The Epiphenomenal In Architecture and a Creative Sequence

A project submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

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October 2015
Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the project is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

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January 2016
THE EPIPHENOMENAL IN ARCHITECTURE
AND A CREATIVE SEQUENCE

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PHD. EXPANDED FIELD
RMIT

2015
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June 2015
Acknowledgements

Kerryn James, who made this possible on so many levels.

Professor Sand Helsel, School of Architecture and Design RMIT University.
Associate Professor Richard Black RMIT University and Professor Richard Blythe, Dean of Architecture and Design, RMIT University.

Dennis Wilson
Kathleen Wilson
Sheila McGlade
Julien McGlade
Hamish McGlade
Emmanuelle McGlade
Timothy Farrugia
Trefor Prest
Anthony Greaves
Ranulph Glanville
Helen Chapman
Diane Davidson
Jenny Darling
John Flaus
Chris Barker, RMIT
Brian McCormack
Genis Wylde
Simeon Roberts
Yasmine O’Sullivan, proofreading
And again, Professor Sand Helsel, for tirelessly reeling me in.
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**Epiphenomena**

*Pathology.* A secondary or additional symptom or complication arising during the course of a disease.

A secondary or additional phenomena; by-product.

*Origin.* 1700-10. epi + phenomena.

World English Dictionary

The American philosopher Daniel Dennett describes in his book *Consciousness Explained* that his shadow when making a cup of tea is not central to his tea making, it is just there as an additional phenomena.
Chair Sequence. Photograph series.
John McGlade.

“There is much pleasure to be gained from useless knowledge."
(Bertrand Russell, In Praise of Idleness. 1872-1970)

“The thing can never be separated from the one who perceives it…”
(Maurice Merleau-Ponty, The Phenomenology of Perception.)

“All observation is theory laden”
David Deutsch (commenting on Popper's theory of knowledge), A New Way to Explain Explanation, TEDGlobal July 2009.
“As we turn toward the light are we blind to the shadows?”
John McGlade, 2013

“I am interested in the beautiful accidents of architecture.”
John McGlade, 2014

“Like architecture, I am interested in our experience of geometry in the present, not in abstractions too far.”
John McGlade, 2015

“Geometry is not true, it is advantageous.”

*Science and Method*, Poincare, Jules Henri, 1854-1912
Introduction (1)

This PhD, by project, makes suggestions for directions that could be further explored and resolved to form the basis for design and creativity not only in architecture, but interior design, landscape design, sculpture, photography, film making, drawing and even sound as it affects our experience of space and time. However, the primary focus of this PhD is the visual and the spatial experience of events in and around the building with a focus on architecture as a means to enhance Being. It is for an architecture that enhances the existence of us, as most architecture attempts to do, but also within a particular geometry of observation and forms and, at particular critical times. Architecture that is an instrument that orchestrates these transient relationships between buildings and us, to further enhance our experience of places at particular, perhaps significant, times. The transient nature of my observations is particular to buildings as they interact with natural phenomena. Buildings are mostly static phenomena but nature has many phenomena in dynamic states which results in interactions between buildings and nature that are mostly transient and not seen as relevant to the function of the building. However, such epiphenomena introduce the element of time as perhaps a consideration for architectural design. As a consequence this project has evolved to be concerned with the first **MAIN QUESTION:**

**Can the transient epiphenomena that arise as architecture interacts with natural phenomena be a valid consideration for architectural research and design?**

It is also in support of beauty and mystery in architecture and the significance of time and position in or around the building. Architecture can be a mystery by being an instrument for temporal events. This is an intrigue beyond material function and good static aesthetics. It is without reference to religious dogma but with a more earthbound humanist bias with a satisfaction that our experience of this world is marvelous enough. What I call a spiritual, but secular architecture. These aspects are reflected upon with reference to art, science, philosophy, beauty, time and mind, and their relation to architecture, primarily providing context, as I see it, not as validation. Epiphenomenal aspects in architecture beyond the visual, for example the sound of rain on a metal roof, are not considered here but are applicable to the attitude in this project. I begin by researching phenomena that is often ignored or taken for granted as it arises in existing buildings or on landscape with geometric structures. This attitude arose out of my Masters (2005) project where I treated the humble shadow in a different way. In this PhD I treat shadows, light, the building and natural phenomena in a different way.

The **creative sequence** aspect of this project that leads to the asking of the first question also asks the following **SUB QUESTION:**
Can my particular creative idiosyncratic aesthetic propensities, unrelated to architecture, be applied to real architectural concerns?

I have aesthetic baggage that I bring to my creativity; these are the biases of my directions of designing, my creative propensities, and they constitute my mostly subconscious aesthetic attitudes that direct my creativity in ways I am not aware of. I call these our “aesthetic frameworks” that I unconsciously bring to bear on my aesthetic judgments even in the making of my own work. I am aware that this aesthetic baggage is evolving all the time within my thinking and acting, but in ways not known by me, influenced by what I choose to focus on, usually by repetition. This is perhaps a form of Cognitive Bias Modification (CBM) that I have conducted upon myself before I knew about the science of this form of modifying our subconscious biases. (I refer to this in this text, in the section on neuroscience.)

As I point out in my parallel writings to this text (Extemporaneous and Proleptic Thoughts, Item 688), “My mind just pleases itself and I try to catch up”. I am attempting to find in this project if my aesthetic concerns in this subconscious baggage can be applied to architectural design. I suspect propensities of an even esoteric nature, and those regarded as not related to the practicalities of architecture, in any obvious way and therefore perhaps epiphenomenal to architectural practice, can be a stimulus for, and connected too, practical architectural design. This epiphenomenal aesthetic baggage or obtuse interests of the architect may arise in their daily practice but be considered not relevant to the ritual of their practical designing; these are activities that are normally regarded as nothing to do with architecture. In this project, in my fine artwork and writing, I have found over time that activities and concepts that I initially thought not related to my central creativity, were in fact ultimately, very influential in surprising and very satisfying ways.

A further question that this raises is how to find the path to practical application from these evolving aesthetic propensities, these perhaps so called irrelevancies? I can only offer an illustration of my case in this project as an example of how this can be achieved. After all, what has the image of a flying chair got to do with architecture or a poem about a machine in a room? I come from a dual design and fine art background tempered with the pleasures and pains of physical work; so I have wrestled with the demons of their interactions and creative overlays. I therefore come from the experience that all my creative work and activities are connected through reoccurring intuitive tendencies that I usually discover in hindsight by reflecting on the resulting works and realising the connections.

I am therefore proposing these aesthetic interests have actually set me up or formed my subconscious to regard space, objects in space and the consciousness of experiencing space and objects in particular ways that are possibly applied to architecture. That I
have formed and created these intuitive tendencies along particular paths is, I think, evident throughout this project and they are forming every day, by selection and focus, creating a family of aesthetic resemblances. This “family of resemblances” (Wittgenstein) cannot be stated in words succinctly but we may know them otherwise through continuous experience. I therefore ask the observer of this PhD to experience my aesthetic wanderings through apparently unrelated things/images and directions of thought; to know my family of aesthetic resemblances, my aesthetic frameworks and decide whether they can be connected to architecture in a productive way.

Project Sequence:

• Identifying my original aesthetic and creative propensities (attitudes/influences) brought to this project in images and words.
• Extemporaneous thoughts, notes. Writing the main text of this PhD and parallel aesthetic interests, with reflections in notebooks, to explore, clarify and entrench these aesthetic propensities.
• Resulting observed epiphenomena evolved from entrenched aesthetic propensities in photographs, videos, notes and diagrams.
• Experiments to recreate selected epiphenomena and prototypes, photographs, videos, diagrams and notes.
• Reflections on results of these experiments; what I discovered.
• Conclusions.

The mapping of the creative sequence that led to, and was instrumental in this project, with reflections on the process, relates to the second question, the Sub Question, which I approach through a phenomenological account throughout the text in an effort to make clear to others and myself what my creative methods and interests are. This text therefore is my first person account to show the way rather than seeking the support of others in arguing a case. (I do make mention of the ideas of others who I agree with.) I have chosen this path as the only honest way I can have reflections on my creative process; it is therefore a pragmatic decision, a pragmatic phenomenological account. To quote the German philosopher Edmund Husserl, the originator of the branch of philosophy known as Phenomenology; “I seek not to instruct but only lead, to point out what I see. I claim no other right than that of speaking according to my best lights, principally before myself but in the same manner also before others...” (The Crisis of the European Sciences). It is also a “stream of consciousness” strategy; I write as I think, to extract the most from my mind and go over many issues again but in different
ways, in different words. In the same vein, this PhD is not science or analytical philosophy requiring argument and verifications to establish validity. It is closer to art practice in that I am pointing to possible directions for architectural design. Architects straddle the difficult area between art and the pragmatic world of engineering and clients. But many architectural design features are more art-like than can satisfy the (so-called) rational, pragmatic mind of the engineer or client. I deal with this position later in this paper with reference to designing transient phenomena as an art occurrence.

This work came out of findings and clarifications of my previous fine art work and from my Masters Making in Landscape. Time, Geometry, Observation and Transitory Objects in the “Expanded Field” program at RMIT, completed 2005. This Masters was an exercise in my ongoing development of my spatial/aesthetic propensities, which figure very much in this project. As I have mentioned, I come to this project with aesthetic, spatial, objects, image and word baggage which determines the contents of my creativity, my intuitions, my thinking. I think it is important to this text that I show this background, which sets my intellectual/aesthetic scene. For example, on the subject of my fine art interest in my relationship to static objects and to the flux of dynamic systems, this has led me to try and reconcile the two into one experiential event. That is, an object that is also an event within a system that I can experience, not only intellectually, but also with my senses. This was achieved in the process of the Masters. One of the many outcomes of the Masters was the discovery of 3D anamorphic shadows as a means of altering the perception of actual objects in landscape by combing an existing object with a transient system thereby generating a new object. It is suggested in this project that such objects could appear in and on architecture as a transient aesthetic event. I am also suggesting that the same geometric circumstances and devises discovered in this project could be used to alter architectural space and structure, inside and out, under certain transient conditions. This raises questions on the function of windows, openings, surfaces, boundaries and connections to the outside natural conditions. The ephemera of nature, light, wind, rain, clouds and even plants play a central role in this research, forming systems with architecture without the use of high technology.
• Writing (2)

Research, by its nature, evolves and to paraphrase Einstein, “If we knew what we were doing, it wouldn’t be called research.” This project demonstrates that over time, not only does the focus of my research change and become clarified, but the nature of the agent (myself) doing the work and how I do the work, changes also. (“The evolving observer” “The attached observer” this paper) The action of perceiving, drawing, making, photographing and even painting prompts ideas, but also, the act of writing itself prompts the evolution of ideas and clarifies existing ones in a way I am not conscious of. “The act of writing changes thought” (Extemporaneous and Proleptic Thoughts. No 1684 JMCG). Consequently, I have deliberately erred on the side of writing too much, sometimes saying the same thing in slightly different ways, from the reader’s perspective. This attitude is consistent with my philosophy; insight comes from doing, which is also the premise of a PhD by project. It also comes from my experience of saying the same thing in slightly different ways, even with similar words, which can give insights where with previous words there were none. Therefore my writing is part of the creative project. Also, the sequence of the text here is mainly as it occurred to me with a minimum amount of redistribution after the fact, as was the project generally. I do not proceed with a map of destinations other than to notice my intuitions as they occur and follow them. Particularly in the Extemporaneous and Proleptic* Thoughts notes which were generated parallel to, and even larger than this text but with many reflections relevant to this project. I have long recognised and practiced this approach in my creativity generally. That is, to do the physical action first and the ideas and words will come after them in a never-ending process of interaction. Husserl also believed that experience comes before theory as I have found and practice in my creative work. That is, the action with matter comes first. I have recently found that this idea is similar to those of the Russian acting theorist Meyerhold in his theory of human biomechanics (Meyerhold on Theatre 1978). For example, when an actor makes his face, he forms the expression first and the emotion will follow. (This is why the last thing I will do in this written component of this PhD is the contents page. If I had my last words in mind this PhD would be doomed). I do not proceed with a map I am conscious of in my work generally. This casual wandering is an effort to find stimuli that strikes a chord in my brain, a moment when unrelated things become connected. With phrases, I often only use slightly different words; combinations of words or images around a concept and these simple variations are enough to trigger insights. This is an effort to use this text not only as documentation but primarily as an active creative instrument and allowing myself time to do so. Universities are places of explanation and there is a danger that the explanations can impede creative work, particularly creativity by project. I am wary of explanations too soon in the creative process. Hemmingway said he would stop writing if he knew what was coming next (Mason
Curry *Daily Rituals*, 2013). I take the position with all my creative work and in this project that, if I know what’s happening next I wouldn’t begin. Ignorance is an important incentive to my creativity, as I point out later in “The Sublime Ignorance of the Architect”. The pleasure in doing this PhD is that I discovered things through doing it. Therefore the action of writing this text is part of the creative process, not just a summation after the fact and certainly not an attempt to explain all possible meanings from the outset. I am making a distinction here from explaining method and explaining meaning in the work. I explain/comment on method but do not explain meaning of anything I do in this project. The meaning to me of transient phenomena and the meaning in my use of basic geometric shapes has a cultural and personal dimension for myself but is too complicated to explore in great detail here, although I do make some attempts. I refer again to Hemingway in his book *A Moveable Feast*, that to overcome his writer’s block, all he needs is one good sentence and it flows from there. Meaning, like consciousness, it comes late. I apply this not only to writing but also to images, things and events as a central creative method. I select, focus and isolate selected words or images in physical space or on a surface (writing, painting and drawing) that I intuitively suspect may lead to further ideas or could enable clarifications but I am not entirely all sure that this will happen. I also work on the suspicion, a perhaps Lamarckian idea, that my constructs/preoccupations which I fixate on and then put out into the world actually change me at a deep and perhaps biological (even genetic?) way, and my selections of focus change my intuitions, my subconscious reasoning laying the path for further creativity. For example, the practice of writing a phenomenological account during this project has led to poetry as a means of developing ideas that set me up for architectural thoughts/attitudes/insights, not only as a narrative tool but as a basis for further creativity. Writing poetry allowed me to recall my responses to landscape, places and buildings in my past and clarified what was important to me about these things. These poetic concepts developed out of the habit of writing collected words or phrases in notebooks, isolated on a single page for later casual viewing when my mind was ready to be triggered in an unknown way. I have also become aware in my total artistic work of a gradually building aesthetic, my ever-changing ‘aesthetic framework’ that poetry is now an addition to. So far my aesthetic framework has created an interest about my relationships with space, objects in space as well as an interest in time and human perception. Although always wary of words and their power to seduce me into extreme fantasy abstractions, my basic interest, for many years, has been also been a curiosity about the relationship between my theoretical, abstract thought and my concrete actions in material. By doing poetry, fine art and this project I am acknowledging the mystery of my creative processes within myself but also acknowledging the equal importance of the physical act doing, of writing on a surface or screen as consistent with my practice of working with my hands directly with physical
materials as an intelligent act and necessary for my creativity. I **discover and unify ideas within myself by observing and being involved with selected physical events outside myself or by direct actions in matter, including writing.**

Writing for this project, with its focus also on my creativity, has led me integrate other activities that I initially regarded as separate but, like poetry, became satellites to this project and as I continued became more and more relevant. Painting, which I had started in 1980, and continued during the project, slowly became obviously related to my interest in introduced geometry in landscape (which architecture can be). Rather than hinder the project by leading me astray, these extra-curricular activities began to clarify my thoughts. I also began to compile parallel numbered and sequenced notes which I originally thought would be about fifty in number but ended up exceeding more than 1800 items in 90,000 plus words, and which are still being added to on a daily basis. My *Extemporaneous and Proleptic* Thoughts are a sequence of reflections, attitudes, images, poetry and opinions on creativity, art, architecture and any other thoughts, including word or image triggers for future thoughts that arose during, and were definitely prompted by doing this research. I feel no need to exclude these from this project because they are all part of my ongoing mapping of my thoughts during and beyond this PhD. I have included samples from these parallel thoughts in this text.

(*Proleptic thought: from the Stoics or Epicureans: spontaneous thought provoked by sense perception without reflection: Dictionary.com.)*

- **Sites (3)**

My aesthetic experience of place, buildings and landscape is central to how I feel and function. It is an integral part of whether I am prompted to think, reflect, explore, notice and create in what I regard as a positive way. I had noticed this from an early age and would feel a strong need to escape from aesthetically oppressive places. I know my basic values regarding these matters. I feel them viscerally and emotionally and can provide these feelings with intellectual backup if required. The Australian culture and rural landscape has, of course, been instrumental to my interests and attitudes. It is therefore important that at the very least for this project, like the Masters, that I placed myself in aesthetically pleasing environments even at the expense of physical comfort or practicality. **Site 1** is such a place. Culturally, as an Australian, I am ever aware of the questions that arise within myself about the interface between a land that has been occupied by a culture of thousands of years and my European heritage. This, I think is exemplified by my juxtaposition (intrusion or trespass?) of European geometry on the Australian landscape (which architecture is). This produces an aesthetic/cultural oscillation or dissonance within myself, which I enjoy and is a feature of my work even outside of this project. I suspect much of my oil painting is about this dissonance.
The research was explored over two sites in rural Victoria, Australia plus a three month period in Europe, mainly in France and Spain. The first site (Site 1) was the shearing shed and landscape in central rural Victoria where I was living. The second (Site 2) was a 1920s house having had a recent modernist, extension in the nearby town of Castlemaine. This second site was the site of later research because of my encroaching ill health and subsequent mobility issues.

Site 1
Text and Image

The text, words and image component of this PhD, by project, including videos, is not only a documentation of process as required by this study, but, many are instrumental to process, a method of grasping what I regard as aesthetic concepts to add to my evolving aesthetic, a method of enquiry that I normally do in my general work. The documentation of process, through reflection on conditions, experiments and attitudes that arose during this project is augmented by some of the relevant work, images and ideas that preceded the project. Such inclusion is intended to clarify what the sensibilities and intuitive directions underlying the creative investigations for this project. Some of these preceding concepts were also reformed as I realised their connection to this project; again, an evolution in myself. I map the sequence of this process throughout this text. The documentation component includes reflection and questions on the directions of interest, what work was done and what conclusions were drawn not only on the work during this project but work prior to it. In addition, I comment on the creative process in general from a personal perspective and with reference from others. For the scanning reader I have pertinent points of the text, in italics and bold.

Therefore, from the beginning of this project I also hoped to demonstrate that my creative method is not a fixed set of behaviors. As an evolving part of the process, my methods of working, attitudes and questions are continually changing and emerging. My
writing of the text, as stated, is therefore instrumental in this process of change. Because of this, deference to previous work and reflections on method are woven throughout the text as part of the creative process. As mentioned earlier I developed a parallel project to this one (*Extemporaneous and Proleptic Thoughts*) because of this project and there is a cross-fertilization between the two. The following illustrate the connections to the main study and is an extract from these thoughts, number 1,792 to 1,793 with photographs from Site 2.

1792. To surprise me, my partner Kerry placed one of my small metal frames on the east wall of her living room (Site 2). Over time we noticed shadows generated from different light sources from the different position of the sun to different interior lights. This is an example of me being removed from placing things, to things being placed by others. This increases the likelihood for me to discover unintended phenomena. The sequence that follows came from sun through passing clouds from a high north-facing window at Site 2.
EXTEMPORANEOUS THOUGHTS (4)

Photo sequence. Site 2, May 9 2015. JMCG.
Sequence showing variations with time and clouds passing. Site 2, May 9. 2015. Photos JMCG.

1793. The architectural photographer, Trevor Mein, photographs interesting cloud formations, whereas I look at what the clouds are affecting with objects on the ground as they move. I do the same with stained glass windows. While others look in awe at the window, I look at what it does to the interior. Often creative insight just entails looking in a different direction to others.

The Expanded Field program at RMIT is in a unique position, enabling this project to straddle architecture and art. However, as I see it, there is a subtle difference between architecture and art that also affects how this PhD proceeds. Essentially the difference is that “art points” (usually with impunity) and “architecture points, then has to argue the point” in words (my notes, 2013). This provides, I suspect, an added burden to some architect’s creative process, compared to the fine artist, and may give rise to a heightened status and consciousness for words, excessive rationalising and therefore interference with the more intuitive, subconscious aspects of the creative process.

In this PhD, as I have said, I am primarily (phenomenologically) pointing at phenomena, my own experience and efforts, not arguing from an evidence-based perspective in the tradition of science or the expectations of the architect’s clients. This has given me the freedom to indulge ideas not initially specifically architectural or sensible, but from my broader, perhaps esoteric interests, my image/spatial poetic history, on the suspicion that through the agency of myself, these will ultimately connect to architecture. These ideas I regard as aesthetic thought experiments or
epiphenomenal concepts, initially not related to anything in particular, just arising in my consciousness, often by doing a physical action with material as I add to my aesthetic reservoir. “Each of us then...should make a record of our own spatial histories.” (Leon van Schaik, 2008 Spatial Intelligence, Wiley). For example, in my case, just putting things together or orchestrating an event and photographing, then years or months later, combining with some words from elsewhere. These concepts are different from what comes from my conscious, utilitarian frame of mind, they are not of material necessity, they don’t serve any obvious purpose, they just arise, I suspect, because I have a mind and I experience things. As the philosopher Bertrand Russell said in his 1935 essay, In Praise of Idleness, “There is much pleasure to be gained from useless knowledge.” However, I do work under the suspicion that these apparently useless concerns are instrumental in molding my intuitions and I have always worked with this in mind. Perhaps they are the first good sentence at the beginning of a yet to be written novel or equivalent to the first hints of a design direction in an abstract sketch. I have accumulated many, over years, of a particular aesthetic and frame of mind, hunting for a common thread from these shots in the dark. Such an approach I found to eventually lead to results in unexpected ways. To use a language analogy, such concepts exist “on the tip of my (conceptual/aesthetic) tongue”. As such, these concepts are on a threshold of explicit understanding; they are liminal concepts. Typical of this, although wary of the seduction of words, is my habit of collecting or making particular phrases that intrigue me but I don’t know why. I isolate them on single pages, so I can notice them, when my mind is ready, if in future I am casually passing (not hunting) and something clicks. Initially I collect, or pen such snippets purely for aesthetic intrigue, not to logic. During this PhD, as alluded to before, these words evolved into conceptual poetry, that I use to further develop unconscious sensibilities as distinct from narrative poetry. In the same vein I make or take photographs, draw, paint, construct things or events, or any combination of these purely on the basis of intuition, that more allusive way of thinking. These are puzzles that I can’t relate to anything in particular. This is what I mean when I say: concepts beyond words or an established system of signs. These apparently useless gestures however, are on the edge of grasping for me and I consequently keep them for some time in the future when my mind decides to see something in them. They exist akin perhaps to the philosopher of Phenomenology, Edmund Husserl’s “Life World”, pre-reflection, categorisation or conceptualisation in the usual sense, nevertheless, filled with complex meaning sensed by myself. I have used these apparent nonsensical sources (pre-conceptual sketches if you like) in this project to benefit and have some that have not yet gelled, but still regard as somehow fertile. These are concepts in transition from the subliminal stage of thinking and just hovering at the liminal stage of thought before coming into consciousness. An example is the image of a chair passing through a room, existing as a sequence of photographs. I
am still nurturing these images for a suspected future connection to architecture. It may come before the end of this paper. This strategy is also dealt with in the section on words, diagrams and notebooks.

* Art, architecture, real sustainability and the mind (5)

Architects may create art, spatial sculptures, that are also functional buildings, but because of scale and their work depending on money from others, it is realised in a culture that insists on “reasons for action”, a pragmatic culture that often ignores or does not give much credibility to words associated with the poetic experience of architectural design. However, their decision to approve a particular design may well be based on these unconscious poetic aesthetics as well as their more pragmatic concerns.

Architects, distinct from builders, are primarily concerned with this aesthetic experience as an important aspect of our built environment. These poetics, the ambience of the building is an appreciation of beauty, which pertains to, and, what I regard as the real sustainability of a building beyond just a materialist notion; sustaining the human through aesthetic experiences beyond material utility. Sustaining perhaps an ongoing awe or mystery or just feeling good about being in a place even though we may find it difficult to say why: the psychological, phenomenological experience of the building, its non-material, non-utilitarian ambience giving intrigue and some may say the spiritual dimension that a building can have for us, which is sustained over its lifetime. This, in the language of today, is the psychological sustainability of a building, and can override the physical sustainability or so-called practical considerations. We indicate this amongst our practical rationalisations; in the way we ultimately choose many things, that is, emotionally. The philosophers John Armstrong and Alain de Botton maintain in their book *Art as Therapy* (Phaidon, 2013)
that art and architecture have the role of connecting us to aspects of ourselves that we lack or unconsciously need for the balance of our psychological health. When we experience such moments we may say the art or architecture is beautiful.

In our language, beauty is set as diametrically opposite to utility and practical concerns. Pragmatists claim utility and practicality come first, followed by beauty only if we can afford it or if we have the time to allow it. However, I suspect this is a rationalisation covering our real motives. It is a tenet of myself, and this project, that beauty is a utility, a practical reality for any human endeavor. Like beauty, utility is a choice and utility is also in the eye of the beholder. It is the experience of beauty, in the often consciously ignored aspects of a building, that can determine whether or not we think or feel positive about a place, a space, a room or a building; as a place we enjoy being in or not, indeed, whether it is healthy for us either physically or mentally or whether we call a building beautiful. For us, as a complex species, the aspect of the beautiful is not a frivolous indulgence. It is very real, practical and important to our wellbeing and healthy survival. I suspect nature gives us a sense of what we call the beautiful, for important survival reasons.

I am not referring to beauty in the sense of only the visually pleasant but a beauty that stirs our aesthetic and intellectual imagination combined, a beauty for the total mind and body. In neither art nor architecture does beauty mean the purely decorative sense of the word, but may use even the ugly, the terrifying or the bland, to stimulate us in the more profound sense of beauty. Kant said of the beautiful, “that it pleases without a concept.” (‘The Art Instinct. An Evolutionary Theory of Beauty’, P228 Denis Dutton). I take Kant to mean “concept” as expressed in words or an accepted conceptual language such as mathematics. As mentioned above, however, I have a concept of concept that exists in addition to words or pre-words, an aesthetic framework by which we know intuitively that a piece of music, art or design, for example, fits into a certain genre, a general pattern which we cannot make explicit in words how we know, or give all the measures for our knowing. This is also in which form, the epiphenomenal concept or the liminal concept arise, before I have language for its meaning. As I have said, my understanding of beauty is consistent with the view that our attraction to beauty, the aesthetically stimulating, is no frivolous adjunct to our practical existence, no frivolous activity in our brains, even though we may not be able to describe it in established conceptual terms. Beauty is an experience of the mind/body in all its rich complexity, and is important to us as individuals. Historically, some architects and builders have intuitively understood that architecture affects how we feel and think when in and around those places. Architects acknowledge, without necessarily sufficient words to defend themselves against the so-called realists, this complexity of the architecture for the mind, our psychology in addition to physical concerns. In fact, it is argued by others, our aesthetic sense is part of a range of important evolved human natural
Propensities essential to our survival. The beauty we experience in nature, art and architecture may be essential to our humanity. This will be further referenced in relation to neuroscience later in this text.

Passing Clouds and Time

Beyond the static beauty, the sculptural aesthetics of the building, I was eventually intrigued by the transient beauty arising, which I saw even in the modest structure of my live-in shed. These beautiful moments I was beginning to notice were dependent on not just the building itself but the building in unison with nature, the ever changing environment combining with the fickle, often distracted, human (myself), taking the time to notice these changes. The ever-changing environment of nature produces the ever-changing building from the relative static structure of the building. We notice changes in some buildings more than others. Some buildings may take on particular features in particular light that enhances our experience of being there or we may say they are beautiful. Other buildings may always look the same inside and out; washed out, flattened, not having variation from light to darkness, in their response to light or the myriad of artificial lights of today that deny the beauty of variation from darkness to shadow to light in the name of safety. I recall as a child, with time to be idle, savouring similar changing occurrences in the rough bush farm sheds of my grandmother’s farm that had no electric light. Because these occurrences are played out with the dynamics of natural ephemera, they often are transient accidents that may be fleeting in nature or alter in imperceptible ways over time. Similar to watching clouds change shape, they may, in subtle ways, appear and disappear for example, with the passing of the clouds. Our experience of time is dependent on noticing things that change in appearance or disappear and perhaps reappear, while other things appear not to change or change at a different rate. The architecture of the static building is critical for these events to be noticed, the building provides stability to notice change against. The more pronounced the static quality of the building, perhaps by obvious high mass, I think the more pronounced the ephemeral event. I suspect this is why I prefer architecture in concrete or stone. I noticed when in Europe the softness of light or subtleties of shadow were lighter and nuanced against the massive architecture. Regarding light, the architectural photographer is employed perhaps because they notice these variations more than others. These moments are devoid of practical function in the usual sense, and may come about not only by design, but perhaps by a fault in the building, a quirk of circumstance, even a misplaced nail hole through a reused corrugated iron panel, or perhaps some light rain on a stones outside. These phenomena are also dependent on the occupant/observer, being in the right place at the right time. Such sometimes small events may often not be consciously recognised and are often ignored, but they
still can be instrumental to our overall experience of a building. They are a transient beauty, a beauty of process that also connects us to the dimension of time in a particular space, a time that requires a particular geometry (the time aspect and the importance of waiting). It is a beauty that is experienced in addition to, but relies on the static form of the building, the aesthetic intentions realised by the architect.

A Clarification about Mistakes

On completion of the best-intended designs, unforeseen mistakes of a permanent nature can sometimes occur in the final static form of a building or an aspect of it. A building upon completion may, for example, appear to look like something it’s not supposed to be or appear to have a geometry that suggests, for example, that the building is falling down. These unintended optical variations with perhaps reference to other images, structures or spaces can be, in the worst cases, detrimental to the overall design. Alternatively, if the architect is lucky, these accidents or unforeseen occurrences may give enhancement to the design and be noted by the architect to be included in their future creative repertoire, similar to the painter, although at a much slower rate. However, these permanent accidents are not the concern of this project with the emphasis on “the poetry of the unintended event”, the transitory phenomena, the fleeting or the slow that appears and disappears with the passing of a cloud or needs the rain on stone to exist for a moment, and pass quietly through a room on its way to somewhere else. These are the things I am interested in.

The importance of the unintended can generate the unexpected

In architecture the building is designed and foreseen. This is necessary because of the economics of scale. Variations during construction cost money! Generally, all has to be designed and considered as much as possible to avoid negative outcomes. Unlike smaller or less expensive creations that may need or use the process of heuristics to reach a satisfying result, architecture, early in the planning, has to know where it is going and why beforehand.

In architecture there is little scope for experimenting on the job. With few exceptions, architects tend to stick to this approach. Recent technologies, by simulation and calculation, can mitigate the unforeseen but not entirely. However the complexities of a building can extend beyond the planned. Architects, builders and officials are responsible for all that is about a building. Once built, but because of complexity, they are not entirely aware of many of the actual unintended consequences, and may not be for years to come. In truth, the architect, like the potter opening the kiln, isn’t
completely in control. They do not know completely what the reality will be. This is particularly true for architecture, at a human experiential level. Ironically, this ignorance of the architect, the potter and the artist generates the expectation for pleasure but also possible pain. What architect doesn’t want to experience the completed structure first hand? The architect, in his or her excitement and curiosity is perhaps also acknowledging this ignorance, hoping for more than was expected in a positive way. Like the artist who is praised for what he/she did not foresee, the architect may also be surprised by an unintended revelation in their work. Art requires the viewer or listener for completion but also requires the artist to look back at their work for further insight. These revelations may not only be about utility or the experience of spaces but also may stem from the interaction of the building with the natural world. We tend to think of buildings as environments and generally fixed environments. Buildings are not only environments for us but also like organisms, always reacting to their environment. This is another sense of the building as never finished and not foreseen; it is also an example of the building as an instrument for the unexpected. When visiting the Temple of Sagrada Familia in Barcelona, one of the most aesthetically complex buildings in the world, I wondered whether the effects in the afternoon light that I was finding, even during my short visit, were totally intended by Gaudi himself? Was he conscious of all the possible permutations that the building would throw up in its interaction with sunlight? I suspect he, too, would have found phenomena in his own building that would have surprised him. One of the main premises of this PhD is that buildings, as a system in unison with nature, produce more than the architects, owners or builders (even plumbers) bargain for; this transient, accidental, unintended aspect of architecture.
All Buildings

Like nature
All buildings
Have secrets.
Beautiful secrets
That reveal themselves
To the unhurried mind
In the right place
At the right time.

A shaft of light
Unintended,
A shadow not there.

From the lowly shed
To the temple of La Sagrada Familia
Surprising even their makers,
Passing secrets appear
In still moments
Of metal, mortar, glass and stone,
Often unimportant,
But noticed
By the unhurried mind.

John McGlade.

La Sagrada Familia Temple interior. 2009.
Photo JMCG
Design is the intention to do something. When a building is designed, that “something” is specified as clearly as possible. But a building, once fabrication is finished, is not finished. The building on completion begins not only a lifetime of use, which may vary from its original intended use, but also interacts continuously with variable elements such as humans (including their changing psychology), natural elements and environment. In short, a whole, ongoing system has started. Art, that we return to again and again and still intrigues us, is said to warrant more merit than art that doesn’t maintain our attention over time. I think the same is true for the art of architecture. A good joke may be instantly funny on the first hearing but has diminishing returns of humour on subsequent hearings.

Good aesthetic design in architecture does not have the novelty of a joke; it can sustain our attraction to a building. This is the “art’ of architecture, the psychological/intellectual function of the building. Those architects who satisfy this aspect as well as the material functions are deemed successful. However, these aspects,
these interactions are complex and beyond explicit articulation, down to the last detail (as they are in any art).

- **Mind and Mystery and the Client (6)**

Another premise of this PhD is that the inability to make explicit is a precious commodity and this is how it should be and remain for architects and architecture. Our human minds do not require all the answers in just one particular form of understanding and particularly not in words! However, to quote the American poet Wallace Stephens, “The poem must resist the intelligence, almost successfully.” In fact, our minds prefer the mystery of the unknown. As it is for me, I suspect it is important for architects, as it is for artists, that they cannot say completely why they are doing what they are doing. “The job of the artist (and also the architect) is to always deepen the mystery.” (Francis Bacon. 1561- 1626.) This saves art and architecture from the barren, pseudo-intellectual landscape of a soulless but logical existence, lacking the subtleties, nuances and experiential riches or the mystery our minds require. The problem for the architect to include the mystery of these transient phenomena I am suggesting is more problematic for the architect than the artist. The artist just points and doesn't have to argue in defense of their work, whereas the architect has to point and then argue the point with the client to justify the design. But I am suggesting phenomena that the architect produces in the same mysterious, perhaps unjustifiable way as the artist; and I suspect this will be a problem in the architect-client relationship. If the meaning of the architect’s designed phenomena is explicit for the client’s sake, it will not have aesthetic mystery. An apparently frivolous addition to the project may, with some clients be a big ask and if the architect is unclear of its meaning (as an artist) it may not be accepted by the client who needs explicit reasons for spending money, particularly on something so non-functional or ephemeral. Traditional buildings that required or expected such artistic elements in their construction-involved clients who accepted suggestions beyond the material functional, like religious buildings. However, although in our secular age clients who want to convey power, status or an aesthetic sensitivity through flamboyant but essentially static forms (large corporations and art museums), they may be less likely to support transient occurrences if the architect is unclear about its significance other than artistic mystery. Successful architects have to be skilled in arguments for aesthetic flourishes but even more so with the epiphenomenal in their designs.

- **The Aesthetic Reservoir and Mystery (7)**

I cannot emphasise too much the importance of attending to the *unconscious aesthetic reservoir* that architects, like all artists, need to draw upon and therefore must nurture in themselves to achieve their own aesthetic language. The uniqueness of an architect’s
work has to come from somewhere and it comes from the architect's primarily *unconscious aesthetic propensities* that are built up over a lifetime, it does not come from design formulas shared by everybody. This process is a mystery to all creative minds, but in the artist and the architect ensures mystery being infused into their work. In this project I too come with aesthetic, intellectual and creative baggage, mysteries and puzzles for myself, that I bring to my perspectives on architecture. It is hoped that by including references to my previous work in this project I make comprehensible where I'm coming from to others and myself and reinforce the idea that, for the architect, the subconscious reservoir that he or she calls upon in designing can come from the most unlikely of places, the even so-called esoteric activities.

As I point out, also contributing to the unforeseen or the unintended can be the complexity of the unpredictability of the building’s interactions with the complexities of nature. These unplanned interactions are *epiphenomenal*, a by-product, to not only the physical function of the building, but also epiphenomenal to the intended aesthetics or psychological functions of the building. Buildings are relatively simple creations but with even a simple natural occurrence, like morning sunlight, can give rise to intriguing, complex, unpredicted phenomena. I learnt long ago from my sound cube experiment that simple beginnings can give rise to incredibly complex patterns (*chaos theory* and tipping point). Perhaps these architectural phenomena could be regarded as *spatial fractals*?

For the architect, while not conscious that epiphenomenal occurrences of a particular nature may occur, if they arise and have good effect, usually means they are prepared to go with them as an added bonus to their work. Even as an owner-builder using recycled materials, I discover many unintended things.

A misplaced nail
Long gone,
From this sheet of iron,
From this old wall,
Can give rise,
In my idle mind,
To internal reflections.

As I recalled,
When the sun came around,
The afternoon light
Streamed in.
An unintended apparition
For a time, occurred, 
By a hammer 
Long gone.

Casually, 
Perhaps years before 
In another place, 
A blow was struck, 
Amongst many in a day, 
Now, wrongly placed 
By, thrift reclaiming.

I turn and see again 
A ghostly dance 
In ephemeral light 
by wind and branch 
And to my mind 
a mystery for my eyes.

Mystery and place

"The job of the artist is always to deepen the mystery." (Francis Bacon. 1561-1626)

I have always been interested in how particular spaces (e.g. rooms) and places (e.g. landscape or buildings) affect my thoughts and feelings. The **buildings I am interested in should not be explicit** in this regard. Like art, I prefer architecture I don’t completely understand. **Buildings, like good poetry, should be intellectually and emotionally enigmatic, hiding some of their virtues, not known always, there to be discovered, perhaps over time.** Similarly, I prefer non-explicit concepts. Non-explicit concepts have more aesthetic appeal and abound in good art and poetry. **Non-explicit concepts are on the edge of grasping** (perhaps liminal), just beyond the range of my being able to express intellectual and aesthetic understanding of them and particularly resistant to words, but with the suspicion that someday I will have some insight. Non-explicit concepts are not the result of deliberate “obscurantism”; I acknowledge that much of the experience of understanding is not only confined to words or indeed the literal meanings of words. They can also have many layers that I am largely unaware of until each in turn is discovered over time, much like rich poetry. In turn, I am also attracted to architectures through which I discover new experiences when I return at
different times of day or night, seasons or even years later. These transient experiences, I believe, add mystery to space by connecting us with the processes of nature, reinforcing our place in it. I have noticed that this occurs particularly on my revisiting historic religious buildings like Notre Dame Cathedral in Paris. We have largely killed these subtle variations by modern lighting, large glass and our penchant for the idea that it is a positive thing that we have seamless transition from the outside to the inside of our buildings. Our language reinforces the assumption that light is good and dark is bad. We drown ourselves in light and erase the subtlety of shadows or we don’t see them. The flash amateur photograph is the supreme example of killing subtlety and mystery by concealing nothing. **As we turn toward the light we can be blind to our shadows.** (Refer to *In Praise of Shadows* by Junichiro Tanzaki.) By enjoying these concepts or experiences I am acknowledging that my conscious mind is only part of my greater thinking and doesn’t know the full picture of a building or a piece of art. I am also a mystery to myself. I am acknowledging, along with **current neuroscience**, that the subconscious (in Jungian psychology, the shadow), perhaps in the mainly right side of my brain function, forms a large, unknown and perhaps faster operation than my left-brain conscious functions. To quote myself "consciousness is always late." and **that** is interesting and in creative work should be taken into account! This is why I enjoy good art, music and poetry and not legal or insurance documents which overload us with explicitness so that we become perceptually numb. In architecture as in art, we have a **collision of the “non-explicit”** the below consciousness aspects of ourselves and therefore nature and potentially the building, depending on its design, in an aesthetic interplay. Traditionally, we have relied on religious architecture to suggest feelings of a non-explicit existence beyond ourselves. I am suggesting, however, ways of enhancing our awareness of ourselves, in the vastness of our even known terrestrial home in a positive way: **positive, existential architecture.**

**A building can be like a work of art** and potentially mysterious and stimulating to our aesthetic senses and our psychology, perhaps forever. A building exists in a cultural context and interacts with the minds and bodies of those experiencing it, as they are constituted at that time. We can enjoy our new buildings because we know in their “newness” there are **things yet to be discovered**, just like contemporary art. In fact, as Ramachandran, the neuroscientist, suggests, we perhaps prefer to never resolve the puzzles completely, just short of the final “ah ha moment”. We prefer the ongoing mystery that much art and architecture can provide.

A building or a work of art from another time has an added advantage of cultural distance. This distance increases our ignorance and hence the mystery surrounding the building. We are not contemporaries of those who made it, or experienced it during that past time. **Cultural distance** and difference allows a **cultural slippage** or a moiré pattern or an intellectual/emotional interference patterns that arise when we move...
from our familiar cultural patterns and overlay them with even slightly different ones. Some of our lines of experience and expectations are reinforced, some cancelled out. This can be experienced in our time just by crossing borders. This adds further depth to the intrigue of the art or the building. The mystery when we travel and experience ancient buildings and art may be the attraction of these unknown qualities, interacting with our current cultural sensibilities. We seek the wonder of these unknowns in the pyramids of ancient Egypt, for example. We not only wonder and do not know how they were built, but also wonder why they were built. To our times and culture they are now just *epiphenomenal* and hence, mysterious.

Architects, historically, if allowed the freedom, imbue buildings with aesthetic appeal, beyond material utility. The whole profession of architecture is based on the belief that a building must also have this psychological function in addition to the functions of material use, environmental and the economic. This psychological/aesthetic function is non-explicit, but good architects are adept at achieving it. How long, through time or for the individual, a particular building continues to have this psychological interest is dependent on sustaining this non-explicitness, the unknown, and the mystery by design. The modernist mantra of “*form follows function*” was largely held by most as referring to material and was an excuse to get rid of what was regarded as non-functional material, i.e. decorative additions. However, the mantra still supports decorative additions if you acknowledge, as architects must, that with humans, a large part of function is non-material, *psychological function*.

To ignore the psychological function of a place or a building is to ignore the complexity of human habitation. Even before permanent habitation, humans have put psychological significance onto particular places or landscape and added formations, serving little or no physical function but to reinforce the non-material qualities of these significant places. We have done this up until this day, despite, Modernism’s claims for the so-called, unadorned rational.

**Designing mystery (architects can only infuse mystery into their work by becoming mysteries to themselves).**

The *transient phenomenon* I am interested in, which occurs in buildings, is usually an *unplanned consequence* of the building’s design, additional to the intention of the also *non-explicit, static psychological functions* of the architect’s aesthetic designs. These transient phenomena, unexpected events, can be intriguing and pleasant because they possess a high degree of the “non-explicit”. They have no function that can be discerned in naïve, so called, pragmatic terms. Or, do they? Art, although it might be non-explicit, carries with it, in the viewer’s mind in addition to associations and impressions, that it was done by an artist, another intentional being, not a machine or by an accident of nature. The awareness of a designer with the implied *intent*, behind a building generally,
but more so, when a transient event occurs, can add further to its mystery by seeking the unknown intent in a building as one would with a work of art, our interest in the building may be sustained. Our aesthetic sense is often regarded as a luxury by some architects and clients who can only be indulged when all practical issues are in place. I disagree with this view and recently some sections of neuroscience and evolutionary biology have suggested our aesthetic sense is instrumental to our survival as a species, an important function of our brains that has served us well (Ramachandran, Pinker and others). As a species we like puzzles, mysteries and the process of solving, perhaps more than the solving itself: to paraphrase Ramachandran, a sort of mental and emotional foreplay.

The challenge for architects is to design transient phenomena in addition to the practical and stable aesthetics of their designs, without the use of expendable, transient technologies. The architect can also cooperate with the dynamics of nature, humans and the building, beyond the perceived pragmatics of physical comfort, practicality and efficiency. The architect can give rise to further quiet surprise and awe (mystery) in and around our buildings, without giving too much away, (in fact deliberately not giving too much away) furthering the art of a non-explicit design through designing artistic, non-explicit transient phenomena. Phenomena that is hard to discern but is nevertheless not too far abstracted to be meaningless is the aim. The mystery of Leonardo da Vinci’s painting of the Mona Lisa is precisely because of its non-explicitness, particularly on the edges of her smile. Leonardo in his paintings developed a style of gradual tonal transitions rather than explicated edges or lines to separate forms. Thus the smile on the Mona Lisa is ambiguous; we are not quite sure where it begins or ends. We perceive that it is a smile but there are many types of smiles in the human mind and this is what intrigues us. What type of smile does she have? We are not sure as we would be if Leonardo had made the edges of her smile explicit with lines of demarcation. I am suggesting that architects be more like Leonardo in their designs of these transient phenomena and not fall into the designer’s trap of a precise analogue between their designed forms and intended meanings. The architect has to also acknowledge that their creativity and its resultant meanings, like the fine artist, is largely a mystery to them. Once this is acknowledged, the architect can pursue paths solely by indulging for pleasure, not relevance. This approach, if the architect-artist or an artist employed by the architect can succeed, will open up more allusive interpretations to a wider public of the building’s effect and meaning. However, the question still arises; is this combination of the pragmatic design process and artistic creativity with its tendency to pursue the apparently irrelevant, possible in the one person, with architecture’s required, pragmatic, sensible outcomes?
Achieving the Esoteric

These extra aesthetic features are often achieved because the architect does not have complete control over the meanings or non-explicit aspects that will arise for the human dweller of a building, any more than the sculptor, painter or writer does on the showing of their work to the public, and neither should they. The interaction of a creative work with humans is a complex evolving system and not subject to our complete knowing and therefore, despite some egos, cannot be completely designed, orchestrated or predicted. Our ignorance, the architect’s or the artist’s ignorance about the full ramifications of their labours, apart from being impossible to determine, is essential to the mystery and joy in the artwork and the building. This ongoing mystery determines psychological sustainability and follows functional sustainability. We can return to a favorite book at different times, discover new things and wonder how we missed them on previous readings. This is because we evolve, and art and our buildings evolve in the context of our changes. The artists of today acknowledge the importance of pursuing aesthetic, perhaps esoteric interests for their own sake (art is the reward of art), but some architects, with their real world, pragmatic demands may not see the relevance of such perhaps trivial pursuits purely for pleasure. I am suggesting, however, that if more architects allowed themselves to step aside from their design concerns and develop a continuous evolving body of work pursued for its own sake and not for its potentials to be applied to architecture, they would ironically, be in a better position to impart mystery into their designs in ways not foreseen by them, rather than the need to employ artists to do this. Of course university studies often encourage experimentation in space and structures, even of an esoteric bent, for the aspiring architect to develop their creativity. How often does the time-poor professional architect exercise this potential, or is it just seen as a freedom only for the undergraduate level? History often displays examples of designers and architects being deprived of the practical concerns of applying their designs because of political or economic circumstances. They may spend years in the wilderness of irrelevance only to have a profound flourishing from their esoteric wanderings when the floodgates are opened. The energy in Spanish design after Franco’s death is one example. The separation from the demands of the real world created a vacuum in which they had time to develop aesthetic directions of no particular relevance; (so-called “paper architects” experience the same). This is the space that I choose in my fine art work. Not everything that an architect does creatively has to have a direct, discernable, conscious relevance or application to architecture. However, pure creativity for its own reward will infuse into everyday designing, by subconscious means, because it is different to normal design thinking patterns. The architect will have a richer and deeper reservoir of images and concepts to draw on from deeper intuitions so important to practical
creativity, while having the potential to give more psychological depth and meaning to their designs in ways, like the fine artist or the poet, not known to them, but experienced by a speechless public.

**For humans, a building is as much a state of mind as it is bricks and mortar.**

When a building, for example, becomes a home or a place of significance to us, the psychological meanings ascribed to the building form over time complex meanings in the mind and feelings of the occupants. For every dweller there are different nuances, memories and associations, largely subconscious, that form a unique experience for that individual in that particular place as distinct from all other places. These can be positive or negative feelings and thoughts that we may to return to for our health or stay in places that engender the positive, good feelings and move away from the other places. These psychological aspects, as I said, are largely subconscious. They may be the way the morning light comes into a room in winter and aligns with positive memory or a thought, or the particular proportions and textures of a space, or the known thickness of the walls evident in the recessed windows that gives rise to feelings of security that we are barely conscious of. Apparent static physical things (buildings) and transient things (from nature and humans) align. Our transient, evolving psychology aligns also with these and we often might not fully appreciate their effect on us until we lose or change the special place and wonder why we feel different. Sometimes these feelings for one place may arise in another place and, as we might say, we can't put our finger on why. Or we may experience this in the form of **déjà vu.** May I suggest that these experiences perhaps occur because our subconscious patterns for one place or past experience align with the place or experience in which we find ourselves? Being subconscious, we experience puzzlement over our feelings often accompanied by a temporal shift. These experiences, whatever their explanation, support the notion that we attach significance to places and formations beyond our immediate knowing, in addition to our consciously expressed responses to a place, a building or event.

This brings me to another reflection on the inherent **danger in designing transient phenomena that pertains to quality, that is, the degeneration into unsustainable novelty.** Currently our culture expects and craves novelty and we are awash with examples in advertising, entertainment, consumer products, art and even architecture. Technology has produced many seductive and startling effects and continues to do so. I remember the early Moog synthesizers and even earlier attempts to produce and control sound by electrical and electronic means. Initially the machines and their effects were a novelty in themselves but we quickly became bored with these, despite claims of new dimensions in music. Eventually, we relied on the few exceptional musicians and composers who produced real art with the new media rather than just novelty. There seems to be a required lapse of time when new means of potential artistic expression
can be used in a non-self-conscious way. Computing and current technology can produce quickly and be changed at will to produce even architectural sized events (for example, the Sydney Opera House with projected images on the sails). However these types of transient events while spectacular, are generally only of passing interest. These tricks often speak about the use of the technology and are thin on content and sustained mystery. Hyper-surface exercises in architecture may be visually impressive but risk being low on content or meaning other than expressing the dexterity of the technology. **We can get lost in the novelty of using technology and neglect to say something.** Conversely, if the event is dependent and is generated by the actual long lasting form and structure of the building, literally set in stone, it needs to be of such a quality, like good art, that we never tire of it. In the past, humans relied on spiritual or religious beliefs to put sustainable meaning into repetitive rituals via reoccurring alignments with nature and with their human constructions (for example, Stonehenge). **Secular societies** also have rituals in special places and at significant times and there is a tradition of architecture used to reinforce these times and places.

The challenge for today's **secular architects** is to get beyond the wow factor of technological effects similar to the concept of 1960s kinetic art, which primarily focused on the effect, and put relevant meaning into these transient alignments. **This requires artistry.** In some cases, secular buildings have also been designed to align with nature, the sun for example, to remember an important historical event at a prearranged time and place. The **Melbourne Shrine of Remembrance** projects a shaft of sunlight at 11am on the 11th of November that passes over the Stone of Remembrance in the interior and illuminates the word “love”. This example is of architecture aligning with an ephemeris of nature coming together in a culturally important space. The Shrine's architecture is high mass and reinforces the difference between this high mass and the ephemeral nature of the event. This designated place is marked by a building that is solid and, more importantly, permanent. Because of this, there is even more contrast between the architecture and the fleeting nature of the special time, the softness of the light and the fragility of the sentiment or thought.

I enjoy this dichotomy and would prefer buildings designed for transitory events to be permanent, of high mass and of stark and basic geometry. For me, the quality of the transient event is enhanced when it occurs in high mass, permanent, even brutally geometric setting. I have experienced this in **Notre Dame** and the **Temple of Sagrada Familia** as well as the Shrine. Light enters a darkened chamber and a ghost-like, fleeting image appears or the space alters in a transient way, out of the very geometry of monolithic stonewalls and structure and the mystery is enhanced. As I mentioned, **the challenge for secular architects, landscape architects and interior designers is to produce meaning in transient phenomena that occurs in or on a building or its surrounds.** The type of meaning I’m referring to, like sustainable art perhaps, cannot be
explicitly designed by some sort of formula. **Designing meaning** into a building, landscape or space runs the risk of too much conscious reasoning and therefore literal and ultimately banal interpretation or experience. In other words; a design approach to meaning runs the **risk of being too explicit** similar to the craft of illustration or obvious advertising. The sustained success of a transient event will come from **architects who are also artists**, as happens now with architectural designs that hold our attention over time and transcend physical and economic functions. The conscious control of this artistry by intent and design, I suspect is headed for aesthetic mediocrity by not acknowledging that we do not completely have control of our creativity or the minds of others.

### Poetry and Meaning in Architecture

The poetic pertains to that which prompts elevated feelings or thoughts. This is achieved not only primarily through words but can also by other things, such as looking at a particular landscape, appreciating a performance of music, looking at a work of art, experiencing certain architecture and even a building with a small, accidental, hole in a wall. The poetic aim of religious architecture has relied on builders and architects conveying a feeling beyond the immediate physical presence of the building; awe for a power beyond us, cloaked in mystery, achieved through the manipulation of materials and space. This is also present in some secular cathedrals of industry, commerce and public rituals of today: banks, company headquarters and our most secular of cathedrals, the art museum, opera houses and the pinnacle of secular mass rituals, the stadium. These grand palaces are used to convey other forms of power and meaning, or unite us with shared meaning.

**As an alternative to the static aesthetics of architecture**, I am suggesting that some of the **transient phenomena** that I observe when the inert building, even quite insignificant ones, modulate the natural ephemera, they form a **temporal system** with these dynamics of nature, for example; the sun, the rain, wind, trees and clouds. Sometimes these systems or phenomena result in **beautiful, poetic, mysterious and powerful occurrences**. These are in **addition** to the existing aesthetics, symbolism and metaphorical language of a particular building’s static design features.

- **Positioning the Observer (8)**

**Labyrinths**, by their nature, position the moving observer in space along particular paths. Distinct from mazes, which are designed to confuse spatial orientation, labyrinths promise revelation or encourage meditation to the observer of the path as he or she moves along it. Labyrinths are therefore one example of design leading people to be
positioned in space and facing in particular directions with particular lines of sight. Some of the phenomena I am suggesting for architectural design involves anamorphosis to achieve the three-dimensional effect when the observer’s line of sight is within a particular geometry in relation to the architecture (refer to the spatial disruption of the anamorphic work of Felice Varini). Therefore, the architect will have to use particular spatial devices to ensure the passing, controlled or casual observer sees the phenomena at the time it appears; pathways, corridors, doorways, steps and stairs, points of focus, windows, areas and spaces for sitting, pausing or reflecting, lines on walls and floors, etc. Traditional buildings for meditation or religious observance achieve this; there is a system of changing geometries when the observer walks through the building or approaches it. The architect who is aware of these dynamic geometries can orchestrate things to occur at particular positions and times by positioning the observer by design.

The Attached Observer and the Evolving Observer

So far I have only addressed how the static forms designed by the architect can position the observer physically in space. However, seeing is not a passive act of being in the correct physical position in space, as according to Merleau-Ponty, "The object cannot be separated from the one who perceives it." It is popular today to decry the emphasis on visual perception to the disadvantage of other considerations like systems of social/psychological space. The system of observing is a system of attachment to all the visual, spatial, tactile, societal and psychological dispositions of the observer and this is inescapable.

I am therefore proposing that architects explore these transient epiphenomena by influencing the position and the attitude of the observer by their static designs of interiors and exteriors. This could produce buildings that connect us more deeply with the dynamics, temporality and cycles of the natural. The architect can use this designed positioning in a particular place at particular times to also reinforce our awareness of our own transient existence within the natural scheme of things. The architect can use spatial expectation, as religious buildings have traditionally used, to create a sense that something poetic but real may be experienced when you move into a secular space.

A poetic experience is usually a quiet, slow realisation of meaning accompanied by the pleasure of a cerebral and emotional kind. Indeed, many poets advise one to read poetry slowly. In the concrete matter of architecture, the poetic understanding, an understanding of what a building means to us, like poetry in words, may not be all that conscious to us, coming about not in the form of words and without fanfare, not requiring the dazzling immediacy of technological light shows, complex mechanics or
even the logic of a theory to convey something. The silence of architecture can provide an opportunity for a contemplation that allows a slow revelation for its wordless poetry to emerge. A slow revelation, in feeling and pleasures just below consciousness, of what the building’s forms, structures and spaces mean to us and do to us. Already, buildings and nature do this without our intervention and often without our conscious appreciation. We are often too busy to notice. Reading poetry and the poetry of architecture is not entirely for the rational mind. This architectural poetry which conveys meaning is experienced by a deeper form of knowing, by the combination of the intellect with feeling; consciousness in tandem with, and equal to sub-conscious connections. Good artists, poets and architects are skilled in this form of unspeakable knowledge. On this front, when talking about the poetry of words, Wittgenstein makes the following point applicable to understanding the poetry of architecture beyond words in Zettel “Do not forget that a poem, although it is composed of the language of information, is not used in the language-game of giving information.” Similarly, the poetry of architecture, although composed of the concrete, space and form, color and texture to solve physical utility, does not only play the rational game of physical function. Architecture also plays the game of spatial poetry, a humanistic psychological function. This happens even in the unintended poetry, a humanistic psychological function. This happens even in the unintended poetry, which in this PhD is documented in photographs of “observed phenomena” in existing buildings. Some phenomena, recorded for this project was unwittingly setup by the plumber because plumbers concentrate on pipes, not the position of their pipes in relation to the sun.

Sun, blinds and epiphenomenal plumbing. August 20, 2010. 3 pm. Photo. JMCG.
MODERNISM, SECULARISM AND IDLENESS (9)

These observed phenomena were initially recorded based on the pleasure they invoked in me. It was only through the process of doing these photos, keeping them within sight or constantly looking and thinking about them that I consciously made the connection to architecture, which my unconscious had already made. Consciousness is always late.

Later in this text, in the section devoted to notebooks and diagrams of no apparent consequence, I cover how I have come to use poetry and phrases as intuitions to form future creativity and as premises for design.

- Modernism, Secularism and Idleness (9)

The house extension (Site 2) where the second part of this project was undertaken is in the classical modernist tradition. It is devoid of so-called decoration or ornament and has a simple white geometry. However, the architecture provided unexpected phenomena to me despite a clinical modernist ambiance. The white walls of modernism in this place, I realised, offered no hindrance to discern subtle variations in light.

My noticing of these phenomena was due, in a large respect, to my circumstances; I had time to look without urgency. Being devoid of the pressure of urgency is conducive to
slow creative thought and slow observation, which is also a central tenet of this project. It is ironic that modernist architecture should offer transient ornament. Subsequent to visiting both modernist and historical buildings in Europe, I am tentatively of the opinion that historical buildings potentially offer more in unintended occurrences than the starkness of modernist buildings because they were produced in times when we were surer of our beliefs, although my jury is still out on this point. The Japanese architect Tadao Ando’s Church of Light is a contemporary example of modernism using natural light to create a mystery beyond ourselves, but is still religious in intent rather than addressing secular meanings. “I wanted to create a place where people gather by nothing but light, and reflect...the creation of space in architecture is simply the condensation and purification of light.” Tadao also mentions a point akin to this PhD: “Seeing light constantly moving through the cross makes us aware that we live in nature and that we cannot live alone.” (“From Emptiness to Infinity”, video documentary.)

Architects, of course, become accustomed to justifying their proposals in so-called pragmatic terms, which the client and the public can understand and expect. However, the architect does not easily articulate the aesthetic dimensions of their work in words. Like most artists, architects in this aesthetic aspect often can’t say why they are doing what they are doing. (I am suspicious of those architects and artists that extensively do say why). Indeed, this is one area in which I found an affinity with Duchamp and Wittgenstein. Duchamp, although words were part of his work, maintained that artists really don’t know what they are doing and that artwork is not complete until seen by others. Wittgenstein had a concept of “Imponderable Evidence” (Philosophical investigations” 1954), evidence not based on a theory or able to be explained in succinct words but nevertheless valid. At the aesthetic level I apply this validity of the unspoken to be respected and acknowledged, not only for artists but also for honest, original architects, who also operate on imponderable evidence, who may not be able to say why they did that shape there but nevertheless, know, on the evidence, that it’s right. To our creative detriment we have fallen prey to a mentality that all must be explained, even badly, in words. Goethe “warned against the tendency immediately to reduce observation to conception, thus losing the power of the object in all its newness to break out of otherwise unbreachable defences of our conceptual systems” (The Master and his Emissary, Ian McGilchrist (p373). Zizek claimed in The Parallax View that “the word murders the object”.

Fortunately, the established architect’s work is aesthetically known in the public arena, so his or her aesthetic propensities or style are at least known through past work and may be respected, requiring no further attempts at explanation.

As this project straddles both art and architecture, I am reflecting on the interplay between the two with the validity of the unspoken as a shared assumption. I am also
saying that the nature of architectural aesthetic concepts, like art concepts, consist of more than words.

Art Words and Phenomenology

There is an unfortunate and unnecessary tendency in the art world to overuse words by professional explainers, to give the artwork more legitimacy by propping up the art with a foreign language, with excruciating consequences. Many artists have also fallen into this trap of talking too much about their work, explaining what a particular work is about. This PhD, however, like art, is not arguing a point based on a theory stated in words or suggesting it is similar to work by others who have argued their case and therefore should be respected; it is attempting to merely point and suggest. That is, pointing to some aesthetic phenomena, particularly the unintended, the *transient epiphenomenal in architecture* and then suggesting their possible implications for architectural issues. It is acknowledged, therefore, that this project, in direction and method, was at the outset a case of not knowing where I was going, or rather, could not say explicitly, nor is it based on theory beyond the phenomenological, first person reporting of myself, my aesthetic baggage, what I have observed and what I suggest could be applied. The final destination was arrived at by *doing* the physical work first; by being physically present in the environments, observing or making, and *then* reflecting on it. I see this as an advantageous heuristic function of doing research by project and phenomenologically. I remember reading a quote somewhere by Leon van Schaik, Innovation Professor in the School of Architecture and Design at RMIT University, which, to paraphrase, said students have a tendency to add validity to their research concepts, to say their ideas are similar to someone else’s ideas or compare their ideas to others. I feel no need to do this because I am trying to merely point out as honestly I can from my direct experience. However, I do take time to refer to others who interest me, but would not have arrived at anything different because of their work.

- **Observed Phenomena as a Basis for Predispositions (10)**

The bulk of this project deals with spatial events, which alter over time and may be fleeting, and is therefore documented in photographic sequences or videos consisting of “observed phenomena”. There are reflections on these photographs, photography and implications for the observer in the creative process as well as the observer/occupier of a building. The bulk of the observed phenomena is in **Site 2** in Castlemaine.
The subtle image I saw on the Chapel at Barcelona Cathedral was projected from a small, round stained glass window high on the wall at right angle to the image and disappeared in a few moments. This is an example of the phenomena I, even subconsciously, look for. Phenomena that is fleeting and subtle, giving the opportunity for the unhurried, observant subconscious to notice. While in the same cathedral I also noticed the floor stones with carved designs. This I immediately connected to the
concept of the “Rill Mirror” as possibly being etched into stone on floors, plazas or in landscape. Being in religious spaces like the Barcelona Cathedral, the Temple of Sagrada Familia and others I have experienced, always leaves me in awe by the mere form of the buildings and wondering how this awe through architecture is possible, and possibly even necessary, in non-religious societies. I think this experience of awe is necessary for our species and myself. But, the question arises, awe at what? Religious architecture is designed to have us experience the omnipotence of an invisible force or an “other” (a god or gods) and they do this very well! However, since the “Enlightenment” we can experience the awe of our place in the scheme of nature as revealed by the rigours of science with no need for a deity. I am suggesting this can be achieved not by shielding us from nature through architecture, or reliance on more powerful, invisible beings, but through architecture, connecting us to the cycles, the transience of nature’s systems and our place in it.

Venetian blind holes, mirror and plumbing sequence at 3:45 pm. Site 2. Photos. JMCG.
Bathroom Apparitions. Site 2. 5pm. December 18. 2012. Photos. JMCG.
Kitchen beam and windows. Site 2. 2 pm. March 20. 2011. Photos. JMCG.

Bathroom Apparitions with Trees and Breeze. 5pm. March 14. 2011. Site 2. Video stills. JMCG.
There are many phenomena I recorded with photographs and video in the interior of Site 2. I noticed throughout the project that I became increasingly open to such phenomena and found myself in awe of what was occurring in those fleeting moments. I suspect, as I always have, that by merely choosing to notice and collect images of particular aspects of my environment, my subconscious becomes more attuned to noticing them when I least expect it, even while showering, as the preceding photographs show. Once I started noticing such things I discovered there are many more than I could hope to cover in this project. The insight from these particular series shows what incredibly complex and beautiful phenomena can arise from mundane things like plumbing. In these cases it opened the design thought of aligning curved polished surfaces through narrow openings (a narrow bathroom window facing west) with the sun. This introduced the concept of reflection as another possible area to explore and research and, in the context of my deliberately basic geometry, would generate even more complex occurrences as a basis for design. I suspect this noticing of reflection prepared the ground for me to notice the reflection on the ceiling of Site 2 that moved with the wind and resulted from a narrow puddle of water on an outside roof. This observation, along with others I was accumulating, led to the concept of the “Rill Mirror” and subsequent experiments. The wooden venetian blind sequence opens the idea of variable apertures or slits in walls to produce transient effects when combined with designed formations in interiors.
The chance observation of the *Standing Wave Reflection* hit my sensibilities more than it would, I assume, others. I experienced shock and surprise in the one moment as I did with the *First Insight* during the Masters. I suspect this is because I had a prepared mind, years in the making, by allowing myself to notice and follow through my intuitive, perhaps confounding propensities (like flying mirrors or chairs passing through rooms or a hole in corrugated iron). This background ensured my subconscious mind was always on the lookout for similar things and experiences delight in the matching of inner world and outer phenomena. Because of this emotion in discovery, my conscious mind went into overdrive to explain the significance of what I had seen on the ceiling.

It was rectangular in shape and was from water trapped on the roof and I realised if it was more narrowly confined it would describe a line of moving, reflected water, in any design consisting of lines. I then decided to see if I could replicate what happened but in basic 2D design. At the time I had also a notion of permanency, so chose stone as I had seen carved on the floor of Barcelona Cathedral (See *Experiment 5*).
This observation, although primarily static, gave me the thought to use reflections, on water in landscape, to complete a structure at an architectural scale. Subsequently, I came to discover wet or polished stone as an architectural vehicle for reflection to complete 3D structures or project them. Like Goethe, I need things to prompt thought.
This image, although a contrivance, gave me the idea to distort a real frame so that its shadow projection on stairs, for example, was anamorphically correct; in this case resulting in a perfect cube appearing on the stairs.
The previous four images *The Impositions of Geometry* show the grasses invading my casually placed geometry on Site 1. This observation brought home to me how our human order, like geometry and architecture, is actually an insertion into nature's systems often with little regard for the processes of these natural systems. Again, I suspect such observations unconsciously inform my intuitive responses in other creative situations; for example, architecture’s ability to work with nature’s systems, its ever-changing aspects in order to enhance our being in a particular place. This apparent digression from the main project thinking in this PhD highlights that the apparently unrelated, as judged by the sensible mind of consciousness, can yield insight to the main task at hand.
The Gatepost Shadows photographs resulted from the intuitive desire to mount cubes on top of the gateposts at the entrance to Site 1 as a permanent fixture. I had no intention of using them in this project but they gave unintended insight to it.

This also confirms my ongoing suspicions that my unconscious has its own agenda and my consciousness is always late (sometimes years) in recognising this. The relevant insight came one afternoon as I noticed their shadows and started to trace them in the sand perhaps to make myself more aware of the progression as the sun moved.
However, when tracing the shadows I noticed that they were changing position rapidly, frustrating my drawing. I quickly realised it was the trees moving in the wind, intermittently shifting the illumination of the cubes by the sun. The ancient Greeks, I later learnt, noticed this pinhole lens effect by leaves leaving images of the sun on the ground. This introduced the thought that trees in association with architecture and the sun or the wind could be used in my project, somehow.

Further Noticing, Site 2

*Unintended Wall Phenomena.* Site 2. Photo. JMCG.

*Venetian Blind Phenomena.* Site 2. 5 pm. July 31. 2012. Photo. JMCG.
These are typical observations I began to have in Site 2. From these I got a sense of time as an important element in my interests, once more. I carried a small camera with me at all times because even the fetching of a camera was enough to miss the event. I also realised that these events were more precious to me because they were so transient and beautiful and I reflected on this significance in other human experiences, like our awe at seeing a beautiful sunset.

*Bamboo Blind and Marker Pen on Window. Site 2. 10 am. March 5. 2013. Photos. JMCG.*

*Previous photo. Bamboo Blind, Window and Marker Pen Cube and Triangle Morning. Site 2. Photos. JMCG.*

* (Simple projections from window)*
Bamboo Blind, Marker Pen and Tape Residue. Site 2. Photos. JMCG.


(Interior drawing and projection align)
The *Morning Drawing* observation gave me the idea to combine exterior events coming into a space and playing onto designed elements to give a unique occurrence, reinforcing the previous insight from the *Standing Wave Reflection*. I reasoned later that such occurrences could play on interior or exterior architect designed elements in 3D or two dimensions. This offers the further possibility for me to design exterior 3D elements projecting on to exterior surfaces or structures and interior structures or surfaces to produce transient reformed structures or images.

*Morning Drawing* on wall with window, wind and trees. Site 2. 10 am. March 2014. Drawing by Jenny Darling. Photo. JMCG.
Afternoon Hallway Sequence. With wind, window wall and trees. Site 2. Video stills. JMCG.


The previous series of photographs connect to the Gatepost Shadows of Site 1 where moving, fluctuating images are produced from the sunlight coming through trees or shrubs moved by the wind.
While out walking. Masonry and path. Near site 2. 4pm. March 24. 2015. Photo JMCG.

The above observation of While out Walking brought back my fascination with sunlight shining through cutouts in stone to align with something significant at a precise time.
Intersection of granite exterior projection and interior walls/ceilings.
Site 2. 1 pm. 18 September. 2011. Photo. JMCG.

The light from an external marble topped table provided these images, which alters the perception of interior surfaces.
These *Core Stick Reflections* are intricate and ghostly in appearance, having an element of mystery about them. This attribute is attractive to include as an aspect of my orchestrated phenomena; again, the appeal of the non-specific.

By altering the angle of a door I am altering the geometry of the angles of shadows and light, which disrupts the perception of interior surfaces. The door becomes an instrument for altering interior space. This reminds me of Marcel Duchamp’s Door, 11 rue Larrey 1927, which was open when it was closed.
Intention

The “observed phenomena” in this project leads to “constructed or orchestrated phenomena” via very basic prototypes, suggesting further development by others. With this PhD, mainly of a visual/spatial nature as it applies to architecture, I intend to show that the experimental examples suggest the possibility for extending architectural design into transitory, ephemeral phenomena, arising from the building’s static hardware, without the use of unsustainable, hi-tech technology. They can form an important addition to the psychological sustainability of a building, allowing architects to include apparently, accidental transitory phenomena into their designs using natural elements. The poetry of these phenomena is only limited by the architect’s imagination. The examples in this project, being of simple geometry, are only the beginnings of possibility. By not depending on hi-tech hardware these phenomena will occur for the life of the building and as long as weather exists.

There are prototypes, experimental fabrications and proposals for exterior or interior architectural contexts. There is also a quantity of digitally recorded, dated, hand-written notes and diagrams, some with matching audio that are indicative of the creative sequence for this project. These notes also cover different possible directions that arose
at the time, were not pursued directly but have a bearing on this project. Since completing the Masters I have, of course, had reflections on the Masters and earlier work that is pertinent to mapping the creative thought process that underpins this project, so they are included here.

**Neuroscience and Creative Self-Therapy**

The philosophy and neuroscience of perception and the mind, the ideas of others exist in this project as afterthoughts, particularly around spatial perception, optical illusion and the importance of the form and pattern in our environments. However, this PhD has as its primary focus, the *experiential*, what actually occurs in architecture from the perspective of the occupant and what significance that may have. The phenomenology of the human in relation to the building and natural ephemera is what I’m interested in. A spatial humanism that ultimately limits this study to human experience and does not necessarily argue justifications based on support from theory or the more abstract or the writings of others. With such a phenomenological approach, this project traces and indicates *my own* first person perspectives, although, augmented by the ideas of others and contextualising the work. However, more and more, in my creativity, from my early suspicions that I can alter and build on my intuitions and subconscious preferences, are now being confirmed. These intuitions feed and direct my creative methods, and are becoming supported by recent research on the brain and philosophy of mind. Neuroplasticity has long been an assumption of clinical psychology and allied health therapies, that is, by repeated effort we can alter neural pathways in the brain and even restore lost physical and cognitive functions. If theories like *Cognitive Bias Modification (CBM)* prove correct combined with Darwin’s theory of Evolution and new ideas in epigenetics, where different genes throughout our lifetime can be switched on and off by our environmental experiences, they may support my creative practice suspicions. Even materialist philosophers like Daniel Dennett indicate that we have free will despite determinism and that we may be pre-programed zombies but can make decisions about ourselves within determinism (*Freedom Evolves* and *Consciousness Explained* D. Dennett. Penguin). CBM is based on clinical studies for dealing with stress, addiction and depression by asking subjects in controlled experiments to continually select good images over bad, usually of smiling faces amongst a range of scowling or sad faces. This practice reinforces the subconscious negative biases of the subject away from these negative propensities merely by this continual demand by the researcher for the subject to only focus repeatedly on smiling faces. There is a measurable reduction in stress and depression and addiction in the subjects through doing this. In my aesthetic creative practice I do a similar therapy on myself as most artists do. I select and focus on the things that intrigue me regardless of
any perceived relevance or practical application to my current practical situation. I do this by recording things that I notice appeal to my mind and create a pleasurable response, for unknown and perhaps, intuitive, but authentic, not contrived, reasons (which is an art in itself). These may consist of images or concepts but, more importantly, aspects of my real world. I have realised over the years that these initial, authentic “noticings” have set my mind up to be further attuned to noticing more along the paths of particular perceptions or making connections I had not foreseen, as in the CBM subjects who have no idea of their subconscious dispositions, before or after therapy. This is relevant to and supports my concept of building my creative directions by choosing to follow seemingly unrelated and parallel, obscure concepts purely for the identified pleasure they produce in my mind. In fact, I suspect I continually set myself up for future “ah ha” moments as proposed by the neurologist Ramachandran in his paper *The Artful Brain*, on the purpose of art and its connection to the brain. Identifying authentic choices for focus has only come with experience over many years. It is a subtle process of knowing my reactions and feelings when my mind latches onto an image, a thought, words or a particular gesture, or working with materials and how I feel about negative directions I have pursued in the past. I think the early stages of a creative path entail quantity and persistence, trying many things to work out what you don’t like as well as what you do like.

**Many creative thinkers and artists suspend gratification and spend years on apparently useless tasks and pursuits in the hope that one day their efforts will reward them with a single, but profound, “ah ha” moment, when the jigsaw puzzle comes together in an unexpected way.**

Over the years I have found that these apparently obscure, aesthetic pleasures of mine mould my perceptual bias and subconscious theory and eventually complete an aesthetic jigsaw puzzle that leads to further insights, perceptual tendencies or practical applications. Sometimes these revelations have been dramatic. I hope to have illustrated this here in a way that is useful to the architect. This also ties in with Merleau-Ponty’s *The Phenomenology of Perception* in which he says, “The thing can never be separated from the one who perceives it...” Also Karl Popper’s idea “that observation is theory laden”. I agree with these but add the idea that the perception and theory, albeit subconscious, can be changed by deliberate effort as neurological science suggests. My previous work and current indulgences form how I approach this PhD project.

- **Previous Work as a Predisposition for Research (11)**

In my previous work I introduced geometric structures that I had made onto a specific Australian landscape on which I chose to live at various times. I did this with no plan
other than to wait and see what might happen. My strategy when in doubt is; *do* something! Much of the land was the open treed, grazing of my youth. The site for this project has large granite plates and outcrops of granite boulders as well as open landscape. I had introduced the odd geometric structure on odd occasions for many years, intrigued by the contextual contrast, but, to my dissatisfaction, not moving much beyond that point. I carried with me in these days a dissatisfaction with the prospect of just making static sculpture or things, although, as an industrial sculptor, not lacking the skills to do so. Earlier, I longed for a technology that could synthesize 3D objects and space in the real world in real time, as technology was already doing with sound and music. This was indicative of my growing outlook and desire to see the world as moving systems rather than populated by static objects. ("A rock is an event by degree".) However, I had also the desire to work directly with my experience of nature and interact with material, using my hands rather than exclusively in the abstract. For the Masters and this PhD I had to live on a site and experience it for a long time in a variety of natural scenarios. I had learnt so far that my creativity was most likely to result in something if I was on the landscape with the uncertainties of weather and working directly with material.

Previously, by casually placing geometric structures on landscape (a shooting in the dark strategy) and then documenting controlled experiments I learnt the following:

**A.** That three-dimensional structures could apparently double in size or take on a new shape, METAMORPHISE just by the action of the sun: the “object extended”. This is an “adumbration”, a variation in the appearance of an object of perception although it has not varied. This was initially by an anamorphic process different from mere reflection. The reflected image although later used by me, stays basically the same as the observer moves, whereas the projected shadow, an anamorphic image, alters, when the observer moves. This difference can be exploited when the two forms come together or separate as the observer moves or the natural conditions change.

**B.** The object can apparently make an “object elsewhere” by ANAMORPHIC PROJECTION using the sun. One of these experiments involved suspending the object in the air, thus separating the shadow and the frame for the first time. In the first case, projecting a cube on the ground. The term “Unselbständigkeit” (non-self standingness) was connected by me to such an event. In discussing objects, the philosopher Edmund Husserl uses this German concept to denote an object that cannot exist unless another object is present. This effect appears in situ (not only in the photograph next page). I was now thinking in terms of PROJECTION.

**C.** The POSITION of the observer is critical to phenomena of this nature. Anamorphosis, unlike reflection, is dependent on the observer being in a precise position, otherwise the observed structure will distort or fragment.
D. In the phenomena I am dealing with, the **TIME** of the observation is critical also. The hour, the day and month can determine the form that appears.

E. There is the added dimension of **MOVEMENT**. The movement of the observer alters what is perceived. For the stationary observer, the movement is in the form or position of the phenomena relative to the observer.

F. **TRANSIENCE**: fading in and out of existence with the passing clouds in front of the sun was another aspect of change. A strong suggestion of a reconfiguration of an object would occasionally change slowly or rapidly, in resolution strength or disappear, reverting the object to its original form. This was dependent on the speed and direction of the upper winds as they moved the clouds.

G. **REFLECTION**: I discovered that after rain, the film of water left on the surfaces of rock and even rusted steel plate was highly reflective; this lead me to polished granite, wet or dry. Possessing reflective qualities, this is a robust long-lasting material that could be used outdoors.

H. **LONGITUDE, POSITION ON THE EARTH**: If a structure reconfigures in a particular place at a particular time and orientation, it will reconfigure at a different time if moved east or west, while maintaining the same orientation. When I fabricated a steel sculpture of a half chair I did so in a small time window at 11.30 am every day until completed. The month was May. However, in the same month I moved it about 100ks to the east. In the new position, it formed a complete chair at an earlier time although the orientation was the same. Orientation was determined with marks on the sculpture and a magnetic compass. As a consequence, close attention must be paid to the particular geometry of an object and the site relative to a chosen time.

- **Initial Research Projects (12)**

The following photographic series was taken on Site 1. In **experiment 1** with bricks in the form of steps and a suspended frame. In **experiment 2** I am using a glass plate, right angle 3D steel frame, tape drawing on glass, sun and shadows. This resulted in seeing the potential of the window as an instrument combined with a real object, images on the glass surface and working with anamorphosis. It is important for these types of experiments to have the materials at hand because in this case, I didn't start with the conscious idea to experiment for possibilities with windows. I had seen the glass present on Site 1 and I had used one panel in a window already. I then decided to put things around me together to see if anything happened, and to generate ideas (heuristics). This is a common creative strategy of mine; when stuck, I start handling materials with no idea in mind, and insight usually follows from the actions. There can be different geometrical relationships between each element in the system.
Still Outside

At an early stage in the PhD I was still thinking in landscape terms; phenomena in landscape. Most of the projections and reflections to date from 3D frames were outside on flat ground or water. Any undulations or rocks or ripples on water would alter or distort the image. I reasoned that it would be another path to follow in making objects that compensated for a very particular topography in a particular place at a particular time. Objects which were deliberately distorted, but under the right conditions would construct a perfect image on an irregular surface.

Experiment 1. (Suspended frame on steps) Site 1. April 17. 2009. Photo. JMCG.

The design of such objects could be done by computer with scans of the topography first. This problem reminded me of earlier work where I had molded strips of lead over the contours of rocks. Perhaps I could work using lead strips on the land contours to create an anamorphic image, in situ at first, then work backwards to deforming an object and its shadow onto the lead. Again I was inclined to do this manually. I suspected that by doing so, more surprises would arise.
Windows at Site 1

For practical reasons I decided to put windows in the shed. This required cutting holes and moving strips of cladding around, which I documented. This allowed me to see the effect of those temporary holes on the inside giving a patchwork view as I looked out and various effects as the sun streamed in. I was starting to think more in terms of inside and outside.

I had glass panels stored outside for fabricating windows and began using a panel in conjunction with existing 3D frames, in various configurations. I could tilt and orientate the glass relative to these frames and the sun. I also drew on the glass and aligned the subsequent shadow projections with smaller 3D frames on the ground. This created ambiguous effects. What was real, what was image and where were the objects positioned in space and relative to the glass and the ground? (Refer to photos on previous page.) The glass leads to the window, a surface at the intersection of the outside and the inside. A surface that normally passively lets light in or out, allows looking in or out but is looked through, not at. Now there was a possibility that the window could be a more active component; an instrument through which to explore the relationships between the viewer, the interior and the outside. The window could be a projector as well as something to look through. A design on the window could be 2D or consist of structures on the inside or outside surface of the glass, or just a structure in an opening. Such a window could project anamorphic images into the interior, combine such images with interior objects or alter the interior spatial geometry. Looking through the window to the outside designs or structures at the window could align with things in the environment, making new structures from that perspective.

Subsequently I placed two windows in the shed on opposite sides; one to the north and one to the south. The southern window was approximately 1.5 meters square and centre-pivoting horizontally on a vertical axis. The northern window was recycled from a glass, horizontal, bi-fold industrial door measuring 1.5 metres vertically and 3 metres horizontally. On its shorter vertical sides were centered pivots so that the whole length of the window could be rotated and tipped to any angle. In addition to this, the side pivots were each on horizontal tracks that protruded out and away from the building. In the afternoon sun the entire window could not only be tilted to any angle but also moved horizontally away from the building. These were to be windows for experimenting and accidental noticing inside and out. I was beginning to regard the shed as an instrument.
Experiment 2. *Window as instrument?* Site 13 pm. June 7. 2009. *Photo. JMCG.*
Experiment 2. *Window as Instrument?* This sequence from a slightly different view and configurations combines anamorphosis from a 3D frame and drawing on glass.

The preceding sequence was a hastily cut mask for a cube in steel plate. The purpose of this experiment was to see if the reverse of shadows of structures was also a possible direction to propose for larger scale work. This exercise was inspired by cutting through the metal cladding of the shed while putting in windows. Because of ill health I had to abandon further experiments on shed windows. However, I was now inside looking out as a point of departure for moving to Site 2.

*Anamorphic Sand Pyramid with Twigs.* Last gesture at Site 1.
Photo. JMC. 2014.

This small work was a spontaneous gesture to my ongoing sensibilities and has yet to reveal an architectural thought, however it connects sand with nature and geometry.

**Welding with the Sun (or Moon)**

One of my early experiments for this project, while still outside at Site 1, was welding up a bigger version of my half anamorphic chair. I wanted to see if I could make a half chair that didn’t look like a half chair, because of its strange angles and would only emerge as a full chair when the shadow and the steel combined. This would only happen from a particular eye position at a particular time of day at a particular month and only on my landscape (the geographic co-ordinates outside my workshop door). Of course this necessitated me to begin working, cutting and welding the 100mm RHS steel at 11am in
May because it was during May that I began. I discovered I only really had about a fifteen-minute window of opportunity before my observations were no longer relevant. I also had to mark the position and orientation of the emerging sculpture so I would return it to its correct position each day during fabrication because unfortunately, in my enthusiasm, I had not noticed it was in the middle of my track. The cutting of the steel at odd angles required me to place particular lengths of steel at very particular angles and then walk to the observation point and see if it worked. I would mark the cutting angle with chalk and place it in position after cutting. Usually my first cut was wrong because many of these cuts involved compound angles. So I would return again and again to the observation point only to recut or weld or grind the weld again and again to get the placement correct. I realised I could use a computer program specific to my location, time and observation point to establish the cutting angles. To establish the viewing point for the observer in addition to a marker on the ground I welded a cube to the sculpture along its longer upper length. This was put as an indicator the observer was in the correct position for viewing the chair. When the observer saw a perfect cube they were in the right position to see the chair.

This exercise spawned the idea for a 3D sundial consisting of a circle of half cubes and when the observer moved to a position of seeing a perfect cube, that was the time. It also created the idea for the correct alignment for landing aircraft, but that’s not pursued here. This also reinforced in me the critical nature of time and place in the design and occurrence of such apparitions.

Anamorphic chair for 11:30pm. May. Wrong time, wrong place. Site 1.
Mild steel. 2012. Fabrication JMCG.
Drawing on Walls

Another experiment I did in anamorphosis at Site 1 was to see if I could combine a partial 3D structure with a drawing on a floor and wall to complete the structure. This opens the possibility of not only drawings on interiors combining with 3D structures to complete the object but instead of a drawing on elements of the interior, projected shadows from another object could perhaps be used to complete the object anamorphically; or sun illuminated cutouts in the floor or wall; or rill mirror projections.
Parallel Painting Experiments *Landscape 6 with Geometry of No Particular Relevance*
Subsequent Experiments Site 2

From the initial experiments at Site 1, I moved to the interior of Site 2.

Experiment 4. Tape on outside of east window projected onto interior stairwell wall.

Experiment 4. Site 2.
Note transition from image 1 to image 3.

A collection of concepts, observations and experiments. Photos. JMCG.
Attempts at Rill Mirror

The carved granite tile. Site 2.

The first attempt to emulate what I had seen on the kitchen ceiling of Site 1 was to have a granite tile carved in a simple design.

Reflection on exterior wall from granite tile (distance: 1 metre)
When I received the granite tile back from the stonemason, I inadvertently discovered in addition to being a potential Rill Mirror, it also reflected the carved design of the cube onto a nearby exterior wall. This observation opened the architectural possibility of stone being used to not only hold the water in a specific design, but to act as a durable mirror to project a 2D design onto surfaces from plazas or interior floors.

Experiment 5

The groove in the granite tile in the convient shape of a cube was designed to hold water and then project the design anamorphically onto another surface; this was not a success. The scale of the grooves was too fine to hold the water in a 2D cubic form. However, I discovered that the stone reflected the action of the water as it flowed or was evaporated from the tile. I made a video of this fire-like action of water on stone which is included in this submission. The following images show the setup for pouring the water onto the tile with the moving projections on the nearby vertical surface.

The setup for Experiment 5. Granite tile is in the sun and projecting image onto vertical surface. The wooden frame is for the later Experiment 6.
Water as Fire. Experiment 5. 3 August 2011. Video still. JMCG.
Experiment 6. Chasing Multiple Shadows Under Water

While trying to produce the Rill Mirror with the inadequate grooves in the granite tile, which was the result of a misunderstanding between myself and the stonemason, I nevertheless discovered the preceding effects with water in Experiment 5. While doing so, I also intuitively placed a spare wooden incomplete cube on the tile and noticed the multiple shadows in the projected image from the sunlight. Inquisitive about these multiple shadows from a single object and one light source, I decided to suspend the wooden cube and video the transformations to watch more slowly at a later time. I realised at the time I was, until then, thinking of ground based structures for architectural applications whereas now I was considering the possibility of suspended and moving structures on a large scale to project their shadows. The video of this and other observations and experimental results is an attachment to this document.

*Experiment 6. Setup with suspended wooden cube. 21 August. 2011. JMCG.*
Experiment 6. 21 August 2011. Still from video. JMCG.
Experiment 6 (161 to 173) Site 2. 11 AM, 21 August 2011.
Videos and photos. JMCG.
Transition from Geometry to the Folly of Architecture (13)

It was with this knowledge and predispositions that I moved inside the building. Initially, because of my experience of working in the field, thoughts of working at an architectural scale became the idea to create larger constructions in the field. I imagined, for example, approaching a geometric architectural folly of a particular geometric design. If I was, by chance, approaching a building at a particular time of the year, at a particular time of the day and from a particular direction, the structure would dramatically transform before my eyes. Perhaps it could transform into an Escher-like ambiguous construction but in three dimensions. This is entirely possible and could be a long-lasting attribute without the use of mechanical or electronic systems.

Not only did I entertain this thought, but I also proposed a simple large architectural cube in the open landscape, similar in it’s positioning as the camera obscura or the astronomical telescope. A cube that did not change on the outside and was perhaps empty on the inside. An empty space being conducive to thought. However, once inside under certain conditions and times it would change internally, or something would appear in the room perhaps traversing it over time, as the sun moved. Another variation on this design was the idea that upon entering such an interior it would set up the observer to view the outside from a particular position. Similar to the way the veranda sets up one to look away from the building and across the landscape. This would allow a transformation to take place as components within the room, or on the viewing window, aligned with components, designed or otherwise, outside. These thoughts not only led to putting windows in the shed where I was living but led to construction of the “Cabinet of Solar Anamorphosis” (after the print Cabinet of Pyramidal Anamorphosis by Jean Du Breuil, 1649).
Cabinet for Anamorphosis

With my need to experiment with windows and their possible projections into rooms I had a cabinet constructed so I could do this on a smaller scale in real time rather than learn a new computer program. I wanted to work directly with the sun, interchangeable window slides and structures in the room. I have only begun to explore this area.

Placed in the sun, this cabinet (a model room), allows me to experiment at a manageable scale, by controlling the amount, angle and the shape of sunlight entering the room.

It also allows me to experiment with designs, 3D or 2D, on replaceable window panels. This facilitates projections into the interior and possible alignments with various model structures or objects within the room. I can let it sit over extended time periods and
watch for accidents as I come and go at different times. I have not been able to use this cabinet to any great extent because of illness. However, although we might be able to construct computer programs to predict what happens in such a cabinet, we could miss the accidents outside the program’s terms of reference. For this reason, although this work could be further advanced by using computers, I think a combination of computers and hands-on physical experience with material and the direct experience of these with nature is a preferred strategy for the architect. Later in this paper I suggest using a video camera and monitor to enable drawing in situ.

Site 2. April 1. 2012. Photos. JMCG.

Second Attempt at Rill Mirror

With the failure of the stone grooves I realised they were not wide enough to hold water. I also realised that the grooves needed to be shallow like the water on the roof, to respond to the lightest breeze for movement across the projected lines. I made a drawing of what I required and showed a local metal fabricator, but because my drawing was a design for a 2D object that had perspective for a possible anamorphic projection, they obviously didn't understand the design. I subsequently asked a sculptor friend to make it and initially he was perplexed also but stuck to my drawing and produced the large one and from the scraps made the small triangular Rill Mirror pictured here. During the construction of the larger mirror he had to check for leaks because these mirrors are essentially long, narrow, shallow tanks for holding water in the required design. While doing so he noticed the moving projection on the studio ceiling and videoed the result for me. This was the first indication that my new approach worked. The slightest knock to the Rill Mirror set off a rapidly moving abstract image and with the settling after the shock, mysteriously returned to the designed formation. At this stage I had not come up with a word to describe the
mirror/reflectors. Again this happened by alignment; I was walking past a computer with a dictionary screen saver displaying the word “Rill” moving across the screen and then disappearing. Armed with my patience from years of watching slow phenomena, I waited or its return and thought it an entirely appropriate definition for the concept. Rill: A shallow channel cut into soil or rocks by running water (Oxford World Dictionary).
Stills from video and photos of triangular Rill Mirror.

Experiment 10.
Projection from floor to wall
*Experiment 11.*

**THE HARDWARE OF PROTOTYPE RILL MIRROR.**
From Chance Encounter to “Rill Mirror” and Poetry

By this stage of the project I was aware of seeing even slight or subtle occurrences.

I always had a camera with me and I recorded many, too numerous to include here. However, one casual observation while having breakfast at Site 2 in Castlemaine proved to be a significant insight, even more so because the radio happened to be playing Mozart at the time. This observation led to the concept and prototypes of the “Rill Mirror”. A rill is a small narrow stream or furrow cut by the action of water or designed that way. I came across the term, again out of the corner of my eye, as I walked past an office with a screen saver of words and definitions. Later, it also pricked my memory from the poem Kubla Khan by Samuel Taylor Coleridge.

“So twice five miles of fertile ground
with walls and towers were girdled round;
And there were gardens bright with sinuous rills
Where blossomed many an incense-bearing tree.”

The observation was after rain had fallen, the sun had come out, there was a gentle breeze and the geometry of my observation vantage point was such that I could see this: I noticed a long narrow reflection on the ceiling that had a curious movement within its boundary. The dimensions were approximately 100mm wide by 1000mm in length and I have not seen it since, (at the time of writing approximately two years ago). Akin to my first insight of the anamorphic shadow from my pyramid frame, I knew this was significant, although did not immediately see the potential. While I was videoing it I suddenly noticed a standing wave occurring as the breeze rippled the water, obviously trapped in a narrow formation on the zinc coated metal decking of the outside roof. Because my mind was primed to notice such incidentals and to think in terms of architecture, I immediately suspected this had something applicable to architecture. Initially I asked a stonemason to carve a 2D line image of a cube into granite stone tile, but when I tried to fill the channels with water they were too narrow. However, in pouring water onto the stone as it reflected the sun onto a wall, the pattern generated by the moving water was similar to flames. I have recorded this on digital media. This also told me that wet areas of stone could be used for projection at an architectural scale and that engraved stone similar to what I saw in Barcelona Cathedral can project the design engraved into its surface. This also has potential for designing architectural events. From plaza though window to wall or structure.

With the failure of carved channels in the granite to operate as intended, I designed a prototype metal mirror to be constructed with wider but shallow channels for testing my theory that I could emulate the standing wave water reflection I saw on the ceiling.
but in a controlled design. It is interesting to note that the engineering fabricator had difficulty understanding the drawing and I suspect this was because the plan view looks three-dimensional. I had the idea that this design would perhaps be foreshortened in projection to at least produce an image of a cube. (See drawings and photo.) The eventual fabricator, a sculptor friend, who had no such trouble and made me a small mirror from the left over channel we had formed. (See photos of cross.) This smaller unit was more portable and easier to move into optimum positions. These mirrors worked well, projecting their particular designs onto interior walls and ceilings. The surface of the water could be gently moved by a gentle breeze which would make the image projected shimmer like a ghostly apparition or vibrate violently if nudged so that the image completely breaks up and slowly, gracefully returns to normal with vibrating lines. Because these phenomena are moving, the only way to appreciate their real impact is in situ or via video. At the time I wrote up the following statement on the concept of the Rill Mirror:

Still from video of standing wave reflection on ceiling from water on roof. Insight for development of “Rill Mirror” Site 2. (Note: Not observed since)
Rill Mirror example, prototype for testing principle. Galvanized steel, marine ply.
The Rill Mirror Concept

A direct result of observing an epiphenomenal occurrence, where building and nature aligned.

The Rill Mirror concept is for the capture and use of water or possibly other liquids in narrow channels (rills), in designed 2D or 3D configurations.

The channels, when filled with water, can project light, in the design configuration of the channels, treated as lines in a drawing, onto nearby surfaces or into spaces. The rill channels can be designed, cut or etched into metal, stone or any material that can hold fluids.

The rill channel dimensions of width and depth are determined by the scale of projection required. However, they are primarily shallow for greater reflective effect. The length of the rill lines is entirely determined by the required configuration for projection and would only be limited by space.

Exterior rill channels can collect rain and with the arrival of the sun will reflect the configuration onto exterior or interior surfaces (perhaps via windows) in any desired design. Anamorphic projection can be used to give apparent 3D apparitions, even altering the geometry of a building or space.

With the addition of breeze or wind across the surface of the water or vibrations from the ground, the projected image becomes kinetic and can totally transform into an abstract, gentle or violent moving image, that can completely break into an abstract motion, only to dramatically return to the original design with very fluid vibrations, eventually stabilising back into the original design.

Rill mirrors depend on the elements of rain, sun and wind within particular geometries, and therefore generate ephemeral or transient images that also change position with the transit of the sun.

Rill mirrors therefore lend themselves to architectural design where a kinetic, transient, timed occurrence is desired, with simple, robust and long-lasting materials without the use of problematic high technologies. The concept can be applied to numerous architectural scenarios where any form or number of lines can be projected. Rill mirrors, being shallow, also lend themselves to architectural design, even on exterior plaza areas or floors or any flat area, for example roof tops.

The Rill Mirror image is ghost-like and therefore, depending on the design, can instill a sense of mystery or wonder in the observer, of the space or surface where it appears. It can be used to project words or symbols under certain conditions or continuously under artificial light.
Sound, Space, Geometry and Landscape

In my frustration at not being able to generate 3D objects and spaces at will with the flick of a switch, combined with an interest in systems as self-developing events beyond my artistry or design intentions, I began to use sound, which was easily generated and manipulated via electronics. I reasoned that sound is a 3D phenomenon. I set the initial conditions for these processes with no idea how they would evolve, an idea I was attracted to. I proposed various beginnings as my contributions to these processes. I set in motion a system where sound generated a cubic space via extended feedback and looping. A single sound or a sequence of sounds, for example a word, would enter the sound system at the center of a described cube and then, in a cubic sequence from each of the six cubic directions, the sound would return to the center, thereby the process was combined with static 3D geometry, namely, a cube. I was not interested in the sound in itself, but was using sound as 3D compression of air in a cyclic directional sequence that, although not visible, described a cube. (Later, however, I toyed with significant beginnings, for example; a word of good intentions, or the last words of someone dying.)
The only visible components were thin luminous green lines that mapped where the air cube was occurring. Standing within the four metre green diagram, in pitch black, even without the sound, one was reluctant to step outside the diagram for fear of tumbling into space. Upon reflection, I suspect this by-product of the piece was my first experience of the drama of perception and space, perhaps highlighted by my use of unadorned, basic 3D geometric structures that eventually led to my interest in architecture.

To describe the process with the sound of a finger click or a word for example (I prescribed many “beginnings” at the time) at the center of the cube; the click would come back to you and the system, from a sequence of directions, corresponding to the apparent surfaces of the cube. With each circuit the sound was continually layered, distorted and became more and more complex. Through this six stage feedback process, (six directions from the six surfaces of the cube) the spatial experience was of increasing spatial depth with rotation at the same time, through sound, a cubic “whirling dervish”. For example, the sound of a pin dropping or a single word within the space could end up in a cacophony or just fade into the distance. It certainly brought home how sound affects our perception of space and how processes can proceed through space, an interest that persists today. (“The Crow” in my notebook is one example of applying this sensibility to architecture, where a distant outside crow call comes into the building, moves from room to room, and alters as it goes, by the acoustic nature of the architecture and inherent distortions in the electronics. The audio work of Alvin Lucier’s “I am Sitting in a Room” performed about ten years after my project, is a similar, but slower event of sound in architecture.)

I also learnt that the “beginnings” could evolve in three different ways and at primarily unpredictable rates, which affected the experience of time and space. Depending on the nature of the interior walls, what objects or people were in the space and how the feedback system was set, the process of evolution could expand, diminish or just remain level. However, because the rate could vary, sometimes one was never sure what the nature of the evolution would be, even after days. This was also a practical early experience of the much later touted, “tipping point”. The following poem, Fitzroy Room is an attempt to convey the experience, in my upstairs studio, when I first switched the machine on. I suspect this sculptural work set my attitude to the idea of space having a processing function; a space as an instrument, and later architecture as an instrument.

FITZROY ROOM

In that room
With no windows
My machine
Was running.
It listened
To my breathing
And gave it back,
To upstairs.
On a hot, quiet Sunday
When I was drawing,
And the scratching
Across paper  
Came back to me,  
With my breathing.  
At first from one wall  
Then the others.  
From the ceiling  
And the floor.  
Very quietly  
Creating a distance,  
Beyond this place.  
A space extending  
As my footsteps  
Went into the walls.

In the laneway  
Down below  
A distant dog,  
Barked and came to me  
With the sounds of breathing  
With the sounds of my lines drawing,

Up the stairs  
Onto a landing  
Outside my door.

And in each rotation  
In six directions.  
Wall by four,  
Ceiling, floor,  
Over and around  
A canine crying  
Through the walls  
Around and around  
Away and away,  
Layer with layer  
With a drawing,  
With a breathing  
Lost in sounds,  
A music
Of their making
From a room,
Blending, modulating, breathing
Into a darkness receding,
From this time,
From this room,
To,
Infinity.


From the sound cube system 1972.

I had other attempts at reconciling static geometry and dynamic systems in the real world rather than on a digital screen. This set the ground for my ideas about architecture. One of these used stroboscopic, ultra-violet fluorescence at night in a rural paddock. It consisted of a four meter high cube (architectural scale) rotating on one of its corners. Because of the remoteness of the site, I had to use a portable generator to power the electric motor I had buried in the ground and provide power for the strobe lighting. The sound of the generator distracted from the impact of the experience. Despite this, by doing a kinetic, incongruous to the site, installation, I noticed some unpredicted results.

One unpredicted phenomena that gave an experiential insight that night, which I held onto and is a central concept for this PhD, is the importance of the observer in forming reality. For example, while spinning, the cube would sometimes visually form configurations other than a cube. It would lose one or two of its lengths or form two separate fluorescent green rectangles hovering above the land, like a very large wire frame computer drawing. (No significant photographs of this work remain). The most dramatic effect for me was when the structure was not rotating at all and the ultra-violet lights were not stroboscopic but were on. Under these conditions, it was just an intense, green stationary, neon-like cubic structure on a remote hillside at night. (The farmer, whose property I was on, received phone calls from up and down the valley that night.) While observing this at various distances from a few metres to 25 metres for example, I experienced the following: if I moved around the structure the effect of its apparent rotating, as if following me, was dramatic. Not dissimilar to, but more powerful than the eyes of a portrait painting, apparently following you around the room. This UFO-like object was following my movement around the paddock as our spatial geometric relationships varied and therefore its perspective relative to me, changed! A most unsettling experience that I have since had observing industrial robots
move, a movement that suggests intelligence. In my example with this cube, however, it was not moving, I was! Doing observational perspective drawing also makes you keenly aware of how lines, angles, planes and space dramatically alter with the slightest movement of the observer. Until the discipline of such drawing we largely use these cues unconsciously as we move through space to ascertain movement of ourselves or in the environment. We are easily fooled in this way, as I was that night in that paddock. As Copernicus had difficulty making clear, it is we that move, not the stars. For most of us the sun still rises, we are not going down or moving towards or away from it.


Propensities brought to the PhD

My experience with the landscape cube and the sound cube was perhaps also the start of my interest in the following list of seven items, eventually having implications in my attitudes to art and architecture culminating in the Masters and this PhD.

Firstly: To set in motion events or systems with unpredictable outcomes or even unforeseen meaning, rather than make specific things, particularly those that I could completely visualise or verbalise beforehand. I still have this attitude today. I had begun preferring to regard my work as “Methods of Enquiry” rather than producing particular aesthetic “things” or statements. Any spatial arrangements, photos or diagrams were mainly aesthetic prompts for inclusion at a later stage, when my sensibilities had changed, into an ongoing puzzle. This how I continue to work now.
**Secondly:** To somehow work with transience and solidity in space, at the same time. Although intellectually, a rock is an event by degree, I was dissatisfied with this position. I intellectually knew this to be the case, but it was not in my direct experience, not through my senses, my body. This ties into my confusion for many years over where modern physics fitted in with my work. This is dealt with, particularly in relation to architecture, later in this project.

**Thirdly:** To work with my pleasure of being in landscape (topophilia) and working with my hands as a basic emotional motivator, by returning myself to the tactile and spatial sensuality of being outside and doing something physical while there. I was beginning to see that I felt better and was at my most productive when I could readily move from writing and reading, or, as it is traditionally called, the cerebral, across to physically doing in the material world, when I feel I need to. “I need things to think.” (Goethe) If I spent too much time and intensity in one, I would start to feel I was neglecting the other and would feel unsettled and unbalanced. I believe that to work with the hands is equally as intelligent as working abstractly. Indeed, they are not as separate as language implies. (Richard Sennett and Iain McGilchrist.) The open landscape also attracts my introverted side, providing enjoyable solitude with less interruption, conducive to reflection. Open landscape also provides a challenge because of its perceived vastness, beauty or emptiness. (Later in this paper I refer to the transfer of this mentality to rooms, particularly empty rooms.)

**Fourthly:** To minimise the use of material things or images that already carried potent or multiple associations, (which for the human mind, is nigh on impossible) and therefore, as the next best thing, to confine myself at least to basic Euclidean geometry and space. I know this is a cultural imposition but one which I regarded as the least personally expressive, the least complex and potent for my dealings. I was beginning to use the same shapes over and over again, and therefore carrying little scope for reading expressive value or layers of meaning. Euclidean geometry is my found object. Despite advances in mathematics, Euclidean geometry is still the geometry of experience and therefore the geometry of architecture.

**Fifthly:** A preoccupation with what I call “the transitory poetic event” in real time, either observed or created by myself. An event not literally explicit, an event that continues to intrigue, no matter how short or long, no matter how small or large.

The interest in transitory events brought me to a dilemma; “how do these transitory events fit with the static world of solid geometry and objects?” and “how could I work with both?” Although interested in processes we call events, I was also intuitively preoccupied with static 3D geometric structures. In the Masters I resolved this dilemma in one form, by seeing a transitory event (shadow) as a static object (frame). In the PhD I apply it to architecture as the static geometric structure, which is necessary to notice.
things changing (events). As I have mentioned, our experience of time is dependent on noticing how some things change with reference to things that do not change at the same rate, or to our mind, are not changing at all, like most architecture. If everything changed at the same rate we perhaps wouldn’t notice change and have no notion of time. In noticing these changes dependent on our static buildings, I am not dealing with all such events, only the ones that I regard as aesthetically significant. The aesthetic worth of my selections or fabrications for others is to be decided by them.

Sixth: Although I was aware of the tremendous ability of modern technologies to produce spectacular visual effects and the obvious choice for my interest in process, short events and systems, I had doubts. Considering I was perfectly comfortable with a variety of technologies from mechanics to electronics, I was still starting to grow disenchanted as to whether I wanted to work through it in the long run. I found myself rather tired of the tendency of modern technology to provide short-term thrills, where it seemed to me, the technology itself dominated. I was becoming more interested in technology that is simpler, non-intrusive, long-lasting, not requiring continuous monitoring or maintenance and not inclined to become obsolete. However at this stage I had no idea how to achieve this without modern technology.

6B: Although a lot of manipulation is possible in so-called *virtual reality* via computer technology and a lot more is to come, I have always been only interested in achieving in the real world. In fact, one of the comments on the shadow sculptures from the Masters was that the same effect could be achieved in Photoshop. The *photographs* of the phenomena could be duplicated in Photoshop, but the point is the phenomena actually existed and was experienced by the observer in the real word. In this PhD it is the same; *I am interested only in phenomena that can be observed or achieved at the architectural scale in concrete reality, not as an image on a screen.*

And finally: it is not only the *position of the observer* unavoidably attached to the geometry of the situation that determines what can be seen but what I call the *attached observer* as well as the *attitudes* of the observer. The observer’s unconscious preferences in what to notice and what to not notice and how long to devote to noticing sets them up to see what they do, their form of attachment in the total system of perception. I apply the same judgment to myself. This led to a series of work, at one time, centered on “*Matters of Attitude*” and I still continue with the notion that I can change my unconscious attitudes by choosing to alter my intuitions by doing work of a particular nature. *The evolving observer.*

Years later in the Masters project, these concepts came home to me, when I made a shift from regarding a shadow as “just there” in passing, *with* the object but not really seeing it, to looking at the *shadow* combined with the casting object *to form a new object*, not on a screen, but in my actual 3D experience. I suspect I could have not made the
simple perceptual shift required if I had not had the years of deliberate preparation in my mind. In this PhD, with the focus on architecture, this has spilled over into *attitudes in spaces*, that is, changing my attitudes toward a particular building or space I might be in. I am not suggesting that this is easy to achieve in a short time nor that it is simply a matter of conscious choice or formulae, but it is enhanced by the *unhurried mind* and the *prepared intuitive mind*.

**Notes, Phrases, Images and Intuition**

As a consequence of the concept that the *attitude* of the observer is also instrumental in what is seen or disregarded, I developed the strategy of using the same found object (I chose the ubiquitous wooden chair or its image) over and over again but regarding it and using it in many different ways at different times. This was with the suspicion that *my attitudes and I* were different at different times. (Refer to my “Blueprint Drawings” books, “Red Laser Chair” and pastel drawings below.) “Same object, different attitudes” or with the same drawing, different titles or sub notes.
Laser Chair Drawing. From the series Engines and Objects as Drawn Events. 1978. JMCG.
Blueprint diagram chair 1980

Hard bound in multiples to be drawn on over time for different attitudes. Hardbound books x 2. From 1980 to present.
From a series of pastel and pencil drawings with set layout, masking tape mask of chair image, placed by intuition, then colours and actions decided spontaneously while drawing. Title words added later. Dated: up until 2005. JMCG.

This was also the sort of single page concept or phrase that I was now starting to record in notebooks for future reflection and with the suspicion that by doing this, I was modeling my intuitions. A habit I continue to this day. I regard these notes, words, and
phrases of an equal weight in my creativity as diagrams, objects or phenomena. They are isolated on a page as the simplest form of an allusive or attractive idea. Then they are restated in various forms on other pages at other times, put into lists or combined with other concepts, images, things or events. They are an attempt to distil, prompt and form creative directions just as equally as the other 3D work while acknowledging that I don't know how this may work. During this PhD these words evolved into longer arrangements or poems. I now use poetry for intuitive development, providing hunting concepts that can be precursors to architectural propositions, poetry for design (for example, on the subject of rooms).

THOUGHTS HAVE WINGS

Thoughts have wings
Like trapped birds,
For a while
They fly into
The rooms of our thinking.

Beyond grasping,
For a while
Desperately seeking,
Sometimes in panic
For freedom,
A way out perhaps?
Wings beating,
Losing feathers,
Breaking, the sacred ornaments
Of the mind.

They might frighten us
As strange intruders do,
While we wave arms of reason
Or faith,
From the floor
Of our certainties
As we set conceptual traps
To, no avail.
Sometimes in vagueness
When I enter a room,
I find a black crow sitting
With one ancient eye fixed,
On me.

As I circle in ignorance
There is a fear
From a hundred nights
In me.
Deep from history
It watches,
As if to say,
"Try and take hold,
If you dare,
Again".

Sometimes in dreams
I enter by accident, perhaps?
These dark rooms
And there is light
And a thousand
Nightingales
Suspended, still,
For my examination,
For weighing,
One, against the other.

Sometimes the little finches
Fly out as quickly
As I step in.
They are lost to eternity,
To the wild,
From which they came.
Or to find the rooms of others
And torment them.
If they see them there,
If they bother
To enter.
But my pleasure is ecstasy
When in casual wanderings
I pass by a window or door
To enter,
And find standing
Still,
With a clarity perfect,
In the alertness of the sun
That bird of paradise
Has come.
One thought glowing
In, a room.

Having flown
The great distances of mind,
Weathered the storms of despairs,
Over the synaptic mountains
Of doubts,
Along the rills of reason,
Down to the valley of rooms.

Arriving,
Clear and succinct,
In a poetry of insight,
The poetry of light
That settles,
Between the walls of wisdoms
Grasped,
In the rooms of my bliss.

John McGlade  13/8/2013  To the pleasures of thoughts in rooms.

•  Notebooks (14)

Example of A5 bound digital notebooks for this PhD x5, 190 pages. For recording observations, proposals and concepts to generate further thoughts and intuitions
Method

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Method of establishing projected anamorphic 3D images for water strip mirrors.

- Structures forerunning of counting for dissolving while maintaining
- Dirty camera close to
- In final printing position of original image

- Philosophical object
- Object disappearing
- Philosophical object ""
- Philosophical object, cloud passing

Cloud

Foucault's pendulum + shadow cube

Philosophical object
Selective Non-Sense Over Time

From my earlier work I made the following two observations amongst others, regarding method:

That a nonsensical, intuitively drawn diagram may be realised sensibly at an experiential level at any time (become real). What I draw, photograph or create, at a particular time when it makes no sense, may become clear at a later stage or contribute to a new understanding. Compare the following red diagram done many years before, to the green photograph of the pyramid frame in morning light (First Insight). In the green photograph the shadow, which is a transient event, combines with the existing static steel frame to form a new object with a repositioned pointed base. All depending on my position, the object’s position, my willingness to see at the time and the traversing sun. In the original red diagram the division is vertical along the pyramid’s central axis, whereas in the chance green photograph the division is horizontal at the base of the steel pyramid, although, the concept is the same in the photograph and the diagram. The drawing of the red pyramid was also bracketed at the time with the idea that there was a component of the observer’s attitude (stuck position) that was intrinsic to the whole concept. In the photograph and consequently in the current work this has translated into the physical position of the observer relative to the object and its shadow. In this
example, diagrams such as the red one are essentially thought experiments that precede unintended realisation.

Nonsensical, intuitive diagram that was realised years later.

- Photography, Drawing, Time, Space and Perception (15)
“Photography is an immediate reaction, drawing is meditation.”

“To me photography is the simultaneous recognition, in a fraction of a second, of the significance of an event.” (Henri Cartier-Bresson)

Conversely, a sequence of photographs may record, for example, “a flying mirror” above an open landscape, constituting a short duration event. I began using photography more and more as a documentary tool and recording set-up events that were not explicit expressions of a succinct idea. I was not interested in expression per se but these were rather conceptual puzzles I wanted to hold, perhaps for future prompts or integration. I would combine these photographs with collecting or composing equally intriguing words or diagrams in notebooks. I suspected that with quantity, repetition and variation these were forming an ongoing “setting up” or reinforcement of my intuitions from which I could make further decisions.

“Producing one's own subjectivity” (Felix Guattari).

At this level “I'm not concerned with being understood” (Jacques Lacan).

The main questions at this time were “What should I do in landscape after material utility is satisfied?” and “How can I reconcile the apparent difference between the solid and the transient?” The main method I was working with was intuitively shooting in the dark (Heuristics).

I now became more focused on using photography as a flexible recording medium for capturing visual variations and transitions, not for producing images as an aesthetic end in themselves. Although there is a lot of scope to manipulate photographic images after
they are taken, I am generally not interested in that. I’m not interested in making things more complicated or more abstract than a reality I have witnessed. “The photograph itself doesn’t interest me. I want only to capture a minute part of reality” (Henri Cartier-Bresson).

Photography was starting to give me the freedom to consider *improvising spatial events*, particularly short ones (i.e. “Flying Mirror” sequence above) or multiple arrangements, of objects as short term compositions (sculpture on the run). I was no longer thinking I had to make finished pieces or static spaces, an important prerequisite for this project.

Photography, because it produces lasting records of even extremely short or slow occurrences, allows a different approach to time and place, therefore expands what can be used in a creative process. The camera as an instrument has broadened my expectations and tolerance regarding time. I will now watch with more patience for fleeting events or try to notice slow changes over extended periods, the latter facilitated not only by photography, but also by having done *observational drawing*, particularly teaching drawing. The two have, I suspect, played a part in my ability to see subtle changes in light distribution across surfaces that also alter one’s visual spatial perception. Observational drawing also increases one’s patience, to stay still and look carefully. *The importance of waiting.* Because of this, I also noticed that seeing some phenomena again is extremely unlikely, so I always have a camera ready. I have noticed, however, a difference between my eye as a drawer, and the subtleties I see which may not be rendered by the camera. Over the duration of this project this has caused some frustration. Sometimes what I am noticing is on the edge of contrasting light conditions. The camera, unlike the eye, needs to adjust for one extreme or the other. If I alter camera exposure to generalise on the scene the subtleties are missed. Apart from this, photography, including video, allows me to keep records of subtle images of change of a short duration and miniscule changes by multiple photographs. These I keep to be combined conceptually in the future, like musical notes in a musical composition. This allows me to visit and contemplate transient phenomena again and again over time. This is important for this project because very short or slow spatial occurrences are the source of the work. Hence the *created phenomena* of this project and possible design directions suggest and require a more patient approach to being in space, taking time to notice and look up from our utilitarian grindstones. Perhaps suggesting *design of spaces that encourage reflection and contemplation*.

Photography, in my experience has allowed me to alter my relationship to time at a real experiential level. Questions arise; if, according to Einstein’s physics, time and space are interconnected, how does an altered relationship to time alter my apprehension of space at the personal, experiential level? In my work generally and this PhD I am ultimately always trying to deal with what actually happens in human experience, not what may be claimed at the conceptual
level. That is, I’m working within traditional “classical mechanics”. To a physicist, particularly a quantum physicist, my position might seem naïve (See Physics, this paper), but we humans experience architecture not through refined instruments or, for example at a quantum level, that we are conscious of, but at the scale of and through our own bodies, with our innate perceptual systems, our level of unaided empiricism. As the physicist Richard Feynman said regarding science, “It doesn’t matter how beautiful your theory is, it doesn’t matter how smart you are. If it doesn’t agree with experiment, it’s wrong.” In art and architecture the same holds. It doesn’t matter what you say, how abstractly succinct it is, if it’s not experienced, it’s not experienced. Not to say that we don’t have the responsibility to get off our perceptual backsides and make an effort to meet a work of art or architecture at least halfway. (Refer to “The Evolving Observer” this paper.)

- **Photography without Intention (16)**

Photography has been a central component of my work from the beginning. The apparently nonsensical, intuitively set up or taken photograph can, with time, lead to an unforeseen outcome. For example; a photograph was taken of the same pyramid frame with a shadow many years before and for no particular reason. The earlier photograph is of the same frame used in the green photograph (incorrectly processed). But, I’m standing on the other side, with the usual photographic position of the sun to my back, thus missing the green photo insight. However, with the passing of time, perhaps priming myself for the future insight. More recently I placed a white steel cubic frame into the middle of a dam, again to see what would happen. I took many photos of this situation at various times throughout the years as the water level rose and fell and the light changed with the seasons. I was not only observing the shadows of the cube on the water but also how they combined with the reflections of the structure. These were quite intense and perhaps reinforced the idea of considering reflections off water and variations in structure over the seasons as a further component. As a creative strategy I continue to set up configurations and take photographs as thought experiments, for no particular reason other than to see what will happen.
Men have become the tools of their tools” (Thoreau). Although I have generally regarded it as a documenting tool, photography as part of our perceptual system is not passive. A camera, like our perceptual propensities, also sets me up to connect with the world in particular ways. It does this spatially and temporally. For example; although the image from a lens, and indeed from our own eyes, is circular, historically we have always cropped it to a square or rectangle as if looking through a window. This I suspect, has arisen out of our building geometries and image painting traditions (Evolution of Perspective. R.P Onians, 1988). The lintel stone and the easily constructed right-angled painting frame created a tradition that carried through into photography from the beginning. Hence we assume this is how images should be, like windows. This predisposes me to crop the world into right-angled vignettes, arenas where something has happened or, in the case of the building’s window, is likely to happen. In the window of the building when we are inside, the outside is where things happen, not on the window and less so in the interior. We look at these potential events through the window. The exception is the stained glass window, where the action is on the window.

I found through this research that I could combine these aspects for eventual phenomena not only inside the building but also via artificial interior lighting to project phenomena to the outside of the building or on adjoining buildings. However, this PhD, for the sake of brevity, has only begun to explore the aspects of natural elements
constructing transient phenomena inside the building with the possibility of the window acting as a modulator on the formation coming from outside. The following photograph is an example of many taken over months at various times of the day, with only a very simple tape drawing on the window. I have taken videos of attempts at alignments between the outside “Rill Mirror” projection or from carved black granite projection of the sun in particular simple geometric formations, aligning with a tape drawing on the window ultimately projected on interior features, potentially altering them, perhaps in anamorphic ways.

We look at this rather than what it does.  
Photo. JMCG. 2009.

Altering Space

One example where I think I may deal with time and space: the further away from me something is, the longer time it is in my experience now! In my “nowness”, as Sartre calls it. Do I alter the experience of architectural space if I can alter the experience of time within that space? Conversely, do I alter the experience of time in that space if I alter the space? Altering the experience of a space, for a particular period of time in a particular place, is what I am attempting to do through this project. When you move past or through a drawing by the contemporary artist Felice Varini, an architectural interior or exterior, your visual experience of that space or exterior form is altered, in spatially disorientating ways.
Possible Method to Design Anamorphic Shadows etc. in Situ (18)

Felice Varini alters space and volume in existing buildings in a similar way I am suggesting here, by applying anamorphic graphic designs in colour. These static designs in paint or applied film are fragmented and distorted until viewed from a particular position. They then confound our perception of the space or the building as we overlay his designs with the space. The designs seem to float in the space or on the building. Varini uses a large projector to spread his design across the various elements of the building from the single position of the projector. The walls, ceilings or columns through the depth of the space are covered with disjointed shapes that only combine to form the original image if the observer places their eyes in the original position of the projector lens. While projecting his image, Varini employs a team of people, often on ladders or cherry pickers, to carefully mark out the various positions of the fragmented image.

The difference with the phenomena I am doing, although they can be anamorphic, is that they are not permanent and fixed in paint. The events proposed in this project use natural light, either the sun or the moon and consequently move within themselves, in the case of the Rill Mirror, or across the building or space. They also depend on other natural ephemera like the wind or the movement of water or even plants, which introduce a degree of unpredictability.

These natural elements raise the problem of how to make designs that do what we want?

A likely computer program that may be suitable for architects and sculptors to calculate what I am proposing has been developed by Dr. Chris Barker of RMIT called “Real Time Anamorphosis”. Meanwhile the following diagram from my notebooks, suggests an on-site method for real time.
• Space is More than Visual (19)

The perception of space is not only visual. We can feel in our muscles, form and particularly direction and the location of objects in a spatial field without having to touch or even see anything. A cognitive map that includes our muscles. I can locate things in my workshop that I have not seen for years. When seeking I try to notice what physical feelings in my body that incline my body to a particular direction for it to move. I may, for example notice a feeling in my right shoulder or right side, so I tend to move in that direction. When I feel I’m close, at a workbench for example, I will hold out my right hand and let it move a direction I feel is good. Within seconds I may open a drawer and find what was long forgotten to conscious memory. I have also noticed how uncanny my body is in locating door handles or wall switches in complete darkness.

• Technology (20)

I had also long ago decided not to use electrical or mechanical technologies to produce phenomena. I only use modern technology to explore phenomena, i.e. photography. Technology in the end product is often spectacular in effect but problematic in the long term, often failing and requiring constant maintenance against its inevitable degeneration. I was hoping to fulfill a long time ambition of mine, and despite the tempting potentials offered by attractive new technologies, I had suspicions that I may
find ways for producing dynamic systems, events or objects without the use of these technologies with their inherent obsolescence and reliance on energy sources. I prefer architecture that is intended to last. At this stage I had no idea how I would do this. There are creative implications with the use of electrical, electronic and mechanical technologies also. I have discussed the implications previously in the section Designing Mystery.

- The Observer, Position and Attitude (21)

Finally, the greatest outcome of the landscape cube installation was that it became obvious to me that, not only was the spatial position of the observer instrumental in what phenomena was experienced, but the observer’s attitudes and states of mind where also instrumental in what was seen and how it was regarded. As exemplified by the local farmers enquiring if it was a UFO, I called this, at the time, a “matter of attitude”, predispositions of a certain type, that are always present with the “thinking observer” as well as the particular geospatial geometry they find themselves in. (I have applied this to drawing and note making by returning to the same image or phrase and doing something with it at different times, even decades later.) My “matter of attitude” is similar to Daniel Dennett’s “Intentional Stance” which I have only recently discovered. Dennett claims that we adopt an “Intentional Stance” with other people, not objects like cabbages. (Philosophy Bites interview with Daniel Dennett, on Free Will, 18 August 2012.) My tendency is to extend this notion to not only thinking agents, but also to their artifacts, including architecture. We may not have to worry what a cabbage might do to us or what it might mean but this is not the case with human fabrications. Human made things reflect the mind and intentions of the human producer. We have a similar “Intentional Stance” and therefore exercise Dennett’s free will to these products as to what they might mean, what they might do, particularly to us, as we do to the human that made them. We suspect a human mind is behind an artifact and because of this make guesses and suppositions that effect how we stand in relation to it. Not only do we hold changing “intentional stances” at different times, but also the forming of these attitudes arises firstly from our past observational experience, our memory from the nature of our observations to date. These “attitudes” we bring to a new unfolding interaction with the newly observed and even things we are familiar with. According to psychologists we have a facility for “object consistency” which allows us to compensate for our perception of, an ellipse (for example), by using memory and our knowledge of the geometry of our position of observation and how it affects our perception, to know we are looking at a circle, not an ellipse. In fact at no time do we know an object in itself, how it really is, and perhaps it is a nonsensical concept. The observed, new or familiar, and the approaching mind are in effect equal collaborators in forming how and what is experienced/perceived at the time. The observed in effect becomes an extension of our
mind processes. What is the outside and the inside of our heads forms an ongoing entity. (The Extended Mind. This is an ongoing, never finished process. As Slavoj Zizek claims, “a work of art is never finished”, On architecture and aesthetics, University of Slovenia, June 2010). This brings me to my notion of the “evolving observer”. Attitudes, in the observer, are modulations on perceptions. However, if we take the view that attitudes can change, even unconsciously, through experience and reflection and need not be fixed, then the observer’s perception of a fixed phenomenon, will be different at different times as their mind changes (evolves) even allowing for consistent observational conditions. An example of this is my own perception of the shadow as part of the steel pyramid in the photograph “First Insight” This perception of mine, I suspect, was only possible after years of evolving my mind along particular pathways by selective effort and reflection.

![Photograph](image.png)

*Epiphenomenal anamorphic object. Photograph. Site 1. Photo. JMCG.*

- Sensuality, Thinking and Nothing (22)

In my previous sculptural work the decision to make and juxtapose geometry and landscape again was an attempt to revisit and perhaps resolve old questions. To start from a basis of my love of place and landscape (topophilia - refer to Yu-Fu Tuan’s “Space and Place”) coupled with an attitude that many of us today are too removed from the sensuality of the seasons and the natural elements outdoors. (Refer to De Selby, Flann O’Brien “The Unintended in Architecture”, this paper.) Embedding myself in a natural
environment is combined with my belief that to work manually, with material in our hands is an intelligent and necessary thing to do. (“The Thinking Hand” and “The Eyes of The Skin”, Juhani Pallasmaa.) Abstraction comes from our physical world. I often go directly to material or objects as a method of solving an intellectual blockage rather than doing more drawing, reading, writing or computer work. This is historically a common creative strategy across a wide range of disciplines. This was also motivating, particularly because I had no notion of where it might lead and because it was by an intuitive choice, based on a hunch, rather than reason. (“If we knew what were doing, it wouldn’t be called research”, Einstein). Or, in my case, if in doubt start anywhere rather than do nothing or wait for a reason. I have continued this strategy in this project, but have extended it to experiencing real place and space and taking time to just watch. Slowness or not being anxious about doing nothing is a valid creative strategy (an often neglected and malign virtue).

First Insights. Shadows, Memories and Reflections.

Eventually by chance, (and I suspect after years of preparing, “setting up” my mind) I noticed that the geometric structures I had, without much forethought, placed in the landscape, were interacting and apparently reconfiguring in unforeseen ways with sunlight. (Refer to green photo “First Insight”.) Initially this was with the shadows of a steel pyramid frame cast by the sun. I had photographed this frame many times over the years without yielding any insights and many times almost written it off as an avenue of futile pursuit. Particularly when asked many times by others “what is it for?” and having no answer! In this new experience I was not seeing anything that I, or anyone had not seen before. I was merely looking at an object and its shadow, which is an extremely common human activity. However, I was looking at it differently! My mind had decided to combine the object and its shadow, which we tend to regard as different types of things, into a new, larger object. I was regarding the material of the object and lack of light, which is the shadow, as one material, in this case, steel. In my perception the shadow had become materialised with the steel, creating a new base for the structure. This effect was different from that obtained by reflection. A reflected image is true to that being reflected, except that it is reversed, no matter what the position of the observer. A cast shadow of a frame for example, is anamorphic and depends critically on the position of the observer. A half cube sitting on a mirror appears to be a complete cube from all viewpoints. On the other hand, a shadow of a half cube only combines with the half cube structure, to make a complete square cube from a very particular, single viewpoint. Any other viewpoint kinks the straight lengths of the cube so that the effect is no longer a cube.
The Weather, Time, Movement, Illusion and Reality

Now, with this “First Insight” a jigsaw puzzle was beginning to take shape. I subsequently conducted a series of structured experiments at various scales, measured positions, combinations and times.

By continuing to leave my experimental material outdoors, I soon discovered, again by accident, other elements such as rain, wind and different materials that interacted to produce other observations. It also became apparent that time, movement and the position of the observer were significant elements in these essentially 3D optical illusions. I do not feel comfortable with the word “illusion”, agreeing with Goethe, that experientially “optical illusion is optical truth”. Again, it is the experiential, or the qualia that this PhD is concerned with. Years later, in my notes for this project, this lead to the idea of the “optical building” or the “building as instrument” Goethe’s words and Kant’s epistemology not only apply to this project but also to the contemporary concepts of “virtual reality” and “augmented reality”. To my mind virtual reality and augmented reality are misnomers and do not exist separate from reality. If they do, they are not conceptually anything new. The first virtual reality would then be the first pigment splatter of a human hand on a cave wall. The first augmented reality then is the first, abstract or otherwise, design drawn by our ancestors in the sand. We do not talk in these contemporary terms when talking about sound. We have been using machines to synthesize sound (musical instruments) for a while now, but do not call music “virtual sound” or “augmented sound” as if distinct from those sounds that are acoustic reality. Music just is part of our sound reality! Returning to the visual, Ramachandran, in his book The Artful Brain, maintains that so-called “realist, pictorial art has only been a small glitch in our art making history”. That (so-called) abstractness (which is accepted in music without question) has been the mainstay of our visual art since we began doing it.

• Reading and Integration (23)

Questions around Realism and Abstraction have always informed my work and apply to this project. This project in turn reinforced my existing preoccupation with any ideas to do with perception and being in the world. Most of my reading for pleasure has been epistemological or ontological in nature, primarily, the science and philosophy of mind and anything on creativity in the Arts and Sciences. Koestler’s’ “The Act of Creation” among the first, along with Maholy Nagy’s “Vision in Motion” up to various recent discussions from a neurological perspective and Leon van Schaik’s “Spatial Intelligence” among the more recent. Particularly in areas of space, materiality, time and meaning. Basically any literature that dealt with being in the world. I now regard the Masters and the PhD projects as having led me to discovering relationships as real integrations, at an
experiential level, in real time, of the made object, space, landscape, natural ephemera and the human observer into a transient whole system.

- **The Shed and Spatial Anticipation (24)**

I realised that the building I was living in, at Site 1, was also geometry in landscape. No doubt I was helped by the fact that it was unlined and its framing was visible. Perhaps it would also behave in similar ways?

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Shed geometry. Site 1. Photo. JMCG. 2015

The question arose; how did the building interact with the natural ephemera in the presence of myself and if so, how could I use these observed interactions in architecture? These questions informed another PhD point of departure.

Architecture is, of course, more than geometry and geometry is more than geometry. Even basic geometric shapes and spaces have associations and aesthetic effect for the human mind. With architecture there can be added enriching layers that transcend material utility and original intentions.

It is at this level I approach the building. Looking for **unintended secrets.** Hoping for serendipity and epiphenomenal moments that make being in a place that more enjoyable or intriguing. This is an attitude to the building that I call a **spatial anticipation,** that is, to allow one to regard a place to give the feeling that something may or is supposed to happen, to me, the space or both. An empty space, even a shed, or a place of meditation or religious worship can have this quality. This is more
pronounced in spaces of no obvious or explicit physical function but also occurs in moments when you suspend your regard of a space from its intended use. Thereby noticing non-utilitarian aspects of the place.

I shifted my attention from my constructions in the landscape firstly to the exterior of the available shed in an attempt to deal with the building and natural ephemera. I began by photographing shadows and light on the exterior cladding at various times. I also noticed the potential, at night, for the interior light to come out from the building through various cracks and holes onto the environment and have effects on it. I saw the potential of the shadows produced by the corrugations in the cladding and cast by trees onto the building to alter (under certain conditions) three dimensionally, the exterior configuration of the building using just the sun. Employing a raised or relief design or combining the relief on the wall with shadows cast from designed or natural structures. Around the same time, I started to put windows in the shed, not only for the usual functions but also to see if it would lead to any insights. Many years previously I had salvaged three sets of bi-fold glass doors from a petrol service station demolition. I used one of these six panels as a window in the shed. With little modification this panel allowed me to not only have a large tilting window, on a horizontal axis, but also have the facility to move back and forth away from or closer to the building. This was with the idea that I may have cause to use the window as an instrument somehow for
projection to the inside of the building from the sun or moonlight or out into the landscape by artificial light at night. Because of my ill health I was not able to use this window.

North facing shed window as potential instrument. Site 1. Photo. JMCG. 2015

Already, again, while inside the building I had seen shafts of sunlight either as a line highlighted by dust or spot illuminating some object, a pleasure from my childhood. ("Everybody carries a room about inside him" -Franz Kafka.)

While installing this panel I had to remove cladding often in a patchwork pattern. This allowed the patchwork patterns of sunlight to fall on the floor inside the shed. I think this set me up to notice not the window but what it does to the interior. At the same time I fabricated a square window, pivoting on the vertical axis, on the opposite wall facing south with a similar possibility of using it as an instrument. It was through this window I noticed why I painted triangles and the smeared colour in my paintings. It was a revelation that my paintings were not abstract but I was observing and painting what was there. I realised now that all my work was connected, even my interest in systems and transient geometry was connected to my painting.

The existing shed provided such insights. With a change of residence and spending more time inside I began leaving myself open to phenomena, no matter how
significant or how short in duration. Phenomena that are usually the least attended to. (“Don’t think, but look” - Wittgenstein, *Philosophical Investigations*) I was not conscious of looking more attentively but noticed I had, after the fact. If I consciously try to notice or search, it often doesn’t work. I usually stumble upon something while doing something else or just relaxing with no pressing intention (*ceiling video, while having breakfast with Mozart*). I now always carried a small digital, stills and movie function camera.

As a documentary tool, I was happy to work with the fidelity it provided. The mere task of fetching a camera from a nearby room could often mean the loss of what I was witnessing, as these occurrences are often short lived. Also, carrying a larger SLR camera puts me in the frame of mind that I must find something, which actually hinders creativity by removing me from a relaxed frame of mind. These recorded observations, some of which I have never seen again, formed another basis for this project.

• **Europe and Australia (25)**

I took a short trip to Europe, mainly Paris, Normandy and Barcelona for comparisons and reflections in older architectural environments compared to my Australian experience, from this growing observational perspective. Although one of the prerequisites of the observations I am doing is to spend a lot of time in one place and also return at different times of the day or year, it is an approach difficult for the tourist. I believe if I can spend extended times in any environment I will eventually notice something. What I have learnt is that often what I eventually notice is something that had been in front of me all along (like hunting rabbits). The reason for my noticing I suspect is more to do with changes in states of mind, rather than total changes in the environment.

However, I was particularly attracted to cathedrals and spaces suggesting something greater, beyond the building, perhaps ethereal, or having strong psychological effect, by their geometry and the use of light as it came in from outside. Yet by contrast, these buildings had a high mass, solidity and permanence unlike many of the buildings of my Australian experience. Buildings in Australia are generally thin in comparison and sit on the ground or float (“to touch the earth lightly,” to quote Glenn Murcutt ) whereas in Europe there are more buildings that seem to nestle into the ground or grow out of it and have existed for a long time. It is this dichotomy that I also find interesting; the idea of solid, high mass, long lasting, static geometry and the counterpoint of the lightness of the transitory occurring in such buildings. As a consequence I proposed designs for overtly high mass, unembellished structures, with no obvious utility that bring into focus, these opposites. To be places where time, the elements and the human observer align, and something happens (see notebook diagrams).
My experience of historical high mass buildings also highlighted some issues of the window in architecture, which I refer to later (see Europe and not looking at the window).

- **Historical Context and Sound Experience (26)**

Generally this PhD is in the tradition of the stick in the ground, its shadow and the line drawn in the sand. It is also in the architectural tradition of “Trompe-l’oeil” paintings of the Renaissance; of ancient astronomy, geometry, ritual buildings and time keeping, to 17th century anamorphic art and science. I also have a fascination with the building as instrument, particularly those buildings that effectively bring the outside in, use it some way and stand alone on the landscape such as the camera obscura, 19th century astronomical telescopes, (see The “Leviathan Telescope” below, Birr Castle, Ireland 1840), the drawings of French architect, Etienne-Louis Boullée (particularly the *Cenotaphe a Newton* (1784) and *Temple of Death* (1795) and Claude Nicolas Ledoux's *House of supervisors of the source of the Loue* (1804) Such architectural works not

Birr Castle Telescope. Ireland 1840. (Architecture as instrument)
Camera Obscura. Architecture as instrument.
(Portsmouth Natural History Museum)

only contain the idea of instrument at a material level but also operate at a psychological level. Historically, these instruments as buildings are massive yet perform very delicate tasks and deal with natural ephemera like light from the stars. As I said in the section on Mystery and Design I enjoy this dichotomy and the resonance created between the two concepts. This brings in my interest in the historical architectural folly, ruins placed strategically in the 18th century garden or landscape, purely for psychological effect, a tradition that informs this project. I do not therefore align myself with the idea of the “the house as a machine for living” (Le Corbusier, Vers une Architecture, 1923) if that idea is meant only in materialistic, physical terms. This project is concerned with, in current vernacular, the psychological and aesthetic function of the human environment. Form does follow function, but if we introduce the human mind to the mantra, what constitutes function, importantly, has to be broadened to include the psychological and the aesthetic. So-called, purely physically functioning structures, despite claims, can have these aesthetic effects, some pure engineering creations for example. The shed I was living in was built purely for function as a shearing shed and for minimum cost but still inspired aesthetic appreciation. Perhaps my position may be seen in the Romantic tradition, for I do suspect it was an illusion that Modernism in architecture was entirely rational. Modernist architects are not as rational as they claim in spurning decoration. In Le Corbusier’s Convent of La Tourette design, he talks of “ineffable space” orchestrated by his love of geometrical forms and their interplay with light and shadow. (‘Architecture III’ Film by Richard Copins.) Corbusier is acknowledging the psychological dimension, which is a basic function of architectural design. Although functional, these forms were also decorative, ineffable, psychological, conducive to clients who (fortunately) acknowledge something beyond the physical, as real and as important as physical function. I notice it
is this aspect of conveying something beyond the physical material that attracts me to religious or contemplative buildings and spaces. This aspect of architecture, to suggest something beyond ourselves, is the concern of this project by using transient events to connect us with the mystery of a nature that is bigger than ourselves.

Conversely, returning to the physical, I’m attracted to the idea of a building as instrumental in modulating the environment in some way, like a reverse camera obscura, a building as projector and modulator onto its surrounding environment, or in the case of the towers of radio transmitters, into outer space. At a human scale, an example is the church with its bell tower, ringing out across the town or the landscape. On another instrumental tangent, the “whispering gallery” in Belfast City Hall, where the shape of the space has an effect on sound that alters our experience of that space. There are other examples where the shape of structures cause unique acoustic phenomena, but for focus, in this PhD, sound or word in space or on landscape, i.e. using this element of AIR in this way, is not pursued. ("The Crow" poem and the “Sound Cube” system I did as an undergraduate sculpture student.)

Hearing transient sounds in nature and extrapolating from there would be entirely consistent with this PhD despite its obvious emphasis on the sun and light. Sound does alter our experience of space. With the cacophony of sounds in our contemporary environments it’s difficult to hear subtleties. The exceptions might be in the early hours in a city basement (Ranulph Glanville recording “Generator” 2002). Even our landscapes are contaminated. Ironically, I remember as a child the significance of sound in an otherwise relatively quiet place. While sitting in the farm kitchen, the family discerned the quiet, distant sound of a car in the valley below, turning into our track entrance. Slowly its sound would climb the hill to the house yard gate, changing quality as it approached and be completely different as the visitors rolled into the yard. I also remember dreading Saturday mornings, waking to the slow, repetitive whining sound of a large circular saw as it cut through log after log on a nearby hill, a long lonely sound moaning across the hills to my room. Perhaps these experiences are the seed for my intrigue with a sound in and moving across the landscape. This I have proposed in one example, as a wondering sound with no apparent source or, moving from vibrating mirror to mirror that are scattered to the horizon. There is also the sound of the Australian didgeridoo that seems to evoke and belong in the Australian landscape. A good example of being close to the elements and noticing subtle sound is the American Indian Nez Perce tribe. In 1971 the American sound recordist Bernie Krause, author of The Great Animal Orchestra, went to a remote stream that fed a lake in Montana, USA. He was with a tribal elder who directed him to wait in a particular place near the stream. After half an hour a wind seemed to rush down the valley and he recorded sounds like a large pipe organ. Later, the elder took him closer to the stream and showed him reeds that were broken off at different lengths. The elder said “We watch nature (and
obviously listen!) and this is where our music and your music comes from.” “Slow watching” and subsequent awe is a central tenet of this project. This capacity and the pleasure that results from it, I suspect, a neurological propensity that has given us evolutionary advantage (refer to the “ah-ha” concept of the research neurologist Ramachandran in this paper, “Words, Notebooks and Others”).

Jane Goodall, the anthropologist, claims to have noticed this in primates as well. Chimpanzees would leave their usual routines to visit a waterfall for no obvious reason but to sit in apparent awe.

• Contemporary Context (27)

The contemporary context stretches from anamorphic systems in cinema and advertising to those artists and architects who work with new media for kinetic or spatial effect. Although this project is an attempt to use natural systems rather than technological systems, conceptually it has similarities with virtual and augmented reality experiments.

Among contemporary artists, James Turrell who works with light is relevant. Turrell treats light as an object, an end in itself, not as a carrier of a narrative, as in cinema, but as something to experience in a pure way. His light is not ignored because we are focusing on a narrative or looking for meaning. However, I regard his work as spatial as well. The phenomena that I initially observe in landscape and architecture does not mean anything either, they just occur. Anthony McCall is another who uses time and light to make space and form. Felice Varini who paints anamorphic puzzles onto architecture, dramatically alters our experience of the architectural space, i.e. a corner in a room. Varini’s work is similar to the solar anamorphosis aspect of this project, except, at a technical level, I’m more interested in exploring such effects, not with permanent paint, but with natural, transient, ephemera. I hope, by attempting this, to connect the observer to natural elements and enhance the experience of time as well as space. It may be said that included in my contemporaries are artists who work with shadows or anamorphosis. However I have been unable to find any work that combines 3D objects with their 3D anamorphic shadows, producing a new 3D object. The Canadian artist Serge Tousignant in his series Geometrisation Solaire used 3D constructions of small twigs in sand, the shadow of which forms a 2D image of a star or a triangle on the ground. In one of my favorite works of his, mainly for its sheer simplicity, is a single stick in the ground; its shadow and a single line drawn in the sand combine to form a triangle, but only from a particular standpoint. This piece is of a similar sensibility to mine, but the shadows, the line in the sand and the stick combine to make an image read as 2D (as opposed to the 3D shadows in my work) and sometimes the twigs are regarded as a separate entity from the shadows, particularly in the star shadow piece, where the configuration of the sticks form an apparent ad-hoc
formation, with no suggestion of the star design. This is similar to the Japanese artist Shigeo Fukuda who uses illuminated junk sculptures of no discernible form to project 2D shadows of a motorcycle image (for example) onto a floor or wall. Such works are geometrically different to this project. I have also not found to date anyone who uses sunlight with other natural elements such as rain, clouds and wind acting on stone or metal as reflectors or shadow projectors or indeed, combine these with architectural features or that pass light or shadow through designs on window glass to produce these effects. I also separate myself from those who demonstrate anamorphism as no more than a visual novelty. Novelty is not enough for a lasting aesthetic experience.

In a static perspective, I would regard my work in the modernist/minimalist architecture and sculpture tradition, particularly the work of artists Donald Judd (and his home) and Sol Lewitt. I also partly align myself and appreciate the work of artists like Andy Goldsworthy and some land artists who work with what nature has at hand, except I’m interested in “the introduced”, what may be regarded as a foreign object or structure. There is an intersection between the two that can slowly and quietly give rise to intriguing phenomena that also hopefully sustains interest over subsequent viewings, as can certain architecture and art.

At a general cultural level, the introduced, (foreign, Western) object, image or person to Australian landscape has a history in Australian art and literature and still raises questions that have cultural resonance today. Indigenous geometry, as displayed in their traditional art, seems different from the European visual and spatial traditions with its perspective and Euclidean geometry. Because Europeans basically invaded this country, a cube on landscape can be seen as an insensitive intrusion, no matter how lightly it touches the ground. I have a history also with this land that I draw upon for this work that has an unavoidable European sensibility. For reasons of authenticity I therefore can only work from my heritage and out of respect for the historical Indigenous sensibility, which by nature I do not have. The paintings of the American artist Edward Hopper possess a quality of the human experience of being inside and how outside light comes in to form the interior space in a way that interests me. Holbein’s Ambassadors is also relevant as it was painted to be viewed within specific geometry from a particular staircase in a particular building.

Context of Context

Historically, I could also say Marcel Duchamp and poets such as Wordsworth, Coleridge and Dorethea McKellar play a part in my practice particularly in tying words to objects and spaces as a method of reconfiguring the way I see, work and approach materials and space. Duchamp’s Why Sneeze is an example of this. But, I suspect my interest came
first and then I noticed others who illustrated this. Duchamp often worked ironically, (he actually included a cast of his tongue in his cheek as part of the drawing of With my Tongue in my Cheek, 1959). This was necessary in the art culture of the time. Duchamp’s urinal is also a didactic piece and many artists since have also taken what I consider to be, an arrogant, didactic stance to the public. Duchamp, I feel, shares some of the responsibility for the predilection. In much art since, to have an explicit concept is a precursor for doing work. Conceptual art like Sol Lewitt’s, I admire for his imagery of the rational, but also because he alerted me to the concept of concept first as endemic in my thinking. A theme or words beforehand supposedly legitimising the art has become a cultural norm, rather than, evolving more complex and nuanced aesthetic concepts through doing the work first.

On another tangent, Duchamp linked concepts with real objects, even architectural elements and created ongoing puzzles. Duchamp’s Door: 11 rue Larrey that is open when it is closed by being in the corner at the intersection of two rooms, is a simple example (some traditional farm gates use the same technique). The door may have a physical function, but in this case, Duchamp consciously presents a conceptual puzzle. Can it never be open or never closed? I suspect, however, his experience of “doorness” preceded this concept. His Fresh Window which is a play on "French window" is typical of his playing with crossovers between French and English, but the interplay between object, word and space is of interest to me. Duchamp’s door, I suspect, made me ready to notice the Swinging Door sequence, shown earlier in observations in Site 2.

Our words are powerful and play a big part in influencing what and how we see. I am therefore deliberate and careful with what words I use and connect to objects and space, realising that they are instrumental in how I see. I am also therefore wary of over-intellectualising, to give words kudos beyond their scope, as I have previously mentioned. Ramachandran makes a point in The Artful Brain that when Westerners first made their interpretation of the Indian statue of the female god Parvathi, Consort of the Lord Shiva, their perceptual, cultural habits prevented them from regarding the statue with the appropriate words.

At a geometric/physical level this translates into the PhD work. The observer can only see the phenomena from a particular position, not only mentally (culturally), but physically, where they are placed, at the time. You have to be in the position to see and with the right attitude (shadows are generally ignored). Regarding perception, Kant's epistemology says a similar thing to my "struck position" or the "attitude" of the observer at the time. This is a reflection of the way we focus and what we neglect. Some current neuroscience and philosophy support this as well. Although I do not need to give reasons to others for my method of transforming perception, it is interesting to
note parallels (refer to “Neuroarthistory” by Onians, Merleau–Ponty, Dennett, Ramachandran and Iain McGilchrist among others).

- **Work, the Brain and Reason (28)**

For many years I have been aware that work itself, as we do it intellectually and physically, alters our mode of perception, our style of thought and therefore our actions. Our perceptions and thinking are not necessarily fixed and we are free enough to mold their evolution by selecting the content of our work. A pleasurable balancing act between intuition and conscious thought, or perhaps, between the brain's right and left hemispheres as suggested by Iain McGilchrist in “The Master And His Emissary”. This is akin to tuning our mind the way you tune a musical instrument by ear, which is also a pleasurable act. A lot my writing, diagrams, photographs and combinations of these I regard therefore, as “thought experiments”, toward this end, rather than finished works for the enjoyment of others, sensibility stepping stones along an ongoing path of constructing intuitions and conscious concepts, not necessarily requiring rational understanding or justification to myself. This is the platform from which I act. It is from this position which further work and practical realisation comes, which can have reasons. Making these transitional works are therefore “epistemic actions”, involve “…directly manipulating the environment to bring about a better state in a problem-solving/planning task, rather than constructing an internal representation and manipulating that” (Kirsh and Maglio, 1994, “On Distinguishing Epistemic Action from Pragmatic Action”). Attending to this side of ourselves ensures our work is coming from somewhere and has substance as it enters the requirements of the world (for example, a design brief). Pragmatism coming from a non-pragmatic base? This is an existential perspective, i.e. one that we can construct ourselves.

*Object to be Explained. Site 2. Photo. JMCG.*
From Zizek.

An object to be explained
Moved across the room,
It has no color or category yet
That I can make clear.
An object to be explained
From the corner of my eye,
That seems to float in the air
And with the passing of a cloud
Fades and disappears.

• Why Euclid (29)

I have enjoyed **Euclidean geometry** from early secondary technical school, in a subject called Solid Geometry. I found it pleasurable to wander through its constructions and calculations. This fact alone is sufficient to use it in my work, however for many years I wrestled with the knowledge that in mathematics and physics there were other forms of geometry that extended beyond Euclidean and **traditional mechanics**. Coupled with my interest in seeing the world as **systems in flux**, I could not, for many years, reconcile the two world-views of static geometry on the one hand and a more fluid, dynamic systems approach on the other. Although I understood intellectually a rock was an event by degree, albeit a very slow event, I was still unsettled. I bought these two opposites together in the form of object, the shadow of the object and observer (First Insight, green photo). After this insight I realised that although I had many years previously constructed the steel pyramid frame for unknown reasons and had carried it with me through countless scenarios, on that day and time, with the sun, circumstances and my frame of mind, I had a revelation. The simplicity of the geometry of the steel pyramid structure allowed me to see the effect in the first place. In a more complex structure I don't think I would have noticed. I also realised that what I was seeing could easily get beyond my control if I worked with more complex forms.

It was in the early stages of this PhD that I resolved my position regarding **modern physics** and geometry. Through reading Husserl and Merleau-Ponty again and others, I realised that my truthful position regarding the project was a phenomenological report from my perspective. This led me to the realisation that I was dealing with **the human level of the experience of physics and geometry, not with the abstract but rather the experiential from our human perspective**. Although we may understand intellectually that physics and geometry have moved on from Euclid and the classical mechanics of Newton and that modern mathematics works in more dimensions than
three or four, our experience, our perceptions and view of the world and our experience of architecture operate within these older paradigms of Euclidean geometry. Also, our bodies still work with the basic elements of earth, water, air and fire the fundamental elements of physics of the ancient Greeks and assume cause and effect in a classical mechanics manner. In this sense, I am dealing with the experiential physics and geometry that is closely related to our perceptions and bodily experiences on a daily basis. This is also the arena of architecture. Our experience of architecture is in the arena of classical mechanics and Euclidean geometry. Despite modern architecture's dance with complex shapes, our buildings and our experience still operate on the x, y and z coordinates. I also realised that any research done with basic geometric structures would be transferable to architectural scenarios in general, I decided to continue this project with basic lines and cubes on the making of experiments and prototypes, the more complex scenarios can wait or be pursued by those familiar with complex computer programs.

Geometry as Symbol or Decoration

There is another dimension to my use of three dimensional basic Euclidean cubes and prisms. The shapes of the bare geometry of this type has been the undeclared decoration of architecture in modern times in a climate opposed to decoration until Postmodernism, which sought inappropriate meaning in our secular world by appropriating from the decorative past. From Modernism, its tenets of the neoclassicism of Mondrian and the influence of De Stijl, there has been an attitude, spurred on by the domination of so-called efficiency and truth in the use of new materials and new demands on space and also enhanced by economics, that decoration is not necessary and superfluous to design and adds unnecessary cost. Decoration had come to mean an unnecessary addition to reality. Ironically, in this climate of distain for decoration, we created our own form of decoration despite this philosophy of design. Explicit Euclidean geometry under the guise of efficiency was the decoration of Modernism and was the decoration of modernist times. The decorative additions to pre-Modernism architecture meant little or nothing to contemporary eyes, we were not part of their stories, but they did mean something at the time, and our use of geometry, even highlighting it beyond mechanical function, means something to us. In a secular world our geometric motifs are extended further by computer programs into very complicated shapes beyond the right angle. Today in the works of Frank Gehry and others we are turning full circle, beyond the decorative element of hi-tech Modernism as architects explore and develop the decoration of our age. In the past we told ourselves through Modernism that we are rational, no-nonsense intelligent beings who see through complexity and reduce things to their underlying structure. We did not involve
ourselves in unnecessary superfluous flourishes, and we would vehemently deny that we were romantics. Geometry represented many things we valued most and, dare I say, romantically! For example, that we preferred to use the minimum required to do an efficient material job. The shortest line between two points was counted as a virtue unencumbered by any reference to any higher power other than ourselves. In this humanism we were displaying how clever we were as a scientific species, how we could control a chaotic world by constructing complex, but still Euclidean, geometries in all manner of buildings with the support of a secular, and certainly not consciously romantic, pragmatic engineering. Again there is an irony in this aesthetics of geometry and engineering because it was our decoration and is even more so now. The geometry of today's buildings has continued to have meaning for us beyond physical functions although it is not the sort of meaning we are conscious of and, I suspect, like many artists, architects like Gehry are not conscious of either. We display acceptance of chaos and love of the unreasonable and the irrational through convoluted geometry as a feature more than is structurally or physically necessary in contemporary architecture. The cube, the rectangle, the triangle, the pyramid and the myriad of complex transitions between have psychological meaning to us now just as gargoyles did to our ancestors. Have we returned to a new Romanticism in architecture? In this atmosphere I suspect it is appropriate to use these geometries to travel further into a secular awe and awareness of the mystery of our existence through architecture by designing the transient phenomena suggested in this paper.

Euclid, Terra Nullius and Trespass

A significant additional factor in my use of geometry pertains to its use in landscape, particularly Australian landscape. Originally my white Australians ancestors regarded Australia as “Terra Nullius” and they immediately introduced not only diseases of the body but among many other things, perhaps a disease of the mind, a foreign geometry, the geometry of Euclid. This was introduced firstly in the form of the ships and then our mapping and the divisions on the land and finally in constructions, including the architecture of the time. We no longer have the notion of “Terra Nullius” but now have a sense of trespass with its attendant guilt. In my previous work and in this project, I have placed my Euclidean steel frames, the cube and the pyramid, on landscape and looked at them over years. Initially I painted these structures in white otherwise they would disappear into the background. The contrast between this trespassing geometry with surrounding landscape was profound and I think is indicative to this day, of our conceptual and cultural imposition on the native, so-called “Terra Nullius”. My geometric steel frames are the essence of the basic underlying geometry of our trespassing architecture. To my mind, there is an interesting conceptual/cultural
dissonance that a lone Euclidean geometric structure can set up, when imposed on the cultural Australian landscape of the original people. A windmill, a shed or house in the bush or on an expanse of open landscape is the typically Australian experience for me. Also, my experience of fire on this geometry and the landscape has moulded my thinking and extended my experience of this dissonance in a very physical way.

**Nature can burn** and the imposed geometry (even architecture) can burn with it.

A fixation with burning geometry. Geometry that is rapidly changing.
Alignments. Imposed Geometry on Nature

“Three Spikes of no Particular Relevance with Object to be Explained”
• From Notes on Liminal Concepts (30)

Typical list from digital notebook exploring variations on a single concept.

“Object As…." JMCN.

As a creative strategy I often write lists of variations on a particular concept, expressed in words, to see if my mind finds a connection to another concept, image or event. I might also use a particular phrase as the first line of a poem that may, through the writing, reveal an idea.
Notes from Observations

TYPICAL PAGE COMBINING OBSERVATIONS.
From digital notes. JMCG.
Typical observational prompt for previous note/drawing.
NOTES ON POSSIBILITIES.

A CUBE APPEARS AND TRAVERSES A ROOM.
Three concepts of projection through a window as an instrument.

1. Half diagram on window casts shadow and shadow combines with other half diagram cut into stone floor, producing anamorphic cube from a particular vantage point.
2. Succinct or distorted diagram on window casts shadow on floor, wall, interior object or steps to form a undistorted anamorphic image.

3. Image on glass casts shadow into vapour filled glass container to produce suspended anamorphic image.

Ramachandran maintains that as a species, we have evolved to maintain the pleasure of not reaching the final insight, or the big “ah ha” moment, as he calls it. Except when it’s a lion hiding behind a bush.

But as well as the pleasure derived from solving a problem we seem to enjoy never completing the puzzle; “The wiring of our visual centers ensures that the very act of searching for the solution is pleasing” (The Artful Brain). Enjoying the process of piecing together a series of smaller “ah ha” moments without getting to a final one. Great art, literature, music and architecture provide this. “Always in foreplay”, as he puts it. That’s why, he maintains, we enjoy returning to a particular painting, piece of music, a space or architecture because they have this effect on us.

Ramachandran is specifically talking about the experience of the spectator of art, but I think this also applies to the making of art. I find or create a series of “ah ha” moments for myself as I work. I have always regarded my work as a “method of inquiry” first and foremost; a series of puzzles I intuitively set myself rather than having the need to express myself or something to others. I regard expression as unavoidable if we do something and therefore not requiring focus. These puzzles (the work) are set not only in the world but also in the workings of myself.

I would prefer to work with such enigmas rather than just optical tricks, which is the danger in the current work. Most of us quickly grow bored once we have figured something out. A joke on its second or third hearing has nowhere near the punch it had on its first. The mind is complex, actively seeks and requires more than that. This may occur even in primates. Jane Goodall noticed in her studies of chimps that every now and then a single chimp might go to a particular place in the jungle not for utilitarian reasons but she concluded, just to watch a waterfall for extended periods (ABC RN 10/11/2008). Perhaps this is an example of the pleasure in perception, of watching without complete understanding, perhaps enjoying a series of small “ah has” as the phenomena of the waterfall is not fully understood.

Noticing is an art in its self. The form of noticing is an important feature of how I work but also the type of noticing I am aiming for architecturally. My richest observations have, I noticed, occurred often while doing something else. As I say “from the corner of my eye” and to the “unhurried mind” but also the particularly prepared mind. This is how I want the observer, within architecture, to notice transient phenomena of my, or the architect’s orchestration. “Let no one derelict of time pass through my door” (with
apologies to Plato). Pushing myself to vigorously seek and find may exasperate coming to the world with agendas that may limit my openness to it. In Kant's aesthetics, seeing with “disinterested” pleasure. My proposed phenomena will hopefully lead to contemplation and reflection.

The Building and Meaning

Following on from this, the physical function of a building may be explicit even if its use changes over time. The meaning, associations, metaphors, what we might call its psychological functions, are however, less explicit. These complex, perhaps inexplicable elements are more pronounced with the distance of time and across our different cultural perspectives coupled with our different minds. Stonehenge is an obvious example. We can ascertain its possible physical configuration but remain perplexed as to what the other aspects of this structure were to the minds of the time. Again, I’m not only interested in observing puzzles in the world at the interface of nature and geometry, but hoping to create “phenomena to be explained” in or by existing or proposed architecture.

- The Gateposts, Trees, Wind and Windows (31)

The following was noted by me (second notebook 2 p. 62, Physics) while still primarily outdoors: “I have noticed that a cast shadow from an object will vary in position and sharpness with the modulation of sun by the branches and leaves as they move in the wind between the object and the sun” (diagram p.15 second notebook 2) and “A tree in the wind can be part of the optics of a building. A modulator of light or a distributor of pattern” (second notebook 2 p.134). This was triggered by noticing my front gate posts. On separate fence posts I had mounted two steel, cubic frames, each standing on its corner. (“Let no one destitute of geometry enter my doors” – Plato.) I had done this a year or so before the observation. Although not videoed at the time I took some stills. Subsequently I have videoed the same effect from inside a building from a tree a block away in the new location where most of the latter PhD was completed. This is a similar effect noticed by the ancient Greeks as leaves formed a pinhole camera.
• **Europe and Not Looking at the Window (32)**

(I don't look at the stained glass window; I look at what it does)

![Sagrada Familia.](image)

At this stage of the project I was starting to seriously think in terms of the functions of architectural openings: doors and windows at the interface of the transition of the outside and inside. As mentioned earlier, on spending time in and around European architecture where, in the short time available, I found cathedrals and churches most interesting. However, the type of phenomena I’m looking for requires patience over extended times. I found myself, for example, looking for the effect the stained glass windows had on the interior, rather than dwelling on the window itself, which was the original intention. A small side chapel in Barcelona Cathedral (refer to photo, above) provided me with a delicate pattern high on a sidewall. I also recorded ancient symbols carved into flagstones underfoot. I photographed the latter, for example, not for noticing any immediate transient phenomena, but because the idea of carving relief designs into paving, which have obviously been there for a long time, may have some application in my work. I had already considered sand blasting or carving designs for alignment, on the granite plates on my land in Australia. This subsequently proved to be the case. At Sagrada Familia in Barcelona, I was interested in the light from clear windows as it played on interior columns. I wondered how much Gaudi would have consciously considered such effects or would any effects just be the unintended consequences of the sheer complexities of his designs?
Looking at the Window

At Notre Dame Cathedral in Paris I noticed, liked and photographed the deeply recessed window openings as I climbed the stairs of the bell tower. The stone surface of the recess provided surfaces for variations in light levels to be read and a surface for the shadows of the wire. These confirmed my intentions to make deep steel box frames protruding from the exterior wall on my shed. The shed, like many modern buildings, lacks wall thickness to any great extent. The window frame has little thickness and therefore, surface is usually read as a line. Usually, church stained glass windows are chamfered. This, I assume is for the purpose of not letting a shadow of the frame obscure the image at the edges. Historical, glassless openings have not got this requirement and some remain deep set.

Notre Dame deeply recessed window with subtleties of light.
However the recess, as I was allowing for on the shed’s steel boxes, provides an area for light and shadow design that could potentially change at the very least the perceived geometry of the window and the cavity space. The window as instrument was beginning to form in my mind. I also was taken by incisions in stone pavers on the floor of Barcelona Cathedral, which I later realised was an unconscious prompt for combining the concept of my “Rill Mirror” invention with carved grooves in granite for reflections from stone onto walls or even through the window. I did not realise this at the time because I had not observed the phenomena that lead to the “Rill Mirror”, but I noticed my intrigue enough to photograph it at the time, despite having no idea of its relevance.

Carved floor stone Barcelona Cathedral. Idea for design in stone.
Vibrating by breeze, large Rill Mirror projection from exterior sun onto interior ceiling. Site 2.

- **Conclusion and Layers of Interest (33)**

I began this project with the vague intuition that somewhere in my previous work, although not architecture and more fine art and writing, there was potential to explore something concerned with **architecture, landscape and the human observer**. Beginning as a PhD by project, by deference to my earlier work, it has come to be a PhD **by practice and project**. From this vague intuition I proceeded to embed myself in architecture, landscape and ideas around architecture, art, my previous work and the creative process, to see what would happen. This is an intellectual/aesthetic jumping off the cliff into the unknown which I find exhilarating. Firstly, from this scenario I started to put this project at the forefront of my mind and with the attitude to grant any noticed
interest that stirred my curiosity, however obscure my consciousness thought the connection to be. It may prove relevant in some, yet to be discovered, way.

My fine art indulgences of obscure, esoteric interests have formed my intuitive propensities (aesthetic frameworks) over many years and contributed to my interest in short spatial events and anamorphism being applied to architecture. This fine art mindset also contributed to my seeing what is usually ignored as superficial after-effects and therefore epiphenomenal to the building. I have formed these aesthetic interests by wandering through the methods explained in here, including writing, for no other reason than pleasure and curiosity and not for practical use. They have set and created the scene for the architectural attitudes in my mind. From a suspended chair in a room to notes about objects to be explained and countless attractive phrases or words, or objects to be regarded as events by degree, and the intrusion of geometry in the air or on the landscape as a comment on a European imposed mentality, or even the processing of sound in a cubic system as having ramifications for the experience of architectural space and even painting and poetry have had a many layered outcome for architecture. The concept and application of my slow, prepared intuition development, taking even unrelated things as part of a whole, unified within my subconscious, coupled with the concept of taking time to experience what the world offers, without urgency has led me to appreciate the subtleties that occur in buildings as they interact with nature. The use of the window and other features of the building such as doors and interior spaces as instruments for transient events in and around buildings; the use of reflections from stone and water, the use of solid structures and masking to produce anamorphic shadows and three dimensional apparitions has all come from the creative sequence of my seemingly esoteric concerns but they also come from an awareness that nature moves at a different pace to contemporary culture.

Writing for Creativity

A PhD by project and practice enabled me to combine all my sensibilities, the physical congruent with the mental at every stage, avoiding my distaste in my fine art work for the contrived separation of intellect and hand as a basis for research. The text of this PhD may seem undisciplined, however, it is a big part of my creative process and it was necessary to write thoughts as they occur in the context and sequence in which they occur. The act of writing was integral to this project and was a firstly phenomenological account but also a stream of consciousness by necessity, so much so that it spawned a parallel project of recording my general thoughts as they occurred in my wider practice recording attitudes to art, craft, architecture and my background influences. This parallel text, called “Extemporaneous and Proleptic
Thoughts also contains some more personal reflections in over 100,000 words and over 200 pages. I think this approach of recording thoughts as words, as they occur, is beneficial to practitioners in the Arts and which I do in poetry. It was a strategy within the context of my relationship with my supervisors in the PhD program. My strategy was to solve the problem of where to begin. In the same way I solve where to begin with artwork. That is; just begin with the handling of the materials at hand and see what happens. With writing this PhD the material at hand is written words. In this way my supervisors had something of substance to bounce off and the process would, at least, develop from there. I have always been wary, like some visual artists, of the corrupting power of words for they can quickly lead to overt rationalisation and sophist arguments that can inhibit intuitions and obscure the creative path, but this may not have to be the case. If I produce and collect words intuitively for their aesthetic conceptual appeal and not for argument or reason but from a stream of consciousness they have enhanced and clarified my intuitive visual propensities. If I collect phrases for their noticed aesthetic appeal and not expect to explain them to myself or argue my case to others, they will inevitably authentically represent, in some way, my interests and creative direction. If I treat words in the same way as I treat my intuitive making of a line, a form or selecting a colour to lay down on a canvas, I am treating these words as aesthetic concepts. Aesthetic concepts that are similar in nature to the drawings, paintings, photographs or diagrams that I create. If I acknowledge that these words can often say puzzling things but not dismiss them as being too absurd that they still gnaw at the edge of my reason, then I may be using words that develop my aesthetic style rather than hinder it. I have found this to be the case in previous work even years after I have put down a few words or drawn a strange diagram. Something can eventually fall into consciousness or result in a new insight that comes when the mind is ready.

As a consequence of this attitude throughout this project, my physical actions, even the act of writing, poetry and painting became part of the project, rather than just reporting on the process. In the case of poetry and painting, which may be judged as peripheral to architecture, they have contributed a general aesthetic sensibility to my creativity regarding this project. For example, the physical acts of just putting things in or around architecture or landscape (geometric frames) without any particular design formula also enhanced my discoveries. I suspect this architectural idea grew out of my sculptural and painting habit of putting different things together, by the complex but felt process of intuition, and photographing the configuration and including these photographs in my notes or placing them on walls of my studios to infiltrate my subconscious as I passed. My painting aesthetic also evolved into exploring my aesthetic concepts for architectural forms generally by putting geometric objects in abstracted landscapes or nonsensically above the landscape, which lead to the architectural idea of suspended structures to generate shadows. By this haptic method I was also developing
my perceptions that enabled me to see things often accidentally and dismissed as not central to the original intent of the building or indeed landscape, hence the term **epiphenomenal**. By immersing myself in intuitive, sometimes nonsensical, words, paintings and concepts I have developed a particular perspective on space, objects in space and myself in spaces and therefore, architecture. For example, many of my notes and diagrams have to do with rooms, spaces, things, things in rooms, landscape, things in landscape combined with a word or a phrase that does not make sense to me at the time but that I suspect is altering my creative intuitions and may eventually lead to a conscious insight. Two such notes/diagrams may have architectural potential that escapes me at present. It is the diagram for “room for one word” or “the burning cube above landscape”. In the latter example I may have to go further with the concept and actually do it in landscape, photograph or video it to learn more. This concept of burning geometry in or above landscape has already led to another concept of “burning architecture” and where this will lead is not known to me yet. In the former, “room for one word” I may have to place a word in an actual room also to see if it changes me. But what that word should be and what room it would be in is yet unknown to me. Nevertheless, this use of words purely for their aesthetic appeal when combined with things or spaces is a fruitful strategy.

A large part of my interests carried into this project were further clarified and extended by the **action of doing the project and doing the parallel activities**, particularly by **writing**. There are many layers to creativity, most of them we are not conscious of. However, even though we may think we know our interests, if we acknowledge it is a process of continual discovery, to ourselves and even to science, how our creative minds work and what our particular mind’s interests are, can only be discovered by doing non-judgmental action in response to them, not to be reasoned relevant or irrelevant, by our frontal lobes beforehand. I **maintain that by doing apparently unrelated, parallel creative pursuits, purely for their appeal to us and for their own sake, we feed into our professional creativity positive, but largely unknown ways, enriching our intuitive options.**

“The life of our minds is more than consciousness can handle” *Extemporaneous and Proleptic Thoughts. (Point 1815)* John McGlade.2013-2015.

The following numbered list is the layers of my interests as identified during this project. By writing out this PhD in a phenomenological and “stream of consciousness” manner, writing poetry and painting during the research I continued to hone and set up my aesthetic intuition biases (aesthetic frameworks) along particular sensibilities, for this project. The parallel text of “Extemporaneous and Proleptic Thoughts” is an extension, with daily additions, of this “stream of consciousness” approach, to the text of this PhD, as a creative strategy.
The second bullet point list is what relevance these purely aesthetic interests eventually had to this project. I have also provided a sequenced map, to the best of my knowledge, of the creative actions and interests that arose during this project, which influenced my focus during this project and follows on from the previous sequenced map of background influences.

1. Transient phenomena and alignments. (*Added later*)
2. Anamorphosis.
3. Natural systems as distinct from transient technological systems.
4. Landscape, Australian landscape, being in landscape.
5. Euclidean geometry.
6. Painting, photography, image making and sculpture as a method of exploring ideas.
7. Painting and photography as identifying and exploring geometry in landscape.
8. The creative process, the mind and perception.
9. The position and mind of the observer experience.
10. The action of the body interacting with material as necessary part of my creative intelligence.
11. Creating with no obvious application or use as a method for creativity on the suspicion that all creative selection and focus slowly builds an intuitive aesthetic frameworks.
12. Reading philosophy/epistemology, and neurology as a trigger for creativity with word concepts/diagrams recorded in notebooks.
13. Researching and experiencing architecture and architectural literature.
14. Collecting phrases, words or concepts, writing poetry to further inform intuitions.
15. And finally my past experience of buildings and landscape.

**NOTE:** All of the preceding from a fine art or a “purely for pleasure” perspective.

I was looking for ways to tie these interests to architecture from these, perhaps esoteric, positions.

An interest in:

- Transient phenomena including those orchestrated by me - gave looking at transient phenomena in landscape and in and around buildings; the accidents of architecture.
• The difference between static geometry and dynamic systems - gave anamorphosis.
• Anamorphic shadows from geometric sculpture in landscape - gave the possibility of applying anamorphosis to architecture as a transient phenomenon.
• Natural systems - gave looking for the interaction between buildings and natural elements I experienced in landscape.
• Natural systems – also gave the element of time and cycles that varied and introduced elements of transience further and of the predictable and the unpredictable in these systems as applied to architecture.
• Natural systems - also gave the possibility of not requiring high technology to achieve dynamic, low maintenance and long lasting transient phenomena in architecture.
• Landscape - gave the awareness of the ebb and flow of natural systems (weather) and the awareness of architecture as it interacted with that ebb and flow.
• Landscape - gave the awareness of inside and outside with buildings and the interaction between the two.
• Landscape - gave the significance of the isolated, geometric object as possible architecture.
• Landscape - gave geometry through painting. Painting connected perception to the window.
• How places and spaces affected me - gave an interest in architecture, space and rooms.
• Euclidean geometry - gave a controllable armature on to which I apply and see experiments.
• Painting, photography, diagrams and sculpture - gave continuation and reinforcement of intuitive propensities regarding space, the landscape, the observer, and concepts and seeing geometry in landscape.
• Researching/reading on creativity, perception and recent neurology - gave further insight to the creative process, visual and spatial issues and perception and the motivations of humans for beauty.
• The position and the mind of the observer - gave the awareness of the critical nature being in the right place at the right time with the right attitude.
• The action of making and placing objects - gave the importance of physical action through projects as a necessary part of creative intelligence.
• The practice of creating with no obvious application or reason - gave new insights despite initial perceived irrelevance.

• Researching/reading philosophy/epistemology and neurology - gave concepts and phrases to add to my intuitive reservoir.

• Researching and experiencing architecture - gave further context and creative stimulation to possibly apply my ideas to architecture.

• Collecting phrases, words or concepts, writing poetry - gave greater insight into my general and architectural interests.

• My background experience of influential landscape and buildings - gave the ability to contextualise position with work.

NOMINAL CREATIVE SEQUENCE MAP FOR PHD 2015

Carryover from Masters 2005. Carryover from fine art.
- Continuous supervisor liaisons - V V
  V Systems approach. Created
Anamorphic shadows extending object. transient event photography
V V
Geometric structures placed in landscape. Notebooks/diagrams
V <<<<<<<<<<<Rereading past notebooks Notes, collecting phrases. V
Photographing placed structures on site 1. Reading philosophy
Passing clouds. After rain. Chairs in room series - V Reading Neurology. Perception
PhD reviews feedback (concepts) Architectural philosophy.
V V
- Looking from inside shed to outside. (Site 1) <<<<<<<<<<<Visual illusions artists.
V
- Awareness of shed interacting with landscape from inside.
  Noticing transient phenomena in shed.
- Photographing
Painting geometry in landscape. Begin writing poetry based on notes
Peer review (concepts)
  Rewriting main PhD questions.
  On line lectures/radio interviews/documentaries.
  V
  Writing random texts from general thoughts of issues on project.
  Noticing transient phenomena inside. Site 2
  Get small camera to carry always.
Continuously editing main text. Confined to Site 2.
  Observing/photographing/finding phenomena. Site 2
  Awareness of writing main text as creative research not just reporting.
  Architecture is introduced geometry.
Continue looking/photographing/filming any phenomena.
Continually sorting ideas to establish common threads.
Balancing writing/thinking with looking/actions/painting.
Taking time out to relax and reflect as important strategy.
Main text writing continuously. Recording thoughts as they occur.
Connecting past work with PhD and architecture.
Painting/sculpture/photography/notes/diagrams.
Poetry and painting as framing my mind relevant to this project.
Forming intuitions/attitudes/approaches.
Noticing phenomena leading to “Rill Mirror” concept.
First attempts/experiments.
Documentations/reflections in notes.
Diagrams/notes from experiments.
Retry/ fabrication of prototypes.
Documentations.
Peer reviews.
Reframe question.
Create two questions.
Writing/incorporating parallel text.
More observed phenomena.
Always connecting general creativity with project.
Always adding to main text and parallel text.
During project often thinking about exhibition/presentation.
Teach myself video editing.
More painting and poetry to clarify thoughts.
Submit rough draft text/photos to supervisors.
Reframe questions/edit main text again.
Rewrite conclusion.
Edit and add concepts to main text.
Continuous reading/online lectures/media throughout project.
Trying to stop/drawing a line on project.
Arranging assistance for final presentation/exhibition.
SUCCINCT FINAL FOCUS AND WHAT TO DO NEXT.

I have come to regard my interest in Euclidean 3D structures or sculpture as architectural in essence despite alternative, more esoteric geometries, which are beyond my direct architectural, visceral experience. In doing this, I have opened up the possibility of more complex design solutions for transient phenomena. These layers of interest and combined attitudes led to the Rill Mirror, the possible use of the window, openings and doorways as instruments, rather than just passive entities, to combine with structures inside or outside the building to give rise to designed phenomena with possibilities for architecture.

What I propose for architecture has a tradition in the alteration of space by trompe l’oeil and anamorphic paintings, projections or structures applied to architecture, even up to the present day, where space or structures are altered by additions (for example, moving video and digital projections on buildings).
However, what I propose goes further than these static tricks of the eye (mind) essentially not reliant on the structure of the building to any great extent, only appearing as decorative additions which can be spectacular in the short term but risk losing their novelty factor or failure of the technology. What I bring to architecture is the use of nature as active and sustainable, combining with particular static architectural structural/spatial designs of the building to create similar tricks of the eye with the added dimensions of transience, and therefore time, as a critical element. I am essentially alerting architects to notice the unintended in their own completed buildings. By using natural elements as an instrument with static, long lasting design components to generate transient events in and around the building for as long as the building exists, without the use of electrical technology or machines. For example, I have demonstrated that the window can be regarded as more than a device to let light in or ourselves to look out, and more than something to look at as the case of stained glass, but as an instrument to modulate, reflect and project. I have also suggested that polished stone, metal or water can be used to reflect particular designs or as a source for illumination onto walls or through windows and openings and into interiors to combine with perhaps static 3D structures inside or outside a building. That is; the use of 3D structures to cast shadows to combine with these openings to produce even anamorphic, transient projections making unique 3D configurations on buildings or projected into interiors. I propose this by working with nature more than we do presently, using shadow, natural movement and elements and reflections. For example, using the wind to modulate the surface of the Rill Mirror, which this project developed, or the surface of water as the result of rain, or to move elements or plants outside the building to affect events inside the building.

I suggest that not only can these events heighten our experience of the transience of nature and hence our suspected place in the scheme of things, but can reinforce our sense of the unknown. These phenomena can potentially suggest the unknown, metaphysical dimension and mystery of our existence, which is lacking today in our secular, materialistic, pragmatic society with its emphasis on the short term decorative spectacle. This metaphysical experience happens to humans when they allow themselves time to be in awe of some natural phenomena or as orchestrated by builders and architects in traditional religious architecture. However, religious dogma dictates a fixed schema for this mystery whereas science and a secular society offer temporary concepts open to disproof and doubt. However, this suggestion of mystery beyond our understanding can also be achieved for a humanist, post-enlightenment society by the architect, designing buildings expressing more than utility, technological prowess or beautiful aesthetic form. For example, using the sun, not only to alter the building's geometry over time as it traverses the sky, but also to generate transient, mysterious phenomena that appears and disappears as it traverses a building's exterior or its
interior that has qualities borrowed from non-religious contemporary art, particularly installation art. Such phenomena can be designed by the architect to be on the threshold of our understanding (and the architect's) and make architectural space more than static form, but similar to installation art, with all the multiple layers of ambiguous perceptions that makes classic art so intriguing over a protracted time. These **architectural events** can potentially make architectural space a place for a **liminality of experience akin to great art** limited only by the artistic skill of the architect/sculptor beyond the traditional role of static form which is usually the domain of the architect. (Refer to *Looking for Liminality in Architectural Space* and the concept of the “Third Space” by Catherine Smith, 2001.) The form of the transient phenomena can be a sign with all the cultural ramifications or associations of artwork designed by the architect/artist.

Subtle variations of occurrence can depend on not only the position of the observer as these phenomena move into or on the building, but can fade, then reappear with the simple passing of clouds. Such phenomena have the potential to return mystery to architecture without deference to the dogma of organised religion. I suspect there is a need to provide such architecture beyond our secular cathedrals of industry and capitalism that talk of materialism, money and power.

These phenomena are time and geometry dependent in the span of twenty-four hours. They are subject not only to the geometry of the architecture but also the geometry of natural ephemera in relation to the building. This occurs not only on a twenty-four hour basis but also on a seasonal and therefore yearly basis. This fact opens up the possibility of these phenomena occurring in architecture designed for significant rituals at a significant time in the year down to a particular day and time, even minutes. At these particular times, quite complex phenomena of a design relevant to the ritual can appear on or in the building, traverse the space and align with an architectural form to complete the design. A **unity of architecture, culture and nature**. For my own part, I intend to apply these principles outlined in this project for the design of a secular chapel, a chapel for the mind.

**In this project I have suggested the following points for design of transient phenomena, of a two-dimensional or three-dimensional nature, that appears in architecture by combining with architecture, to connect us with the rhythms of nature, to give us kinetic occurrences of aesthetic merit:**

- The use of shadows over time to extend existing or designed architectural features or objects for projection with perhaps the use of anamorphosis.
- The use of the observer's position as critical to the appearance of designed phenomena.
• To use existing unintended phenomena in completed buildings as a possible basis for design.

• To use the ephemera of nature as part of a dynamic system involving the design of features of a building complicit with the observer and his or her viewing position.

• To design 3D structures for projection of shadows or reflections, in part or whole, to combine with interior or exterior architectural designed features to create transient phenomena, features or objects.

• To regard the building as an instrument that combines with external nature and humans to generate phenomena, inside or out, that adds to the mystery of architecture and human existence.

• To treat the window, the door and other architectural features beyond their usual functions but also as instruments to generate phenomena.

• To use materials such as stone, wet or dry, as a reflector in the systems I am suggesting.

• To use exterior surfaces, like plazas or walls, to project images at certain times or under certain conditions to generate phenomena on exterior or interior architectural features.

• To use the Rill Mirror concept, in two dimensions or three, to project images anamorphic or not onto exteriors or interiors.

• To increase the use of time, alignment and movement in architectural design.

• To use natural variations in phenomena (even passing clouds) combined with static design features to generate long lasting, low maintenance, reoccurring phenomena without the use of high technology.

• To use any combination of the above in the design of spaces or buildings that alters over time, in combination with nature and the attached observer, to generate transient phenomena that enhance personal or public ritual.

• And finally, to pursue apparently esoteric and idiosyncratic aesthetic directions purely for their own pleasure, with no discernable application to their creative practice, to enhance their creativity without knowing how or why.

In an excellent passage from his book *Mindfulness: 25 Ways to Live in the Moment through Art* the French psychiatrist Christophe Andre describes the nuances, the meaning of light and forms and the compositions significance in the Rembrandt painting The Philosopher in Meditation. Rembrandt would have had a different experience of light distribution in space than we do today. Mindfulness is about being in the present moment, neither focused on the future nor the past but to sense what is happening to us
and in our surroundings now. In today’s world we tend not to do this. We are often too busy to notice things in our present because we also live in a world that can tell us, through technology, what has happened in the past, what may happen in the future and we can be elsewhere through a network of worldwide information. We can be in the present of others around the world by this same technology. Rembrandt, as an observer and artist of his time, would have had a vested interest in mindfulness in the light and spaces of his day to create such a powerful painting. Rembrandt would have had to be where he was in mind and observation. In the context of the contemporary situation I am suggesting that architects, through more subtlety of light in space and the transient phenomena I am alluding to, have a different attitude to light and darkness and all the nuances in between and can, through design, put us back in the present like Rembrandt’s painting. “Nowness”. Andre supports Rembrandt’s ability to put us into the “nowness” of the space and his use of light and form to imply a deeper meaning of the space;

“The painting is small, the place it depicts is dark, yet we have a sense of immense space. This is the genius of Rembrandt, who leads us on a visual journey through the dimensions. We travel the painting width ways left to right, from the daylight pouring in to the fragile, almost derisory firelight. There’s a dialogue established between the sun that lights but does not warm and the fire that warms and spreads no light. Are these the sun of reason and the fire of passion, two ingredients that combine in philosophy? We travel to the painting’s height by means of the spiral staircase that links the deep secrets of the cellar to the dark mysteries of the upper floor, and we travel its depth, from the background where the philosopher sits to the surrounding circle of shadows. But the sense of space also derives from the subtle interplay between all that is revealed and all that is hidden, where our imagination is crucial – what lies on the other side of the window, behind the cellar door, at the top of the stairs? The largest of the worlds hidden from our restless eyes is the philosopher’s mind, his inner world. Shadows and darkness, a little light, a little warmth and a working mind - is that what our inner selves are like?” (Mindfulness p. 12–13)

Was Rembrandt consciously deciding to incorporate all the interpretations by the viewer, or in this case Christopher Andre, by design? I suspect that he was not conscious of his genius and its effect.

The apparent accidents of alignments I am suggesting, to be designed by architects, have the possible same effect on us as the Rembrandt painting; that is to fix us in space and prompt us to reflect on the mystery of what is happening in a particular place at a particular time. To nail us down in time and space; to stop for a while by modeling space and forms, by transient subtleties in light.
The Unintended

“De Selby has some interesting things to say on the subject of houses. A row of houses he regards as a row of necessary evils. The softening and degeneration of the human race he attributes to its progressive predilection for interiors and waning interest in the art of going out and staying there. This in turn he sees as the result of the rise of such pursuits as reading, chess-playing, drinking, marriage and the like.” (Flann O’Brien, 1940, The Third Policeman)

I realised the phenomena I was focusing on was the “epiphenomena of architecture”. The architect’s unintended phenomena. Epiphenomena is originally a medical term referring to assessing what symptoms are relevant to the disease and what are present but not relevant. The epiphenomena are that which are not relevant. Daniel C Dennett illustrates this in Consciousness Explained (1991) by referring to his ritual of making a cup of tea. Relative to his tea making his shadow is epiphenomenal; it is just there along with the tea making. However, I suspect what is epiphenomenal is in the eye of the beholder and simply a “matter of attitude” (my notes 1970’s). Also, could Dennett make his tea in the dark? In his example and in my work, I’m interested in the shadow, not the tea. The same holds for me for architecture and nature. I think that the epiphenomenal consequences of architecture that may occur when architecture and nature align add qualities which enhance the experience of architecture. Apparent epiphenomena can be created to add a further dimension to being in a particular space at particular times. In this PhD I’m attempting to illustrate the potential for this approach by only using my own aesthetic preferences; thus far, when I have created prototype phenomena. That is, I have used basic geometric 2D or 3D shapes. At this stage of the research this has the advantage of keeping what could be complex configurations, manageable. This is not to say that, as stated earlier, that such simple configurations do not have intrigue, metaphors, non-explicit effects and associations for the human mind.
Normandy, derelict mill. A building for epiphenomena while on a walk in the countryside. Introduced geometry, 2009.

Noticing and Boredom

From the primarily static shadow extensions with objects in the field, I began noticing interior affects with alignments of the sun and the building mainly through the position of windows. I noticed my perception for subtle and usually insignificant phenomena in the interiors where I was now largely confined, was heightened. I even noticed barely visible floating spider webs and videoed their graceful movements. In initially recording these occurrences I found I had to be quick because they would soon change. Even the fact of fetching the camera was enough to miss a shot. This time dimension is why we miss or disregard such phenomena. We are too busy in our daily rituals to notice such things. Consequently I am for architecture that slows us down to a more contemplative pace, as when we enjoy Art. Religious buildings and public shrines do this also, but perhaps more by coercion. I am for an architecture that helps us to spend time with our own thoughts. An architecture for thought (“room for one word” my notes). However, recent research by Professor Tim Wilson at the Department of Psychology, University of Virginia, USA, points out that this may be quite a big ask in today’s culture or perhaps the counter to his findings needs to be encouraged by the
type of architecture I propose. Wilson conducted tests in which subjects were given the opportunity to have 5 to 10 to 15 minutes alone time just to enjoy their own thoughts.

I am attracted to designing buildings that respond to our secular age with an appropriate spiritual or aesthetic dimension that is free of religious dogma. Buildings can achieve this first by connecting us to the temporal and physicality of natural systems; secondly, by connecting us with the occurrence of ephemeral, aesthetic signs (art) made by us rather than purely static architectural features or works of art.

All of these natural systems move. In fact, I regard movement as a fundamental characteristic of existence. From this position I divided phenomena that I was observing into two categories: 1. Phenomena that we regard, from the human experience of time, as static phenomena and 2. Phenomena that we regard as moving phenomena and/or ephemeral. Perceptually, it is a matter of degrees of movement, but that is our human experience and the building operates at the level of human experience, the experiential, not intellectual abstractions.

In an attempt to illustrate my contention that even the most unrelated, fine art pursuits from a purely “art has its own rewards perspective”, I have traced the following creative sequence from my interest in seeking an object with no meaning to flying chairs onto architectural interests.
Concept and Experiment Sequence Eventually for Windows?

First anamorphic insight. (Accidental concept)

Experiment. Suspended frame/steps.

Shadows in shadows, frames within frames.

Experiment. Window glass, tape, anamorphic shadows.

Experiment 3D structure, etched granite, water, and multiple shadows for architecture? From outside to within?
NOTE FROM A PARALLELTEXT
(Extemporaneous and Proleptic Thoughts)

1808. ALIGNMENTS. I realised today, Wednesday 13th May 2015, that my subconscious is always on the lookout for alignments. The alignments of shadow with object, landscape with object, idea with object, idea with landscape, triangles with the view through the trees, ideas with ideas, architecture with nature, minutes with hours and so on. I finally realised this obvious tendency from noticing my digital clock numbers. Unconsciously when not wishing to know the time, my eyes for the past year or so, have locked onto instances of numerical alignments in the time displayed (like 12:12 or the mirror configuration of 12:21). This was happening too frequently to ignore and I wondered why my mind was doing this. In my PhD I came to the conclusion that I was interested in how buildings aligned with the ephemera of nature but didn’t realise until today that this was central to all my creative work since I began in my early teens. I suspect the focused activity in my PhD has led me to this realisation in my fine art work by allowing me to intensely focus. I look forward to continuing my fine art, writing and poetry that aligns the “not usually aligned” for my ongoing intrigue of being in particular places and spaces or just the pleasure of overlaying ideas and feelings as in poetry, painting, photography and sculpture.

I also understand that my creativity is about satisfying this intrigue by using juxtaposition which produces sustained intrigue, not explicit answers. My photography, sculpture, painting, word collecting, drawing and poetry have always, it seems now, been about the alignment/juxtaposition of the not usually aligned that intrigues my feelings and intellect. A chair passing through a room, a landscape with flying mirror or occupied by a particular frequency of sound and my subconscious juxtaposing on my conscious intents as I create something. It is important to note that in these alignments I am not suggesting the meanings of these alignments, just that I notice that they intrigue me. Meaning, if any, comes later for me. That is the intrigue.

Also, because I was regarding the window as an architectural instrument I saw how it backlit my paintings with sunlight. I have subsequently placed paintings to be backlit by the sun from windows and photographed. See following photographs:
Sun, Cone Painting 1. John McGlade. June 1, 2015

Side Sun Texture Cone Detail. John McGlade. June 1, 2015
Sculpture prompted from architecture and history.
Concept Progression from One Concept

**(From object with no meaning to flying chair onto architecture)**

(Beginning concept) Early need for object with no meaning to manipulate in aesthetic systems for curiosities sake, with no practical application. (Interest in cybernetics)

Unable to find because, for humans, all objects have meanings, associations and metaphors.

Eventually settled on ubiquitous wooden chair in studio, with no interest in chairs.

Chairs have associations but try to ignore those but realise its inescapable; so in some projects work with the possibility.

I use the chair as a mathematician uses $X$ in equations.

I use the same chair in many aesthetic equations in photographs, drawings, blueprints and sculptures over many years.

Do a series of photographs of a suspended chair passing through my studio.

This leads me to the concept of fleeting moments that I set up and record in photographs (or moments in rooms).

Move into landscape and photograph transient setups.

Moving camera in landscape past moving setups in landscape (passing camera, passing object).

Objects regarded as events/events as objects. Everything in flux.

Systems in landscape.

Dilemma of static geometric structures in landscape and everything as part of developing systems.

Resolved by transient shadows from static geometric structures forming new transient, anamorphic objects.

Nature as part of a system with introduced geometry.

Architecture is geometry in landscape. Architecture interacting with nature to produce transient/epiphenomenal events. Record instances of these events.

Recreate these phenomena and experiment with what is learnt.
Use these epiphenomenal events as basis for transient occurrences in practical architecture.
To modify Russell’s quote to be in line with the claims of this project:

“There is much pleasure (and productivity) to gain from (apparently) useless knowledge (aesthetic pursuits)” - (Bertrand Russell. 1872-1970 In Praise of Idleness)

THE ARCHITECT. 2

She watched
The unnoticed things
To learn from the alignments
Of her efforts
With the transient
Wind, the rain, the sun,
The flow of people,
The words in rooms
And with the passing of the clouds
These accidents of her architecture
Were her new mysteries
To be explained.

John McGlade 15/2/2015
List of Images (34)

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- p.129 Camera Obscura. Architecture as instrument. Courtesy of Portsmouth Natural History Museum
• References (35)


Frick. M. 2013. From Emptiness to Infinity. Tadao Ando. (DVD)


Although I regard my work as “first person singular”, having a tendency to approach the world from personal, phenomenological and existential perspective, I also find the current discussions around the extended mind theories and general theories of mind, relevant to the way I work. (“I need objects to think” -Goethe.) But I do not work in a vacuum. Not only do I rely on tangible things in the world and perhaps these are part of my mind, or extended mind. I also rely on my perusal of the ideas of others and one-to-one feedback. These may provide clarity to my existing ideas, but, importantly, they are a source for new ones, to modulate onto the world of things and space, or keep for another day. I therefore do not, for example, read Husserl to find arguments to support my position, but rather look for concepts that stand out for me, or that I regard as poetic, usually picking up on a single phrase or as few words as possible that intrigue me again without necessarily any understanding why. My short notes are prompts that lie in wait for me to return when my mind is ready to be triggered in an unexpected way. A click as the gears of thought rotate one tooth at a time. Because I notice my intrigue amongst the plethora of words on a page or what someone has said, I have grabbed these, over many years, with the intuitive suspicion that they are perhaps an important, yet to be understood and used, part of a bigger picture. I have filled many notebooks with these words and diagrams. I suspect that by intuitively noticing, collecting, isolating and using repetition and variations, patterns emerge that reflect my developing intuitions. For example, in reading Zizek’s Parallax View one of the phrases I have picked out, amongst the many I could have, was “object to be explained”. I am particularly attracted to words that deal with our relations to the world or confound
them. These are usually applied, eventually, to something I have already done; a photograph, a drawing or an object. In the case of “object to be explained”, it still puzzles me and suggests fertile ground for uncovering future use or connection in the context of my interests. I toyed with many variations stemming from these words. For example, “space to be explained”, “room lacking explanation”, “object to be suspicious of”, “object of which I am uncertain” and so on. In this PhD, I tied the “object to be explained” to the regard the observer might have for the transient configurations or reconfigurations I am proposing. One may be able to explain the physical mechanics of the place and what is occurring but never explain what affect it has or what it means, its psychological dimensions. It is always in a perpetual state of “to be explained” or never to be explained, as I suggest, avoiding an explicit narrative, providing mystery. Historically, architects and artists have known the power of their work to suggest something, perhaps hidden and beyond words, and how the space, form, image or sound is stimulating to the human mind, even beyond what their creators had foreseen. We seem to prefer the non-explicit, at times, rather than the explicit.

*Epiphenomenal Barcelona chair at Sagrada Familia*

Photo. JMC. 2009.
Flow of Bold Text Concepts from PhD (37)

“THE EPIPHENOMINAL IN ARCHITECTURE AND A CREATIVE SEQUENCE”
2015
(John McGlade)

• “The thing can never be separated from the one who perceives it...”
• “All observation is theory laden”
• “There is much pleasure to be gained from useless knowledge”
• MAIN QUESTION:
Can the transient epiphenomena that arise as architecture interacts with natural phenomena, be a valid consideration for architectural research and design?
• beauty and mystery in architecture and the significance of time and position in or around the building.
• Architecture can be an instrument for mystery by being an instrument for temporal events.
• spiritual, but secular architecture
• SUB QUESTION:
Can my (or an architect’s) particular creative idiosyncratic aesthetic propensities, unrelated to architecture, be applied to real architectural concerns?
• Aesthetic attitudes. Aesthetic frameworks.
• Extemporaneous and Proleptic Thoughts.
• Epiphenomenal.
• how to find the path to practical application.
• all my creative work and activities are connected.
• a family of aesthetic resemblances.
• phenomenological account, first person.
• 3D anamorphic shadows as a means of altering the perception of actual objects in landscape
• The ephemera of nature, light, wind, rain, clouds and even plants,
• transient aesthetic event.
• alter architectural space and structure.
• systems with architecture without the use of high technology.
• The act of writing itself prompts the evolution of ideas and clarifies existing ones in a way I am not conscious of.
• ,insight comes from doing,
• action with matter.
• to use this text not only as documentation but, primarily as an active creative instrument and allowing myself time to do so.
• I am wary of explanations too soon.
• “the sublime ignorance of the architect”
• consciousness comes late. (JMCG)
• I discover and unify ideas within myself by observing and being involved with selected physical events outside myself or by direct actions in matter, including writing.
• Often creative insight just entails looking in a different direction.
• molding my intuitions
• liminal concepts
• conceptual poetry
• real sustainability of a building
• psychological sustainability
• beauty is a utility,
• Kant said of the beautiful “that it pleases without a concept”
• architecture for the mind, our psychology in addition to physical concerns.
• Passing clouds and time
• the ever-changing building
• transient accidents..., appear and disappear
• being in the right place at the right time
• a transient beauty, a beauty of process
• the importance of waiting
• “the poetry of the unintended event”
• The Importance of the Unintended or design can generate the unexpected?
• the building as an instrument for the unexpected
• Sagrada Familia in Barcelona
• buildings, as a system in unison with nature, produce more than the architects, owners or builders (even plumbers) bargain for; this is the transient, accidental, unintended aspect of architecture.
• for architects, as it is for artists, that they cannot say completely why they are doing what they are doing.
• unconscious aesthetic propensities
• spatial fractals?
• “The job of the artist is always to deepen the mystery” Francis Bacon. 1561-1626)
• buildings I am interested in should not be explicit
• Buildings, like good poetry, should be intellectually and emotionally enigmatic, hiding some of their virtues, not known, always, there to be discovered, perhaps over time.
• Non-explicit concepts are on the edge of grasping.
• As we turn toward the light we can be blind to our shadows.
• a collision of the “non-explicit”
• Positive, existential architecture
• “Form follows function”
• psychological function
• Designing mystery. (Architects can only infuse mystery into their work by becoming mysteries to themselves)
• designing artistic, non-explicit transient phenomena. Phenomena that is hard to discern what it explicitly means but nevertheless is not too far abstracted to be meaningless is the aim.
• the Mona Lisa
• non-explicitness
• The architect has to also acknowledge that their creativity and its resultant meanings, like the fine artist, is largely a mystery to them.
• Achieving the esoteric.
• The interaction of a creative work with humans
• Not everything that an architect does creatively has to have a direct, discernable, conscious relevance or application to architecture; however, pure creativity for its own reward, will infuse into their everyday designing, by subconscious means, because it is different to their normal design thinking patterns.
• For humans a building is as much a state of mind as it is bricks and mortar.
• the way the morning light comes into a room in winter and aligns with positive memory or a thought
• we attach significance to places and formations beyond our immediate knowing.
• danger in designing, transient phenomena that pertains to quality, that is, the degeneration into unsustainable novelty.
• (Sydney Opera House with projected images on the sails)
• We can get lost in the novelty of using technology and neglect to say something.
• the challenge for secular architects, landscape architects and interior designers is to produce meaning in transient phenomena that occurs in or on a building or its surrounds
• risk of being too explicit
• Poetry And Meaning In Architecture.
• As an alternative to the static aesthetics of architecture/ transient phenomena/
• the beautiful, poetic, mysterious and powerful occurrences.
• positioning the observer
• Labyrinths
• The system of observing is a system of attachment to all the visual, spatial, tactile, societal and psychological dispositions of the observer and this is inescapable.
• I am therefore proposing that architects could explore these transient epiphenomena by influencing the position and the attitude of the observer by their static designs of interiors and exteriors. This could produce buildings that connect us more deeply with the dynamics and temporality and cycles of the natural. The architect can use this designed positioning in
a particular place at particular times to also reinforce our awareness of our own transient existence within the natural scheme of things. The architects can use spatial expectation, as religious buildings have traditionally used, to create a sense that something poetic but real, may be experienced when you move into a secular space?

- “Do not forget that a poem, although it is composed of the language of information, is not used in the language-game of giving information.” (Ludwig Wittgenstein)
- First insights. Shadows, memories and reflections. notes books and diagrams of no apparent consequence
- “Imponderable evidence”
- validity of the unspoken
- Art Words And Phenomenology
- *transient epiphenomenal in architecture*
- observed phenomena as a basis for design.
- I intend to show, that, the experimental examples suggest the possibility for extending architectural design into transitory, ephemeral phenomena, arising from the buildings static hardware, without the use of unsustainable, hi-tech technology.
- *psychological sustainability*
- By not depending on hi-tech hardware these phenomena will occur for the life of the building and as long as weather exists.
- Neuroscience and creative self-therapy.
- my creative methods are becoming supported by recent research on the brain and philosophy of mind.
- Cognitive Bias Modification
- Many creative thinkers and artists, suspend gratification and spend years on apparently useless tasks and pursuits in the hope that one day their efforts will reward them with a single, but profound, “AH ha” moment when the jigsaw puzzle comes together in an unexpected way.
- I suspect this sculptural work set my attitude to the idea of space having a processing function, a space as an instruments, and later architecture as an instrument.
- *reconciling static geometry and dynamic systems*
- I am interested only in phenomena that can be observed or achieved at the architectural scale in concrete reality, not as an image on a screen.
- Euclid Burning
- *improvising spatial events*, particularly short ones
- *observational drawing*
- *The importance of waiting*
- Created Phenomena
- *design of spaces that encourage reflection and contemplation.*
- First insights. Shadows, memories and reflections.
- The weather, time, movement, illusion and reality.
- the shed (site 1) and spatial anticipation
- unintended secrets.
• Europe and Australia
• historical context and sound experience
• Camera obscura. Architecture as instrument.
• decorative, ineffable, psychological
• instrumental/putting outward/reverse camera obscura, a building as projector and modulator
• Work, the Brain and Reason.
• Why Euclid?
• the human level of the experience of physics and geometry, not with the abstract, but the rather the experiential from our human perspective.
• Earth, Water, Air and Fire...
• aesthetics of geometry and engineering because it was our decoration and is even more so now. The geometry of today’s buildings has continued to have meaning for us beyond physical functions...
• Euclid, Terra Nullius and Trespass.
• trespassing geometry
• trespassing architecture
• Alignments. Imposed geometry on nature.
• From notes on liminal concepts.
• from notes on observations.
• Ramachandran, the neuroscientist ("The Artful Brain")
• The building and meaning
• Outcomes informing the PhD
• "Unselbstandigkeit
• Selective non-sense over time.
• Photography without intention
• photography and the window
• window acting as a modulator
• fire, physics and the classical elements
• transition from geometry to the folly of architecture.
• "Everybody carries a room about inside him" (Franz Kafka)
• propositions for windows and glass
• the gateposts, trees, wind and windows
• further research experiments and prototypes.
• Europe and not looking at the window
• Nowness
• The apparent accidents of alignments I am suggesting to be designed have the possibility of having the same effect on us as the Rembrandt painting; that is to fix us in space and prompt us to the awe and to reflect on the mystery of what is happening in a particular place at a particular time. (like Rembrandt) To nail us down in time and space; to stop for a while by modeling space and forms, by transient subtleties in light.
• the unintended
• Noticing and boredom
• More observed phenomena
• Further research experiments and prototypes.
• Possible method to design anamorphic shadows etc. in situ
• From chance encounter to “Rill Mirror” and poetry.
• The Rill Mirror concept.
• Conclusion and layers of interest.
• Writing for creativity.
• The act of writing was integral this project and was a firstly phenomenological account but also a stream of consciousness by necessity,
  By writing out this PhD in a phenomenological and “stream of conscious” manner, writing poetry and doing paintings during the research I continued to hone and setup my aesthetic intuition biases (Aesthetic Frameworks) along particular sensibilities to advantage, for this project.
• I maintain that by doing apparently unrelated, parallel creative pursuits, purely for their appeal to us, for their own sake, feeds into our professional creativity only positive, but largely unknown, ways, enriching our intuitive options.
• “The life of our minds is more than consciousness can handle”
  By writing out this PhD, writing poetry and doing paintings during the research I continued to hone and setup my aesthetic intuition biases (Aesthetic Frameworks) along particular sensibilities to advantage, for this project.
• I was looking for ways to tie these interests to architecture from these, perhaps esoteric, positions, and in this PhD project I believe I have because of the following points and the subsequent “Nominal Creative Sequence map” which shows the integration of the two: my fine practice and architecture through this PhD by project.
• Nominal creative sequence map for PhD 2015.
• alerting architects to notice the unintended in their own completed buildings.
• These phenomena can potentially suggest the unknown, metaphysical dimension and mystery of our existence,
• a humanist, post enlightenment society
• architectural events/ a liminality of experience akin to great art
• In this project I have suggested the following points for design of transient phenomena, of a two-dimensional or three-dimensional nature, that appears in architecture by combing with architecture, to connect us with the rhythms of nature, to give us kinetic occurrences of aesthetic merit.
• Concept progression from one concept.
• Concept and experiment sequence for a window?
EPILOGUE

REFLECTIONS ON CHANGES BY PROJECT

I need to reflect on the changes within myself from doing this PhD by project in the context of The Expanded Field program in the School of Architecture at RMIT University. I knew I already had a plethora of ideas and creative methods I would modulate onto any university program with all its patterns and processes, if I were allowed too. At the start of my Masters Ranulph Glanville, a visiting assessor at RMIT, looked at my initial work over breakfast and said “This is PhD material” This assessment by such a man, was the first of many experiences with supervisors and review panels that gave me public faith in my own work. This was the first hint to allay my apprehension whether the co-habitation of ideas between a university and myself could work without me sacrificing my integrity. My subsequent motivation for doing a PhD was then a purely selfish action to embed myself more in my own ideas and perhaps get some affirmation of these. I had developed what called “My Work” over many years, privately and was protective of this area as the one area of my life where I allowed myself free thought and actions without the demands of day-to-day concerns. I was used to this scenario and had grown to realize it was central to my being and sanity. Early in my career I took a few leafs from the book of Duchamp who was my first experience that visual art could be intellectual. Duchamp said if you want to develop your ideas freely don’t try to earn money from them; so I wasn’t doing a PhD to earn more money in industry or teaching; I was doing to see if I could learn more about my own creativity and as a by product perhaps contribute something unique to architecture and art at the level of ideas. I also admired Duchamp for his years of working in private free of the art world; so I had resolved to do the same. Doing this PhD allowed me to come out from my hermit’s cave and be affirmed by people I respect.

RMIT offers a PhD by project and I took this to mean, by doing in conjunction with thinking which I have striven always to balance in my own work. I have long been an advocate of the intelligence of doing physical actions with material as integral to my thought. (As in the arts and sciences) Traditionally universities were supposed to be places that fostered free thought insulated from outside vested interests but usually, in this context, thought has been regarded as separate from manual skill. This binary view has annoyed me since childhood where one was usually regarded as either in one camp or the other and manual skill was seen as less intellectual or not intellectual at all! I wanted to be in both camps and RMIT offered me this. Throughout the project people, on learning I was doing a PhD, would often ask “Why put yourself under so much pressure?” or then assume I was doing it to advance my career or improve my capacity to earn more money; this also annoyed me. Not one person other than my immediate supervisors or examiners, assumed I was doing it for enjoyment, which I was. This is a sad state of affairs where one must be only pursuing the life of the mind for money or status rather the pleasure it gives to oneself or others. Another worry of mine was at the outset of the degree I would have to show direct relevance to the field of architecture; whereas I wanted the freedom to discover it, if possible, over the course of the project, which is my normal way of working. First I act
then I watch and usually I discover. It was even suggested by one reviewer at the penultimate presentation that I had no table of contents and that was remiss of me. I reflected on this comment for days and came back to reaffirm my method of working. The procedure of writing a table of contents first is to placate the frontal lobes of the brain with the illusion of proceeding logically and rationally into the writing of ideas, implying that we roughly know these ideas at the outset of writing and by framing them into a table of contents will clarify them to ourselves, but this map of ideas may also limit the areas the subconscious mind needs to explore. I evolve and clarify ideas by doing, not to a plan; I follow my intellectual and intuitive nose. I am not suggesting this method is for everyone but in my case, it's fruitful. Some minds need to plan their journeys in minute detail whereas others like the freedom and rush of the unexpected; I am not one for guided tours, even by my own itinerary!!

However the intellectual climate in RMIT architecture encouraged me, through my supervisors, lectures and review panels, via the Expanded Field program, to continue with my established practice of integrating hands on intelligence with thinking intelligence. I took this to mean the acceptance that I was framing the question and evolving the content while working directly out on landscape or inside the building by giving equal respect for the intellectual capacities of the mind by thinking and thinking through doing.

I remember particular advice that was given to me in two separate lectures, one by Leon van Shaik and one by Richard Blythe. That is, many students unnecessarily feel they have to support their ideas from the outset or constantly seek out during their PhD justification for their work. This is done by referring to mainstream, established intellectuals by saying “My ideas are like so and so” etc. often referring to these possible directions of thoughts before they have had empirical experience; that is, putting the intellectual horse before the cart of direct experience. Whereas, why not have your ideas unlike any others? Why not have the courage to go out on an intellectual limb and formulate your own ideas? This suited me very well because although I can defer to like minds, after an insight, I prefer to discover something for myself though observation or working with material in situ. Also Richard Blythe pointed out the importance of attempting to map/diagram your background influences and map/diagram the progression of the project. (Of course, in my case, after it was done!) I had vaguely thought about these background influences but up till the PhD had never tried a diagrammatic mapping of them; this was most useful because I was prompted to think and see clearly what was important to me.

I found it is important to listen to every supervisor or review panel’s even negative comments because I usually found something that piqued my mind and followed me for days. In all cases these persistent questions or comments I realized obviously struck something in my subconscious for a reason and inevitably produced further insight into my practice as I brought them into consciousness; this is the advantage of review panels by a variety of examiners with different ways of expressing their views on your work. Subsequently I looked forward to review panels rather than dreading them. I was helped in this attitude by my tendency for comments, from any source, not to sink into my slow mind until days afterwards. Slow thought has it advantages.

Another advantage for me in doing this study was I had to extend my skills. I taught myself video editing and became more computer literate. I found a way to integrate my
copious notes on paper with the computer in the transition from paper to screen, pen to keyboard. However the main extension was in the range of my creative activities. I become more interested in writing and subsequently writing poetry as a method to clarify my thoughts and attitudes in as few words as possible to myself and will publish soon. I have also recently started to video, in real time, my writing process as it forms on the screen, giving others insight into my particular process of writing poetry. The process of writing for the PhD also stimulated more thoughts outside the project. Subsequently I have an ongoing text, which I add to every day called *Extemporaneous and Proleptic Thoughts* which to date has in excess 2000 thoughts in more 100,000 words.

With the ongoing diminishing of my ability to move I still had the need for tactility, that is, interaction with materials. I had begun to let go of this need by commissioning people to make things for me, which made me realize, in the past, I had perhaps been over reliant on myself to do everything. (A heritage from my country past) To solve this need for tactility I returned to painting during the PhD. Painting has always been problematic with me because I didn’t grow up with painting, I grew up with machines and electricity, after all Duchamp gave up painting! It seemed disingenuous of me to ever paint. However painting is now well integrated into my main work, not only solve my need to do actions in matter but also to enhance my aesthetic and intellectual sensibilities. Once I saw painting as a system of actions in matter allowing me to work through concepts like I do with photography or making objects, I saw it as just another way to contribute to my aesthetic/intellectual world. I produce paintings, not to illustrate something to others but to look upon and puzzle my mind; I therefore have to keep them for my future viewing in line with my photography, notes, and things I have made.

In closing I must mention the type of ongoing support I had from my main supervisor professor Sand Helsel; this woman is as sharp as a tack!! During my often convoluted rambling talks in my attempts to say what I was doing in the project, she would be constantly making notes and give my thoughts back to me more succinctly with advice on what I could perhaps do next. Although I didn’t always follow these suggestions, as professor Helsel can attest, it was most useful in clarifying my own thoughts to myself and how to integrate my work into the university's standards and expectations.

John McGlade. 2/12/2015.

KEYWORDS

Architecture
Sculpture
Landscape
Epiphenomena
Anamorphosis
Rill mirror
Observer
Poetry
Instruments
Window
Alignments
Shadows
Space
Objects
Geometry
Euclid
Creative
Process
Optical
Illusion
Secular
Nature
Ephemera
Spiritual
Neurology
Being
Philosophy
Phenomenology
Camera obscura
Mystery
FLOW OF BOLD TEXT CONCEPTS FROM PHD (37)

John McGlade. 2015. Photo. EMCG
Unselbständigkei t (non self-standingness)

Edmund Husserl

Photo. JMCG. 2013.