've done as an addition to painting in my studio is to balance stones. It's something that I can do outside where I don't need any tools or materials. It's just a pile of stones that I find and will balance them upon very fine points and it's something that I found very beautiful to do. So on this day I had a few hours to spare and it was a beautiful, hot summer day and I went down to the lake and started to balance stones in the water. I had the cameras with me because I was ready to film the sculptor, so I set the camera running and filmed myself getting into the lake and balancing the stones instead. Now, it's a very interesting activity - balancing stones in water - because all of the visual clues are completely thrown. The water is moving around you, you cannot get a sense of verticality. You have to balance the stones purely by sensory means. It is just from the felt sensation of where the stone is falling and the state of-- it's not really concentrating on the breath, but you are incredibly focused-- you are in the moment in terms of dealing with the fine motor control and nuances of where the stone is moving. Unknown to me there was a group of swans that came around in front of me and they were observing what I was doing. I was completely oblivious to them until one of them made a hiss and I jumped back and dropped the stone. All of this of course was captured on camera, which was quite amusing in a sense to review it, but it was the first time

that I had seen myself practicing in which I was so completely absorbed on the activity that I was unaware that the swans were around me. The state is as it is. It's a state that I enjoy to be in and it's a natural consequence of balancing stones if you like. But it's curious for me just to what that state is and I don't want to mislabel it. I don't want to call it mindfulness when it isn't.

LL: I'm not sure it is mindfulness because-- let me give you an example. I think it's the state of absorption of being very absorbed. I would say it was probably an extremely concentrated state, a state of concentration because one of the differences between mindfulness and concentration-- let's say we're meditating and we are sitting and practicing mindfulness and there is a certain sound like a car that fires. When you jump and are startled and whatever, you are not in a mindful state. You're in a very concentrated state, but it's not the same as mindful, although in the language that's being used now in the general public, they are saying one is very mindful. It is not the same, because if you were being very mindful you wouldn't be disturbed. You wouldn't jump up in alarm because you're not a 100% focused on something. Most of your attention is with it, but it is also not excluding. Concentration tends to be exclusionary. It focuses on one thing and excludes everything else. That's not really the case in mindfulness, because mindfulness, this is a quality I think that's important at least from my perspective because the other important thing about mindfulness is that if we are shutting out things, then we can't be aware of them. We can't be aware of them in a sense that they may support us or help us in negotiating our daily life. So, I don't know if you want to explore the difference between what is concentration and what is mindfulness. You can look at that in your own terms and see if that fits. I would say that when you describe that you suddenly-- through the hiss of the swan, you suddenly became aware of them, that you were in an extremely concentrated state, or in a state of absorption, but not necessarily mindful. Not from the background that I'm operating - my theoretical perspective. I think that the word mindful is being used now in such a wide way and I think that sometimes people may be talking about concentration and not mindfulness.

AG: That's a very interesting point. Thank you for sharing that insight.

LL: There's also something interesting. I always think of this experiment, and this might also be interesting to you in terms of your work. I'll give you the little test. Some time ago they are measuring all these people with electrodes to see what happens in the brain. What lights up when they feel sad and what lights up when they feel happy and things like that. They decided to test two groups of people. One was a group of extremely experienced monks who've practiced Zen meditation for many years. The other was a group of students who received a one-week introduction or something to meditation training. What they did was to measure the brain waves of both these

groups in response to sudden noises of things. So, both of the groups would be sitting and then they would introduce sounds at various periods. So, at the end of the experiment, one group showed on their EEGs or whatever they were a continual-- every time there was a sound there would be a huge spike going up. The other group, to begin with, they would have the same high increase, but as time went on these spikes would become less.

AG: The question is which group was—

LL: Which group was which? Don't think about it, just answer spontaneously.

AG: I would say the monks continued having the same reaction to the sounds, because they were mindful of what was happening in each moment.

LL: You are informed, but you know the answer most people give is the opposite way round. You are right. The monks don't become habitualized to the sound. They are mindful of each successive experience as if for the first time. That is where the training comes in.

AG: I think it would be extremely beneficial in developing the reflective methods used in creative practice, to train the practitioner's inherent capacity for mindfulness. To the degree that mindfulness training might enable practitioners to be more responsive to the immediate moment-by-moment perceptions of practice, more attentive to habitualistic aspects of their practice, more aware of how the physical qualities of making help shape the way they think about and describe their work. I find it very interesting the distinctions you made between being deeply concentrated and being mindful. I think periods of deep concentration are certainly necessary for certain aspects of the process of creative making but perhaps visual arts practitioners are too concentrated at times and miss the opportunity to be mindful and aware of phenomena that could enrich their understanding of practice.

This has been an illuminating discussion Linda, I'd like to thank you for your thoughts.

6. Interview with Professor Michael Rodriguez

Interview with Prof Michael Rodriguez currently Chair of the Humanities Department addressing mindfulness in visual art practice.

AG: In the radio show about mindfulness in art the context was coming out of educational theory and you were being asked to discuss that as a department of tutors. Prior to this radio show had you ever considered mindfulness in the context of you work at all?

MR: Certainly the center for learning here was interested in mindfulness and learning but for my purposes during the radio show I was really talking primarily about mindfulness in the arts in my studio practice. For me mindfulness is really a by product of studio practice, or the goal of studio practice but I haven't really done a lot of research or work into mindfulness in terms of education or how it would benefit students.

AG: In terms of your own studio practice before the radio show, had you ever considered the notion of mindfulness before?

MR: Absolutely. I don't know if I always would have used that term. I actually would think of it in terms of consciousness and awareness. For me the meaning of the work really has to happen in the studio, the meaning has to happen in the act of doing. The studio practice and what I get out of that focus, and that kind of paying attention really is a reward for me. The work functions on two levels in terms of meaning. It's related to process art and "geometric abstraction" and the history of abstraction, but it's also tied into this notion of the process being pictured. There's a process that's pictured, and there's a process that's related to process art. There's that interest in abstraction but then also pictorial quality. My work is really this aggregate of simple marks - very simple marks, very simple gestures that are almost mechanical in nature, that accumulate over time and results in this form. This process results in this form, which is somewhat analogous to natural processes, but I'm not an illustrator.

AG: I happened to see one image that was displayed along with one of your profiles. It had a very light background and was quite linear in the sense that it went horizontally across the image. There was a repetition in the patterning, as you said, that was the mechanical process in there. But there was also a spike, almost like an adrenaline spike or a sound-wave spike or something. I happen to be a fan of

dribbly paint myself, which caught my attention. From the image it was quite difficult to see what media you were working in, whether you are dealing in ceramics or were doing it digitally or you're painting onto the paper.

MR: No, it's all a matt acrylic on canvas. I flock rayon fibers. So, I use a really smooth canvas and I use this smooth map paint and some of the gestures or negative spaces are actually like velvet. They are like soy. The flocking technique, which is used for screen-printing. Imagine a velvet wallpaper or raised print on a t-shirt. All of these very light absorbing surfaces trying to create seductive surface that really needs to be seen in person. So I really want to root the viewer in the moment and drill them in physically by the experience, because sometimes it's not obvious what the surface is, but it definitely has the visual quality because of the rayon fibers to get the slide velvet, which doesn't quite look like acrylic paint. So, that seductive surface to draw you in so that hopefully, it causes the viewers to slow down and actually pay attention and look for a moment. I'm interested in a long, engaging read as opposed to a quick read.

AG: The qualities of the surface are something, which engages me in very often far more than the composition of the image or even the subject matter of the painting, the actual surface qualities. There are a number of things that we can say about that. There's one question that I had, though, on this. I'm happy for this to take the form of a dialogue between two people who are both practitioners and both think about mindfulness in terms of their work. Perhaps between us we can come to a deeper understanding, I don't know. In the research that I've been doing about mindfulness, it talks about being present - attendant - at the moment, being aware of what is going on both in you and around you in a successive progression of moment-by-moment perceptions. Sometimes, they talk about a mindlessness, which is when you engage in habitual action. To what degree is the mechanical process of working on a surface, mindful or habitual?

MR: When I do drawings on paper as well as when I'm working on a canvas, I very much like the idea of concentrating on something that is really, really metric, doing some simple cross-hatching. I create these spheres using a very short pen that starts off with a certain geometry. I imagine Bucky balls, Buckminster Fuller. But I very much like this idea on concentrating on something that is almost inconsequential, whether I'm concentrating on applying color in a negative space, very exact. So, it's always this balance between being very mechanical and specific without being overly mechanical. I'm not interested in perfection, by any standard. I'm much more interested in the perturbations that happen, the quirks that happen, again analogous to a natural process, whether it's cell division or something that happens in nature on occasion. You get these things that-- we could call them deformities or

whatever. But I do very much like this face of concentrating on what I'm doing, not clouded by an outside goal as, say, if you're painting a portrait or something representational, you're very aware of, is it accurate? I like working on an abstraction because... Also I'm not always successful. Some days I'm more focused than others. Some days I'm more mindful than others. I go into the studio and I can't always just flip a light switch on and suddenly become completely engaged. Also making intuitive decisions, some days I'm probably better than others but that's the goal.

AG: It's an interesting thing that within a lot of fields where mindfulness is being considered a useful practice particularly in the clinical area and in psychology and things like this, you have an end goal for people that they eventually are able to break habitual action, become more aware of what they are doing as they are doing it, and eventually become more creative. It's interesting. Where does that place a creative practitioner then? Are we actually just through the practice of many, many years of experimentation and experiential experience and practice further along that continuum somehow? I get from what you are saying that even though the process can be mechanical, it's not that habitual action. It's not a mechanical thought process. You are very much conscious of every moment, the moment-by-moment perception by placing, and the qualities of the things they are placing. In that respect it can be very much considered a mindful action. I think of an example from my own practice and something that I've done, not that it's integral to my studio practice but just something that I can do when I'm outside, when I have no tools or material and there just happens to be a pile of stones around then I'll stop to balance them. I'm sure you've seen these kinds of structures around. A couple of years ago, I was doing a series of interviews with a sculptor by a lake in Switzerland. Whilst I was waiting for him to be prepared, I went into the lake and started balancing stones in the lake. I was filming myself doing this because I had the camera ready to film him. When I looked-- there was a moment that stayed with me. I balanced one stone underneath the surface of the lake and was trying to balance the stone on top of it. The visual cues are all thrown because the water is moving around and so you could only go on the sense perception of the feeling. Whilst I was doing this, it was a whole bunch of swans that came around. I was completely oblivious to them until one of them let out the [inaudible]. I freaked out, dropped the stone, and went back. It was like a little movie that you could put on Who's Been Framed or something. It's like a little shock moment. What it did relate to me was the-- I was seeing myself from the outside for the first time completely engaged in the moment, so focused on the feeling of the stone and the balance that I was completely oblivious to everything that was around me. On one hand in the interview you mentioned that the process is its own kind of mindfulness. I do believe that that experience is in some way analogous to some meditative state. But at the same time it smacks of being oblivious to the things

that are around you. It's a strange liminal space between being mindful and being completely unmindful that I'm trying to think about.

MR: That's a hard space to get to. It's not so easily accessible because you do-- I'm doing something very specific so I have to clearly pay attention, but when what I'm paying attention to can be very specific and simple. So it's not meditative in the sense of-- I have limited experience with meditation but it is something that you have to constantly-- you find yourself drifting away, go back pay attention. When I teach drawing or painting, one of my goals is to get the students-- if I can get my students to concentrate and draw in a two-hour block, it's a major accomplishment to get them to slow down, put their football away, and I tell them. I say, "You may never draw again in your life. You may never spend two hours, three hours drawing again." I like to urge them that if they can develop this skill, it may help them in their other studies, whether it's getting through a text, getting through a paper or assignment. So, I like to think that when I'm teaching beginning drawing, I'm introducing them to the ability to create mindfulness, to really stay focused. They do a really good job, lot of them really get into it. I put on some ambiance, music, maybe some early Brian Eno or something, ambient techno-pop music just to get them out of their normal frame of reference and get them really focused for a couple of hours. I think that's a major accomplishment.

AG: It is. I've never done any formal meditation. I find the notion of sitting on my knees for any more than 30 seconds problematic. At the same time, I can quite happily work for ten hours in the studio. Whilst my wife has done yoga and Zen and the rest of it, we've often spoken about it and she agrees that I don't really need to do that because I already engage in that space. There might be some people that would contest that notion quite vehemently. I have spoken with many creative practitioners for whom just an hour in the studio, they might as well do nothing and just clean up. They need that elongated engagement in order to do what they do. You're right in the sense that, how many people do have these prolonged periods of time where they are completely focused on an activity? I think that the full consequences of how that can be beneficial hasn't really been realized yet.

MR: I've learned to be disciplined with my time, because there are moments where I only have two or three hours in the studio and I need to be productive. Certainly, having a full day in the studio is really critical. Because of the demands of my family and the academic career, I find myself working say, from 10:00 to 3:00 during the day or something like that. But I'm going on sabbatical in September. I'm really looking forward to having uninterrupted time - nothing to do. I've had periods of my life where I haven't had a job or I've been able to be in my studio, be it in sales or whatever. Something I always tell my students in terms of-- I always tell them that - you probably know the quote - inspiration is for amateurs. It's really about

this ability to be disciplined and to be focused. I think I'm getting better at-- if I only have two hours to get in there and get to work and focus, because the real tendency is to sharpen all your pencils, sweep the studio, put your paints in order and read a little bit of the newspaper. But I think it's also viable too, just to look and you get away from the work for a while, come back and just look.

AG: There is another state where you-- sometimes I'm trying to go forward with the next stage of the process and just sitting down and allowing the surface qualities of the painting to swim in front of my eyes and find that my eyes are going from one thing to another, not really having an inner verbal dialog, but allowing these things to ferment and crystallize. That's also a very focused state when you are just looking at the work like that. I wonder if I can move to another theme, which is related but also something that I'd be quite interested to hear your thoughts on. It's something that you alluded to earlier in the sense that there is a sense that the students, if they can attain this level of concentration and be able to put things aside and work for two hours, that, that might be beneficial to them and in other classes and things. It goes a step further to talk about how meaning comes out of the work. In the theories of embodied mind, there is one particular theorist who I'm not sure whether you're familiar with his work, Mark Johnson and George Lakoff, who've been operating across the linguistic philosophy crossover. Over the last 30 years of infant studies researchers have been looking at how infants have meaning before they have language. I presume you're a father and you've seen that evident in your offspring that they clearly have meaning before they have language. Gottlob Frege who is the godfather of analytical philosophy suggested that human meaning is irreducible beyond concepts and prepositions. That really stood for a long time until it's been questioned by these theories of embodied mind that are challenging western thought and saying that actually human meaning traffics its images and qualities, patterns, feelings before it emerges into language. As human beings, we abstract from the concrete and there's a whole series of ideas about how we do that in terms of metaphorical projection and conceptual blending and ideas like these. For me the purpose of becoming mindful in practice is to become attentive to the way in which the meaning is growing out of the work. It seems to me that with a lot of the practitioners that I've spoken to and interviewed that they have a preconception that they know that they're starting from a conceptual position. They have an idea of what they want to do. Something happens in practice, which they are not really attentive to because they're so engaged in practice, and then their ideas at the end of it can sometimes be different, but exactly where those ideas came from isn't always clear. To give one specific example, a sculptor called Andreas Reichlin that I was interviewing, was constructing sculptures out of cylinders. He would take, for example, this big metal cylinder and slice it down in two places and invert one section so that the inside part of the cylinder was now facing outside. It formed quite a beautiful, elegant

curve. When talking to him about his conceptual ideas he describes it as revealing the inner soul outside to the world. It's not a huge intellectual leap to see how the concrete qualities of the object have been mapped metaphorically onto the conceptual ideas of something as abstract as a human soul, whatever that maybe to him. There are other notions of where he had not just taken a whole circle but constructed more than the circle and this was two people together in a relationship that is more than 360 degrees. There was this mapping of concrete elements onto abstract domains. It's like a chicken and egg conversation to say we know which one came first. For me, in the interviews and the documentary was evidence that the ideas were growing out of the work and becoming conceptually embedded and solid. I'm aware that you're being very patient and listening to me trying to get to my question here. For me, it's a recurring theme that is very important in my research that creative practitioners become attendant to the embodied nature of practice and to know that their embodied experience of practice is impacting on their understanding of the practice. I wondered whether as somebody who had considered mindfulness in practice whether it's ever had that function for you or whether you consider the qualities of your-- you talked about the velvety quality of the work and how that's sensual. It suggests to me an understanding of the embodied understanding of that quality, whether you had anything that you could comment on that.

MR: Your point is well put in there. I don't go to work with this fixed notion of meaning necessarily that-- I think a lot of my ideas about the meaning of the work come after the execution of the work and reading into it. Reading into the patterns and the color all those things. There's an element of my work that I consider related to semiotics or how one reads a painting. But I'm also very much interested in this Shamanic notion of the artist too in bringing elements of almost memory from a visionary experience and alluding to that as a valuable space. I think it has value in that. I think it relates to my influence, this notion that Shamanic visionary space being brought into the process without being-- again, I'm not interested in illustration or I'm not interested in creating "Shamanic" art, because I think ultimately my work ends up being a little hemmed in by formal considerations of painting. But as I work more and more this way I do find that I am now a little more aware of what I'm doing in terms of meaning than in the past. I, partly through process, stumbled into things that alluded to certain processes, whether it's like alluding to a simplistic notion of algorithms or process or alluding to a visionary space or all these things. I am always trying to disrupt my own-- I always try to throw myself curve balls or to disrupt my own preconceived-- I don't want to know what I'm doing precisely. I don't want to know what I'm doing and why I am doing it. I don't want to just crank them out. I know we make certain paintings, I know we do certain things. I don't have one foot in the unknown and one foot in the known and it's not really important for me to do.

AG: That's the sentiment that I've heard echoed a number of times with-- something that I feel has got great validity for a practitioner's and experience.

MR: I know how to do certain kinds of paintings and I could coast and make those paintings but that's not what draws me to it. I'm drawn to a little bit of struggle, a little bit of-- I feel like I've been trying to make the same painting my whole life. I just can't get it right. I guess I don't want to get it right. I don't know what that would be anyway.

AG: If you were to analyze that a little further and say that there is pattern repetition when you-- and I'm only going off one painting that I've seen. It has this linear formation across the canvas and you have the sense that it started before the canvas and it's continuing beyond the surface of the cameras very much probably onto the next one and the next one. You could say that the painting you've been doing your whole life is just one big one that's cutting the [?] I don't know about. To try to analyze your thought process, would you say that it's too simplistic to say that, through the process of doing patterns, you became interested in ideas of pattern recognition such as memory is a kind of pattern recognition. When you talked about that there is like a sense of memory in the work which can be regarded as the recall of neurochemical patterns, is it a conceptual interest in memory and pattern that makes you want to create these patterns or is it that through the process of engaging and creating patterns that these ideas grow out of it?

MR: It's definitely interest in recognizing pattern or seeing pattern perhaps certainly a nature or just through observation, seeing things that may appear rather chaotic or complex but seeing pattern in those. But I do think that for the purposes of painting, I feel very limited by what I physically can do with these concepts by the act of painting, which I feel rather rudimentary. I'm not interested in creating computer generated images rooted in chaos theory or that stuff. If I was to start getting into that too much, there's machines that could do it far more better than I can or-- I'm still rooted in the desire to bring something to fruition out of my own intuition and practice. So there's still the rudimentary quality about painting, whether it's letting things drip, letting things be very human, not overly mechanical. Again, I think it allays a certain-- I hope I'm not getting too off track, but is there certain value system where I insist on creating this space for myself to do artwork, that's like my own way of resisting consumerism or corporate culture, whatever you want to call it.

AG: Then they do-

MR: -creating a space that I insist upon having it.

AG: They talk very much about-- sorry I just lost the thread there, but the space that you create for yourself. They talk about mindfulness as an inherently human quality. It isn't inherently human capacity to be mindful, to be creative. I can only say that, yes Michael I agree with you entirely, that for me, why have I being doing this since I was 15 years old? Why do I continuously go back to the studio? Because I want that space and I want to create that space for myself. Very often the products are secondary to the process in that respect. There's one final thing if you still have time to speak for a few more moments.

MR: Yes, I do.

AG: The idea of it being beneficial to students to experience this space that we create for ourselves, whether it's just in the very simplistic level of having a two hour drawing class, or whether it's going on and having the experience of hours and hours of studio time. There would be an interesting model to have a bunch of students being-- it would almost be a psychological case study, I guess, that one group of students had an eight-week course in mindfulness and the other half of the students didn't, just what kind of effect that they would have on their engagement with creative practice. There was a psychological study done that created the mass, which was the mindfulness attention awareness scale or something like this. They've got a bunch of Zen meditation practitioners together and compared them with the people they'd taken and found that they scored much higher on this test. I wonder if you got a whole bunch of creative practitioners together whether they would score similarly.

AG: If I can formulate that into a question would be, whether you would consider it to be beneficial to the students to become more mindful about practice, or whether that's somehow paradoxical that your colleague in the interview talked about Zen and the art of archery and how the master was derisory of the students' ability to replicate his process, because he hadn't been through the process to get there, and whether it's a case of the mindful state that we think we get into because we've been practicing for 20 years of more that is not immediately attainable somebody that hasn't. Is it that we should, within universities, start teaching mindfulness courses to benefit that or is it just something that we have to say, "Keep practicing and in 15 years time maybe you'll attain that state." I don't know.

MR: I think it's important to-- my students are often right out of high school, many of them are not art majors. They're just taking the class as an elective. You need to just introduce that idea to them. I don't think they even considered it. They come into the classroom very goal-oriented. They took the class because they thought it would be easy. "I'll take a beginning drawing class. It should be easy. Maybe you'll get an easy A or something." Then suddenly they're confronted with this notion that they have to be very disciplined, do a lot of work. Suddenly I'm asking them to, "Stop. Don't think about your grade. Don't think about finishing. Just try to be in the moment, focused and concentrated and trust yourself." If they trust themselves, things will work out. If they trust their own idiosyncratic natures, that's what going to make the work interesting and they get better. It happens in front of their eyes. They come in thinking they can't draw and you show them what they're good at and why their drawings have value.

AG: The College is introducing a course called, The First Year Experience, and we are going to try to introduce study habits and mindfulness. I was touching on it a little bit to the students because I think that it's something that is really important. We're always making the case in the humanities that the value that we bring to the classroom is just that-- again, it doesn't always work to have students who are not at the right temperament for it or they just don't get it. On occasion, you really tap into the students who really get it and really benefit from it. But for me, I just want to introduce the idea to them because I don't think they've ever entertained it, many of them. It's good because it's like that. You've got to practice to preach [chuckles].

AG: There's a level of understanding, I think, that is only attainable through-- there's not a level of understanding of practice that is attainable through practice. I think in a lot of ways that was the drive for developing practice-led and practice-based research degrees so that we could have practitioners theorize on practice as supposed to just theorists, and try to bring some genuine richness into it.

MR: What is your studio? What work do you do?

AG: I'm a painter. I have gone through a number of processes over the last 20 years, of course, like anybody. Right now, I'm working quite figuratively dealing with a lot of journalistic photography but finding the process of making the work. I do these quite large-scale canvasses and sometimes, I've taken up to 300 hours to complete over the course of a year or something this. The qualities of the surface become very... I like to deal a lot with erosion and I like to deal with-- the paint isn't always under the control of my hand. There is a lot of putting on and eroding off, but having the structure of a figurative image is almost like a template for it not to get too lost, if you like. I like the discipline of guiding it towards an image. For the last year, I've been pretty much concentrating on my thesis. I might find it as October

when I submit it, if I ever get there, it'll be a moment to reflect on process. I'll would be reducing to an 80% contract as of August, which is going to give me three-day weekends. Once the thesis is finished, then I'm really looking forward to getting back into studio and reanalyzing where I'm going with the painting.

MR: Maybe we could exchange some images of some work.

AG: Absolutely. I'd be delighted. I'll email you through some stuff.

MR: So you're working on your dissertation or are you almost finished?

AG: I'm getting on for about 90,000 words right now and I just feel like I'm starting to be honest [chuckles]. My supervisor is coming down to France in three weeks and I really should have it done by then but there's a... It'll be ready for October, one way or another.

MR: I hope you share with me. I hope to read it.

AG: Absolutely. When I have moments of lucidity in this process I do feel like I'm creating a model of reflective practice within creative practice, which goes beyond what we have at the moment is something that could be beneficial. Again I mentioned some of it in the email that I sent to you, but Schön's conversational model of reflective practice. Whilst still very useful in things like psychology and education and town planning really didn't fit with creative practice because of that tattered engagement and this idea that, if human meaning does indeed traffic these images and qualities and pans and feelings, then it's almost like a pre-linguistic, unknown verbal reflection that practitioners have. Being attentive to what you're doing in the moment and being attentive to how the experience of practice feeds through into your conceptual ideas I think is-- there's a potential to advance his theory that could be potentially beneficial to creative practitioners. So certainly, I don't want to just sit. I would like to do something with it.

MR: You've inspired me to do a little more reading on the topic. I haven't engaged in theory in a while because I felt like I did a lot of reading in graduate school and after graduate school and now I didn't want to get clattered up with theory. But what I find what you're working on now so close to the bone, that I think I'm going to do some more reading on it. The two theorists you mentioned, I think-- because I think it's definitely an area that is-- it's something that oddly enough is not being explored a whole lot, at least in the [contemporary?] art world. You know what I mean? You would think it would be but it's actually not.

AG: Perhaps becoming more and more prevalent as work is becoming more and more conceptual and anti-technical and there's this whole new artist-artisan relationship where you have practitioners who just don't make their work anymore. They outsource it to whoever they need to create their conceptual ideas. To a certain degree, I think that they-- what is rich in human meaning about creative practice has all workers become conceptual and anti-technical before it was ever really understood why the technical process was important. Certainly, that human state that we create for ourselves in the studio is something that I think is very rich humanistically and needs explicating.

MR: I very much model my studio practice somewhat after Adam Reinhart. I'm a huge Adam Reinhart fan, not that that's the right word, but it's proto-conceptualism. His ability to distill things down to this essence, his attention to surface, handmade quality of his work. The elusiveness of his surfaces. I find him to be an interesting model. Also his political engagement, but through a whole other medium, his cartoon [inaudible].

AG: Now that you mention it, I'm going to go out and like you said just-- I'm looking forward to the time and space to enrich my practice, perhaps as much as you are looking forward to the time and space to re-engage into theory [chuckles]. It's a balance.

MR: If you ever get to New York City, please let me know.

AG: Absolutely. Michael, thank you very much for you time. It's been great chatting to you and I will most certainly send you the thesis when it's finished. May I ask whether I have your permission to transcribe this interview just to put into the appendix and also to-- that there might be a couple of things that I will take out in relation to that art school. The art and mindfulness radio show that you did into something that I would like to reference in the thesis.

MR: I'd love to have a copy of the transcription of this.

AG: Then, I'll certainly send it through to you. Probably within the next week, I'll have it transcribed online and then edited and send it over to you as soon as...

MR: Okay. Nice chatting with you.

AG: Best of luck with your paintings and enjoy the sabbatical when it comes. Certainly, if I get over to New York, I'll be sending you an email. Likewise, if you come over to Switzerland or France. Take care. Thanks very much. Bye.

MR: Bye.

7. Interview with Professor A C Grayling

May 26th 2014

ACG: There is a connection between humanist, and more humanistic outlooks on the one hand, and questions about embodiment. The impact of being embodied on one's emotional and cognitive lives. It's a slightly indirect connection in the following way: one first has to notice the background revolt as it were, against what had been a very, very longstanding view in philosophy about the disembodied mind. The conception of the disembodied mind has a lot of different consequences, one is that embodiment - that is, emplacement of the mind in the body - is something that confuses and inhibits and beclouds the mind. Aristotle, for example, was a little bit against the ecstasies of sex because it impugned one's rationality. In the Judeo-Christian tradition, especially the Christian tradition, they are sinful proclivities. By the way, this is an idea adopted, actually, from Plato. In the Phaedrus, the dialogue where he likens the human being to a charioteer driving a two-horsed chariot. And one of the horses, the black horse, is the one that wants to drag you back down to Earth - down to the material, down to the appetites and desires that are intrinsically bodily desires. This gets in the way of the purity, the clarity, the possibility of knowledge of the mind and the fact that, again a theme in Plato, that love shouldn't be a physical thing but it should be a love of the abstract, of the forms and the ideal world being. This view about the mind as something which is separate from and which is unhappily exiled into the body, which has its proper home, its proper destiny in a disembodied state gives rise also to the idea of the mind as a spectator or as a pilot in a ship - as something which isn't and shouldn't really be over-influenced by the fact that it has this exile in clay. It's a wonderful line in one of Dryden's poems, he talks about the soul of the really avid, enthusiastic, burning genius-like mind, over-fretting that element of clay; burning it out and using it up.
Little by little, different aspects of the influence of embodiment on our cognitive capacities had come through rather surprising routes. For example, it was discovered that you'd learn a second or third language much more effectively if you enact the things that you're saying. If you sit at your desk and just learn verbs, they tend not to stick. If you stand up and you employ verbs of action and you perform the actions while you're doing it, then you have a much stronger retention of these linguistic forms. Very, very simple experiments that have been done on memory, retention and understanding. If you get somebody to hold a pencil between their teeth - you may have come across this - they're much better learners than if you have a pencil under your nose. All those sorts of things have fed into the fact that it's not just our emotional lives but our cognitive lives that are influenced by embodiment. This has been taken up, of course by the philosophical tradition in the twentieth century. People like Dewey and Heidegger and Merleau-Ponty and others have been big influences on this debate. The Dewey one, which is the one that I know best, has had

a big impact on the theory of knowledge, for example, because in trying to shift understanding about what we know, how we think, how are our concepts of the world deformed from the participant perspective of the disembodied mind, temporarily occupying a body - to, what you'd call the participant perspective, that is, handling, moving about, touching objects, being affected physically by them and this informing - that idea's a really interesting one of giving shape and structure to the way that we think about things - and has, of course, been an influential idea. The connection with humanism is this: humanism is a ethical outlook and the word 'outlook' is really key because humanism is not a doctrine, it's not a teaching, it's not a list of do's and don'ts but it's an attitude and it's an attitude which is neutral with respect to quite a lot of differences of opinion among humanists on matters of politics, even indeed on matters of morality, which is a narrower thing than ethics of course but which will exclude a whole range of ways of thinking about human experience and human destiny and human values. What it excludes is anything which says that what gives a human life its significance and its purpose is something extraneous to human reality - a supernatural agency, a god, making a command from on high on us. One very characteristic thing about divine command moralities in particular, is that they tend to ask of people that they live in a way that cuts across the grain of their embodiment. Natural appetites and desires, needs and interests of human beings as embodied creatures, like for example, their appetites for food, for warmth, for comfort, for sex and so on, are denied in the extremist views of some religious moralities. The body has to be punished and subdued and its appetites excluded so that the spirit/mind can be freed from them. If you took the opposite view, which is that what your mind is, is shaped coloured and formed by what the body is and how it relates to what's around it then you can see this is an entirely unrealistic way of thinking about it.

AG: I agree, indeed this opposite view has changed the way in which I've looked at my own art-making and the art-making of others. In order to set a context for this question in relation to my thesis I'd say that just from being immersed in the history of art you see how medieval history is filled with examples of how art was entirely in the service of religion, and even after the Renaissance art has managed to retain this connection, this link to divinity and to a sense of transcendental otherness. Many of the practitioners I speak to still use spirituality or divinity in their work. I contrast I have found that the theories of embodiment, which have been developing for the last 20 years, through the likes of Johnson and Lakoff have offered alternative views. Johnson talks about the arts as being an exemplary example of human meaning-making; that contrary to Frege's assertion that human meaning was irreducible beyond concepts and prepositions, human meaning traffics rather as images and patterns and qualities and feelings, pre-linguistically, and then emerges into language. Through 20 years of infant studies, we see that infants have meaning before they have language. I think for that for visual art practice, this is very

interesting because that's what practitioners trade in - it's the images and the qualities and how they emerge into language that have potential in terms of furthering understanding about art practice. It becomes problematic for practitioners to speak about their work because to translate it into language is very difficult. Where I have seen examples of it emerging into the conceptual ideas of the practitioner, that's where it becomes really interesting for me. Very often the practitioner assumes that their ideas are credited to their individual creativity but have no real idea their idea's are coming from, how they're developing. I take an example of a sculptor who's been working just down the lake here, in a place called Immensee. He was taking cylinders and slicing them and then inverting a part of it so that part of the inside of the cylinder was facing outward and it creates a rather nice curvy shape. And for him, these were embodiments of-- when he talks about it conceptually it's, 'This is the soul', it's revealing the inside, outside. But it's not a great intellectual leap to see that the physical characteristics of the object have somehow been mapped metaphorically onto his conceptual idea. Mark Johnson talks a lot about this kind of metaphorical projection. When we take a stance that our experiences with the world and our experiences with matter do inform and shape and colour, as you say, our conceptual ideas then this seems to become a much more responsible reflection, a more humanistic approach to our practice and actually, all of the things that are going on in all of the art studios all over the world are these very wonderful human endeavors and interactions with matter and how those ideas-- for me, I would like to see the visual art practitioners not only concentrating on the ideas that they put into the work but the ideas that they get out of it. That would become a celebration of this human endeavor of visual art practice. You mentioned about how mind-body dualism has kind of alienated the body from discussions of the mind. Drew Leder talks about focal disappearance, in the way that we don't see our eyes and we don't hear our ears hearing and the body is very good at hiding from us. For me, one of the things that Johnson talks about is the phenomenological reflection in the phenomenologcial sense, is not enough anymore; that we need to infuse that reflection with findings of cognitive science and to understand how neural maps lead to neural plasticity and then on to image-schematic structures. It's those theories, the very recent theories of embodiment—I'd like to ask whether you feel they could contribute to a humanistic debate or whether there's a place for a humanistic account of visual art practice, and whether it would be useful in the humanistic debate.

ACG: Well, so there are three separate things going on in parallel and they will have complex relations to one another. One is that in constituting a sort of an ethical outlook, the humanistic stance brings the body back into focus as the site of our experience and our actual needs and our interests and respecting it and tolerating it and making room for it and even celebrating it, would be an important part of humanistic ethics. Well where cognitive neuroscience comes into the picture and

relates to that is that when you think about what it is that art in large part does - even if it's not figurative art - but in large part what it does is it constitutes the capture of the expression of what is being inputted by our experience. So what we see over here, we feel, and we compute that in some way, and respond to it. It means something and so we express it. We start to paint or tell a story where we're translating experience into art, and the artwork is a capturing of that output. The output of course is what has come through the experience of feeding that, putting it along the context of having heard a sound and wanting to make something of it or having seen a shape or a color or a scene and wanting to comment on it and art is commentary. The art is the capture of the commentary, the output but what cognitive neuroscience has done for us in very recent years is to point out that the way we process the impingements of the environment on our bodies is by modelling what we take the causal origins of those inputs to be. We have irritations of our sensory surfaces in the extremely complex networks of the brain, we construct a virtual reality model of what lies beyond it. We know that the model is not at all like what's out there but it's very effective and applicable because it helps us to survive. Given all the saber-tooth tigers that once existed, the fact that we're here today shows us that our models are very successful. We know - we see the world as coloured, as textured, as having tastes and smelling of vanilla or peppermint or whatever it smells of, and all these things are attributes imputed to the world by the way that we are processing that data. Primary, secondary quality distinction in what respect in nature is in itself anything like the way the model presents itself to us to be but the model works. The experience that we have of the world is output, not input. It's output based on a very very complex but highly selectively managed amount of data that our central nervous systems on a nonconscious levels are working with to try and construct a picture that can help us to navigate our circumstances. In that way cognitive neuroscience is predated on the idea that we are physical mechanisms so that the mind itself. It's terribly important to see that in connection with that is this idea that the mind is not just in the head. That the mind is out there. Our social minds for example are networks of relationships with other minds. One way that this is sometimes expressed - and it's a good way of expressing it - is to talk about our understanding of semantics and the meanings of terms in our natural languages. If I were a super neuroscientist able to look inside your skull and say 'Ooh there you're thinking about your mum, and there you're thinking about the latest piece of work that you've been doing'. To be able to individuate these two thoughts in your brain, where they are just patterns of excitation of neurons or axions, to be able to do that I would only be in a position to do it if I were able to relate them to the targets outside your skull. Individuating particular thoughts inside the skull requires essential reference and it's a really important philosophical weight is attached to the idea of the word 'essential'. Essential reference to something external to the mind which helps you to individuate to what some thought in your mind is about, gives rise to this theory which is known as broad

contact - that the nature of ideas - the nature of experiences, can only be understood by relating them to the social and physical environment in which they occur. They're not something that could be completely specified or described just in terms of what's happening inside the brain but they really need to relate to things outside that and the things that they relate to, are of course, both physical and non-physical because social reality is a non-physical thing. It doesn't exist in space, but it does exist in time so it is sort of semi-abstract and it is of course our major reality since most of what's important to us is the social sphere.

If you think about the fact that embodiment is a material phenomenon, that matter is essentially spatial, that therefore most of the metaphors that we use - I mean you look at the work of Lakoff and Johnson and others have done on metaphor - up, down, in, out - I'm feeling up today, I'm feeling down today - that they're all spatial and material metaphors that describe especially our emotional states. This is a deep clue to the idea that we are in a broad content relationship with the world around us.

AG: The issue of reflection, of becoming attendant to embodiment - Dewey attempted to discuss that way in advance of the technology that could image the brain and the working the reflective methods that are necessary to become aware of the way in which your embodied experience of the world is relating to how you understand the outer world is problematic but things like the metaphorical projection and the way in which ideas could be mapped metaphorically and then somehow traced back gives us a lifeline, if you like. I was balancing stones by the lake in Zurich and this primary art practice which is something which is nice to do when you have some time on your hands,. Actually I have images.

ACG: Nice, that's really lovely.

AG: When I was doing this, I started a little treatise of what made a good stone pad. You need a solid base and you need triangulation, holes balance on points.

ACG: Is that purely a matter of balance or is there anything, nothing fixing? It's purely balance, that's brilliant, that's beautiful. How stable are they?

AG: Well the thing is. Unless they are interacted with then you have gravity pulling the composite strength of the stone and they're incredibly stable and you can get on to very very fine points of balance but any sideways force, whether its wind, or, hopefully not a small a child, or something like this, can then upset that. When I was doing it I was approaching it from the point of view as a practitioner and thinking about what makes a good structure, thinking about it as an aesthetic thing, like having a heterogenous background and balancing next to a lake, so you can see what it's about and a lady came along and suddenly stopped and started thinking

and she was like 'It's such a metaphor for the human condition that you know we we're incredibly strong but any kind of sideways force can just knock us off balance. She carried away this profound sense of herself which was in such stark contrast how as a practitioner I was envisaging it, and that I put together a schematic model of how this had been linked so that this notion of strength related to permanence and fragility related to transience. Within the stone of course it can either be one or the other but in the mind, we can conceptually blend that so that it can be both simultaneously and then how to balance style and structure as metaphorically projected onto the human being. You know the idea that if it's not interfered with then it will, somehow the balance, the balancing sideways force can be external changes. It became a useful way of looking at how the conceptual ideas were growing out of the work.

ACG: That's absolutely fascinating. Yes. You should have a look at these images, they're really a lovely piece of work, that's great.

MA: Is it your own work?

AG: Well just actually something that I was killing a bit of time down by the lake in Zurich. Just putting a few stones on top of each other, but it's very like painting in the sense that you have this fine motor control and just feeling where it's falling. You should try it just to see.

ACG: Yes I will, I will. Well what this makes me think of is the reading in, you know the interpretations that people place on things, especially, especially non or quasi figurative things, I mean those look like very abstract representations of the human body and the way that the head has to be so finely balanced on the rest of the body presence and how you can be not sideways emotionally in time. I mean of the things that that woman saw. I mean it's an extremely lucid articulation of the point that your exploring about embodiment. Other kinds of artworks, like abstract dance for example, or narrative fiction, open themselves up to a multiplicity of interpretations. People talk about texts existing in a relationship between the words on the page and the reader and it's a commonplace bit of theory about that and that can be true even of figurative work. Somebody who walked into an art gallery and saw a portrait of Juno's breast milk causing the Milky Way in the sky and feeding Hercules at the same time but not knowing the legend might think of it in a completely different way and construct a different story around it. There's nothing in the theory of the embodied mind, which says there is only ever one right or natural interpretation of the experience that we capture when we are living in this broad content where you're in a physical environment.

AG: I think you're right about that. The Reflection-in action thing is an attempt to start to bring some professional honesty into the domain of visual art practice and one example when I was working on a painting of Rostropovitch. It was a very iconic image, and it was just after his death.

The process involved was crushing charcoal into a paste and mixing with oil and applying it and all of this and I got to the studio on a Sunday and I had the whole day ahead of me and it was going to be a lovely, lovely day in the studio - a good 10/12 hour session - and I ran out of charcoal, which was terrible. The art shop was closed. What can I do? After sitting there mulling it over for a while I was like 'Okay I could go down to the garage and get a ten kilo bag of barbecue charcoal'. Off I went and did that, brought it back to the studio, beat it with a hammer and got my paste and continued practicing. The by-product of that was these very sharp and very hard pieces of charcoal which couldn't be reduced down into the dust. As I was working I was sitting down and reading about his life and I didn't know a great deal about him, the idea of oppression and the way in which the Communist regime had provoked him to write the letters to the Kremlin because they had imprisoned his poet friend and then him having to defect in order to become Pre-eminent chellist and all the rest of it. It's a very physical thing if you have a very low ceiling room it has an oppressive feeling, or if there is something heavy over your head that you feel is oppressive. And there is a black line which underscored that 'Charlie's retired' sign on the end of Berlin Wall and I looked down at the by product of these barbecue charcoal and attributed significance to them. Why do smooth things have a gentle feel and why do sharp pieces of glass have an aggressive feel? Glass can either be gentle or aggressive in a human sense but it is possible to map that state metaphorically on to it. I bonded it with resin and applied it to the surface and it seemed to fit. Now, in the exhibition, somebody that came up was like 'I really like that textual, lumpy charcoal thing over the top, it's really oppressive' and at that point it would have been very easy to turn around and say 'Well do you know what that's all to do with the communist oppression'. The fact that actually I just ran out of charcoal and I had to improvise seemed to me a much more human and fair and honest and beautiful thing to say and to reflect upon, to be attentive to. Those little kinds of examples-- again when I started on this thesis it was it was just an attempt to bring some professional honesty into it, but actually I feel that it - without intending to be grandiose about - it is a very humanistic thing and I think it does fit into the humanistic debate.

ACG: Well I agree with you because I think if humanism says anything at all it says that facts about human nature are the determining consideration when we think about what a well-lived, good, flourishing life might be or what human possibilities might be or why the middle principle about allowing a wide variety of human experiments to exist without social pressure and convention trying to limit them because we lose an opportunity if that happens to really find out what a good

human experience can be. In that sense humanism is predicated on the idea that we are physical beings in a physical world and that it's the constant relationship that we're in with our environment that makes us what we are - which is why so much of the way that we think about ourselves, certainly emotionally, probably also cognitively, has to do with our being spatial and material creatures. The point that you just made there about how the texture of the looming, oppressive mind on top of the picture - you say, just be honest about it, Well that's just what I had to hand and so I used it. My inclination and I'm no, what's the word, post-facto rhetorical justification of the deep significance of things but I think that again the humanist perspective is one that invites us to recognise the truth in those aspects of say, Freudian theory, which say that nothing is really accidental. There's always something at some level of our recognition of what something says, or means or how it can be used which we can discover ourselves even post-facto. There's an example - it's a very standard example - in thinking about the nature of perceptual experience, that the impressions that one gets in immediate perceptual experience, give rise of course to fainter memories - this is the human thing about impressions and ideas - but it might be that when you think back over them afterwards, as a detective does about a crime scene, suddenly something unnoticed or marginal might become salient and have real significance. The poker that was used to commit the murder, was it on the left hand side or the right hand side of the fireplace because it tells you whether the murderer was left-handed or right-handed. That's something that you might not just when you're in the room, but then when you think about it suddenly it becomes salient. You can think of meanings as being layered and layered and reflection and interpretation - you know we are interpretative beings. That's a really important. Exactly, exactly. Post-facto you might say, Why did I do that? You could have said, Oh damn I'm going to have to leave this to another day because there are lumps in the charcoal but you didn't you see.

AG: I think it was a realisation moment that it's not all that you put into it - this dialogue. I was enriched by the meaning that was infused in the-- if that sentence does sounds terrible and very pretentious - the meaning that comes out of the work, there is rich human meaning infused in experience. Being attentive to that is problematic, that we know because the right side of our brain is constantly in this flux of sensory experience and the left side is trying to make sense of it, categorise it and put it into past and projections about the future and all the rest of it. When we're talking about humanism and trying to live good human lives and then that seems to me to be a way of enriching. I'm losing my thread.

ACG: No but you're right. You're very much on the right track, because it seems to me the most legitimate thing to recognise that in making something we at the same time make new meanings of things. Go back to the commonplace about readers and

texts, you know there are as many different versions of Pride and Prejudice as there are people who read it. Of course there is the authorial intention, of course there is the text itself that imposes limits on just - Pride and Prejudice is not about the First World War, for example, it's about every man whose got a bit of money is looking for a wife and the Bennett sisters but there are all these little layers, nuances, footnotes of significance that people bring out of their own experience to the thing. Why couldn't it be the case that Jane Austin herself might, on re-reading the text, have discovered things that she said, meant, and thought and felt while writing it that weren't salient at the time or at the forefront of her mind? This is surely going to happen in any creative process because you can't control the number of meanings that you've created or produced when you are creating this one because it's like a note played on the cello - it's going to resonate, there's going to be overtones and undertones and other people are going to hear them or capture them or see them in something - and so to create one meaning is to create a chord of meanings and that's perfectly legitimate.

ACG: We know when people start waving their hands and come out with long words standing in front of a work of art interpreting it, it does sound pretentious but you know, let pretension flourish in my view because something might be captured in there which is of real human significance. That would be another connection with the humanist project which is to live richly and fully a human life in our human world, remembering by the way that one of the sort of tenets of humanism is that the space of a conscious adult existence is in overall terms a brief one. It's the old sobering point, isn't it? Human life is less than 1000 months, 300 of them you're asleep, another 300 you're in the supermarket so you know you've really got to grab onto the brief moment of living in Walter Pater's sense with every pulse filled up with significance. One does that by recognising that to be human in this little gap between dawn and dusk is to grasp everything that's there. Joyful and courageous as well, because one thing that we're talking about here in connection with the humanist outlook is the stoic view of following nature. First follow nature - that was their great teaching. Living naturally, live in accordance with nature, live parallel to or in harmony with nature. They meant it in the medical sense but they also meant it in the sense that to deny your human nature or to deny your needs and desires for affection and community is to live a distorted kind of life. That's a very important tenet of humanism. It's interesting stuff you're doing, great work that you're doing, I love it, I think it's wonderful. So when you've finished writing this I hope you'll send me a copy.

AG: Thank you very much for your time.

ACG: Well, it's a pleasure, most interesting to see what you're up to.

Andrew Gray, Researcher

Embodied Practice: The Embodied Nature of Reflection-in-action

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