Light as Surface and Intensity

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Light as Surface and Intensity

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Abstract.

Light Intensity and Surface is the title of my PhD art exhibition where I explore through paintings, the world of my own encounter with the radiant light of the Linear Accelerator used in treatment of women with breast cancer. This engagement with the world of light technology encompasses oncologists, physicists and women who extended their personal experience to inform my artwork and contribute to the theoretical connections made in this thesis.

The contribution of this thesis lies in how the lecture The Origin of the Work of Art by philosopher Martin Heidegger can be applied to a reading of ‘great artworks’ that are separated in time, space and culture but connected in their subject: light. It was his philosophy that helped shape the connections between where art originates and what springs from the ‘artwork’ itself. The concept of Light in the title of this thesis, Light as Surface and Intensity, refers to Heidegger’s notion of the ‘clearing’ seins Lichtung, the ‘lighting centre’, the medium that holds one being to another from where the idea for an ‘artwork’ springs in the artist. This silent, listening space unveiled by artists throughout history in ‘great artworks’ is the same mysterious dimension where the viewer experiences the poetry of the sublime. Surface relates to the attunement of artists throughout history to the new, particularly in the science of controlling light which influences the way artists achieve the material appearance of their ‘artwork’. The word Intensity refers to the level of
‘openness to the mystery’ of light in both physicists and artists to create and control some ‘thing’ that stabilises a community and remains a source of wonder. *Intensity* applies to the theory of the sublime in art when reading the human response to the new so often portrayed in artworks. Although the words in the title can be separated for clarity of definition, an understanding of the spaciality of the concept becomes implicit through their unity: *Light as Surface and Intensity*.

The theoretical contribution of this thesis is in the application of Heidegger’s philosophy of ‘world’ *welt*, ‘earth’ *erde* and ‘release’ *Gelassenheit* to read ‘great artworks’. A focus on the ‘world’ *welt* of the artist ‘unconceals’ not only the knowledge and skill in their ‘artwork’ but an understanding of technology, questioning and an ever expanding view of the possible which generates both anticipation and a future for the ‘artwork’ beyond the present. Heidegger’s concept of ‘earth’ *erde*, the counterpart to ‘world’ *welt*, when applied to ‘great artworks’ uncovers another way of seeing nature in conflict with ‘world’ *welt* that when unified in their common ground are an all encompassing source of ‘endowment’.

Heidegger’s concepts of *erde* and *welt* when applied to artworks both past and present extends the theory of the sublime as a way of reading the poetry of the new in artworks. *The Art of Painting 1666* by Johannes Vermeer ‘unconceals’ his *welt*, the golden age of light in the Netherlands, and the light technology of the camera obscura. *Light and Colour (Goethe’s Theory) - the Morning after the Deluge - Moses writing the Book of Genesis 1843* by William Turner, advances the knowledge and potential of light in science, art and religion. *Petworth Windows 2000* by Garry Miller alludes to the controlling of obscure light
while *Untitled 1987* for Dan Flavin is an expression of industrial fluorescent lights. James Turrell re-presents *Roden Crater* as a light artwork that unifies the conflict between *erde* and *welt* to evoke the harmony of *Gelassenheit*. These artworks are a window into the new, throughout time providing a glimpse of light technology that has become the foundation for the twenty-first century radiant light technology of Oncology. The philosophy of *Gelassenheit* when applied to great artwork recognizes that endowment is never depleted but continues to be still in process, as each generation brings with them a knowledge of their *welt* to add to the layer of meaning.

This thesis demonstrates how artists have responded to the new in light technology with a way of seeing that creates a depth dimension that bridges cultural worlds to unearth the breath of something often most effectively communicated by being silent. The light artwork, of James Turrell’s *Roden Crater* unconceals this space of calmness, detachment and releasement: a site distant from the *welt*, in order to see nature anew. In this sense *Roden Crater* becomes Heidegger’s remedy for the alienation of a technological world.
Dedication

I dedicate this thesis *Light as Surface and Intensity* to Dr Phillip Kent who died at the age of 44. For six years it was my privilege to have Phillip supervise my Master's Hons. thesis and this Phd Thesis. His infectious enthusiasm for the world of fine arts, his immense knowledge, great insight and personal encouragement expanded my mind and ‘ways of seeing’. Phillip’s extraordinary ‘chats’ always encompassed a rich diversity of subjects that stretched the imagination and reawakened an understanding of what it means to question. This legacy will live on in all those students who knew him.
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Discussions with Dr Sally Macarthur and Terry Hayes helped refine the text of this thesis. However, my special thanks are owed to Associate Professor Jane Goodall and Dr. Brett Neilson for their intellectually challenging supervision that shaped the present text at many points.

I owe a debt of gratitude to all those whose support and advice made this thesis possible. Nicola Cole, from the Reading Room of the Turner Collection at the Tate Gallery London, contributed to my research on Turner and artist and lecturer Cassandra Sharp introduced me to the writings of Martin Heidegger that have provided the framework for this thesis. Gary Arthur, Head Physicist at Westmead Hospital provided me with a foundation in the light physics of the Linear Accelerator and his patience, knowledge and respect for radiant light clarified my understanding enabling me to give convincing expression of form to the invisible.
Declaration

The work submitted in this paper to the best of my knowledge and belief, contains no material previously published or written by another person except where due knowledge is made in the text. This thesis has not been submitted for a degree at this or any other university.

Signed:

Date:
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Key Heideggerian words and phrases from *Origin of the Work of Art* are explored in this thesis to show how his philosophy can be used as a tool to interpret the sublime in artworks. The first time I introduce a German word in this thesis it is written in English within single inverted commas followed by the German translation in italics, for example ‘world’ *welt*, ‘earth’ *erde*, ‘sublime’ *heilig*, or ‘allowing things to be’ *Gelassenheit*. To simplify the text, once Heidegger’s precise meaning of the term is established, the English translation is then dropped, leaving only the German term e.g. *welt*, *erde*, *heilig* or *Gelassenheit*. Additionally, all key Heideggerian words and phrases from *Origin of the Work of Art* are differentiated by being contained within single quotation marks e.g. ‘great artwork’, ‘authenticity’, ‘clearing’, ‘absolute need’, ‘the happening of truth’, ‘truth disclosure’. These words need to be consistently identified to the reader as distinctive Heideggerian terminology. Once this terminology is familiar to the reader the words and phrases will appear independent of inverted commas.
Philosopher Martin Heidegger argues in *Being and Time* that most of us in the modern ‘world’ *welt* tend to lose touch with our own individuality. By conforming to patterns of mass behaviour, strong feelings of anxiety can lead to ‘inauthentic’ lives. In this thesis, I draw attention to a waiting room, a ‘world’ *welt* within a ‘world’ *welt*, the world of women with breast cancer and their journey to ‘authenticity’ beyond what it means to ‘be’ a woman, to a deep, transpersonal appreciation of what it means to be human. I refer to these women of all ages, nationalities and walks of life as ‘warriors’, taking the name from Greek mythology where women removed one breast in order to better draw their bows (ter Hoeven, 1988). For Heidegger the continuity from Greek past to the present is not a progression of events but rather through the being of the artist, a way of ‘setting up a world and setting forth the earth,...the fighting of the battle in which unconcealedness of beings as a whole or truth is won’ (Heidegger 1971).

In twenty-first century medicine, the physicist is ‘setting up a world and setting forth’ radiant light, the strongest light there is in technology, and referred to as the weapon against breast cancer. I was looking for a word that described women as strong as the light treatment they were experiencing and in keeping with Heidegger’s notion of Greek past being the foundation for ‘great artworks’. The metaphor of the warrior an appropriate way to describe
the authenticity of the women who use radiant light in their battle for life.

It was in the waiting room where the conceptual connection was formed for *Light as Surface and Intensity*, between the thesis and the art practice component. The theoretical concept for the thesis, explores natural light controlled by artists in ‘great artworks’ and attunement to the new in *their* world. The art practice component of the thesis gives form to the new in *our* world, invisible radiant light controlled by physicists in medical technology. In this way what cannot be said in words can be expressed in my paintings. Although I separate the world of radiant light from breast cancer in my artwork there is an overlapping that adds depth similar to the layering of that comes from the silent engagement between the viewer and great artworks. Be it the artist in their artwork or the physicist working with light technology, the stabilising concept of controlling light is conceived by a human being in a space described by Heidegger as *phasis* where the idea grows out of its own accord.

**Background Influences**

Research into the theory of the sublime and how light is controlled by artists in great artworks was begun in my Masters (Hons) thesis. These controlling strategies provided the focus for my inquiry into original artworks throughout forty eight major galleries in England, France and Germany. Some of these strategies involve organizing and disorganizing the visual field so that landscape is not so much a view as an obstruction to a view. Other artists focus upon pushing the medium of paint to new limits so that there is an absence of shape and form and sometimes even light itself. It was this mysterious notion of absence, where the subject is manifested through the
chromatic device of paint to evoke a sense of loss, that made the greatest impression. Some of the artworks I analysed in this way were Casper David Friedrich’s *Monk by the Sea*, William Turner’s *Norham Castle Sunrise* and Vincent Van Gogh’s *Peasant Shoes*.

Artist and lecturer Cassandra Sharp, who exhibited in *Aspects of the Sublime* at the Ivan Dougherty Gallery (1993), first introduced me to the writing of philosopher Martin Heidegger in 2000 as a most effective writer who addresses notions of the sublime in his writing whilst not necessarily writing about the sublime. This interview became a primary influence because the writing of Heidegger in *Being and Time* and the essay *Origin of the Work of Art* in *Poetry Language and Thought*, form the framework for my PhD art practice and thesis *Light as Surface and Intensity*. Whilst theorists Edmund Burke and Emmanuel Kant are important in research into the sublime, it is the twentieth century writings of Heidegger and the poet Rainer Maria Rilke that echo the openness and interconnectedness of all things that are the core of the sublime experience. “Often there are no words for the sublime moment but Heidegger defines that space of silence and stillness from where language first speaks and it is from this same space that poets work” (Sharp 2000).

The theory of the sublime will always be linked to philosopher Emmanuel Kant, the rise of Romanticism and ‘nature’ as might. However, if the link in the theory between morality and aesthetics is modified to poetry, the sublime becomes a viable contemporary concept with wider cultural significance for the twenty-first century. It is possible to experience the sublime from ‘nature’ as catalyst with three alternative connections: the overwhelming human design of technology, the limits of emotions and the personal poetry of the
subject. In this thesis the dimension of the theory of the sublime allows the sublime experience to be evoked by the complexity of the human design of light technology called the Linear Accelerator which recreates and controls the ‘nature’ of radiant light. The Linear Accelerator which is central to the lives of women with breast cancer is evocative of the sublime experience in the depth and intensity of the experience that is forced upon them. The personal poetry of the sublime comes from the invisible ‘nature’ of radiant light itself that remains a mysterious source of wonder.

The personal experience

In a waiting room ‘everyday’, but beyond the standards of the ‘everyday’, I encountered the very powerful weapon against cancer, the Linear Accelerator. In a lead lined room, the medical technology of the Linear Accelerator makes it possible to control radiant light. A beam is fired of light particles called electrons travelling at high speeds that hit a metal plate where the lost energy is diverted into X rays that penetrate the body of the warrior. The radiotherapy damages the malignant cells while surrounding cell tissue over time is able to repair itself.

With Heidegger's philosophy providing the interpretive key, my experience of breast cancer and the impact of this encounter with radiant light from the Linear Accelerator captured my focus, imagination and respect. Although radiant light is invisible, this does not mean that the subject should be left in obscurity. Rather it became a challenge to explicitly render visible the invisible in my own artwork. To achieve this aim and arrive at insights required a multi perspective approach from personal experience, conversations with other women involved in the same experience, and
consultations with the Oncologist Dr Verity Ahern, Physicists Gary Arthur and Mark Radziszcwski and medical technicians at Westmead Hospital. By projecting this light \textit{welt} of ‘inconspicuousness’ into the foreground in my artwork, I hope to esteem the qualities of the women warriors in much the same way as the Greek artists taught us to esteem the qualities of the hero.

**Philosophical Influences**

For Heidegger, words and meanings are of the utmost importance due to the difficulty of his subject matter so he has developed a precise vocabulary retaining many traditional German connections. Once accessed, the challenge of Heideggarian words and phrases becomes an opportunity to interpret the poetry of light as sublime in both historical and contemporary artworks. In this thesis, several aspects of the text are especially noteworthy and need clarification in the introduction. Heidegger's use of the German term \textit{Dasein}, originally translated to mean ‘to be there’, ‘present’, ‘available' and ‘to exist’, allows him to investigate ‘being’ whilst maintaining “the right Ontological ring” (Mulhall 1996, p.14). Heidegger uses the term \textit{Dasein} in connection with our ‘everyday’ understanding of what it means ‘to be’ and our constant attempts to ‘unconceal’ a more profound understanding of the question of being. The word \textit{Dasein} clearly distinguishes Heidegger’s philosophy from that of others who in their reference to the subject of ‘being’ use terms that could have misleading implications for the subject of being such as subjectivity, consciousness, spirit or soul. Heidegger reappropriates the word \textit{Dasein} in a neutral sense “… 1. for the being of humans and 2. the entity or person who has this being” (Inwood 1999, p. 42). Heidegger connects \textit{Dasein} with ‘authenticity’ \textit{eigentlich}, that is “something of its own and can be interpreted as close in meaning to the Greek \textit{autos} meaning self” (Inwood 1999, p. 25). My
interpretation of the word ‘authenticity’ is a substratum quality that we do not know we have until the experience of the limits of emotion cause it to be exposed; a quality closer to being in existence than to the self.

Heidegger asserts that the process of ‘authenticity’ is where the ordinary ‘everyday’ experience of ‘being in the world’ has been abruptly interrupted by the threat to life itself and the foundations of what it means to ‘be’ in that ‘world’ welt. He chooses the German word Wahrheit to express ‘truth’ and the word Dasein, for ‘being’. The lives of warriors as they face their ‘existence’ existenz and the uncertainty of time change dramatically and continue to evolve throughout the healing journey. Heidegger’s notion of existenz is a ‘stretching’, a ‘constant projecting’ of ourselves into the future, always anticipating things or hoping for things. However, when someone is given a diagnosis of breast cancer the invisible light of being extended ahead into purposes to be fulfilled or tasks anticipated temporarily goes out. Heidegger’s philosophy centres on Plato’s “truth in being”.

Whilst some key concepts from Being and Time (1996) underpin this thesis, I base my argument that Heidegger’s philosophy has the capacity to liberate traditional thinking about the sublime in art on the Origin of the Work of Art. ‘Great artwork is art in which the truth of being as a whole i.e. the unconditioned, the absolute, opens itself up to human historical existence’ (Heidegger, cited in Young 2001, p.6). My contribution to the philosophy of art will be in showing how Heidegger’s perceptions in Origin of the Work of Art can be used to interpret the reality of the sublime in both historical and contemporary artworks.
The link between Heidegger, artists and warriors.
Heidegger's struggle with the deceptively simple verb to 'be' Dasein, appears to be remarkably similar to the struggle of artists expressing personal truth in their artworks and the struggle towards 'authenticity' that progressively unfolds in the lives of women warriors. Struggling with the shock of the cancer diagnosis, physically transforming surgery, chemotherapy, radiotherapy, desolation and fear, scatters the surrounding 'world' welt of materialism so that consumerism becomes an empty, insignificant fragment on the fringe of their lives.

The waiting room for radiant light treatment becomes a pivotal centre for the warriors where life itself is appreciated; not just a personal appreciation of what it means to 'be' but also to 'be' human. From uncertainty and despair, from the 'everyday' experience of light technology, warriors emerge from the experience with an inner calm, an inner strength and a sustaining wisdom. As if liberated from the captivity of Plato's Cave these warriors, cleared and illuminated, share the joy of 'seeing' light in the real 'world' as if it were for the first time. Re-formed by light, the warriors gift of 'authenticity' allows a progression beyond the form of the temple body to the temple mountain where the 'earth' erde within them surfaces enabling them to reclaim their 'world' welt. 'A temple reveals the rock on which it rests, the storm that buffets it and the stone of which it is made' (Heidegger 1971, p. 44).

The poetics of invisible radiant light.
Adjacent to the waiting room, the warriors' experience with the artificial invisible light of the Linear Accelerator becomes the centre of their everyday existenz. Each warrior brings to this experience in light physics technology,
their dimension of cultural associations with light, their dimension of spirituality and their dimension of the ‘inner light’ of being. Their experience with the mysterious radiant light of medical technology transforms the significance of light in their lives as a metaphor for inspiration, the transcendent or the mystic in art and poetry. Although the invisible light connection between one warrior and another also contributes to the healing process, it too is a mystery. Perhaps the invisible personal connection has its source in the experience of the Linear Accelerator combined with an innate concept of the dynamic of light, the purest of forces, the ‘medium’ that holds one being to another and is expressive of the ‘centre of all beings’. This invisible connection between the initiated warrior and the novice is a silent centre from where the need for stability in the novice can be drawn. Then, from this boundlessness, a point of detachment is reached within the initiated warrior that allows the novice to experience the intensity of their own ‘inner vision’.

To glean some understanding of this silent poetic connection, one need not look further than a ray of natural light falling on the surface of an object where several things can happen. The light may be reflected, or it may be refracted whereby it pierces the object or it may be absorbed into the object. Sometimes the connection between warriors is reflective, sometimes the connection is invisibly refracted by the touch of the hand and sometimes it takes the form of absorption in the experiences of others already at the pinnacle of their victory. These three forms of light experience as exemplified in the lives of the warriors in the waiting room inform my choice of artworks for this thesis and generate meaning in the way I engage with those artworks. My choice of artworks for analysis were Johannes Vermeer’s *The Art of Painting* 1666-68 William
Turner’s *Light and Colour (Goethe’s Theory)* - *the Morning after the Deluge* - *Moses Writing the Book of Genesis* 1843, and James Turrell’s *Roden Crater* 2004. All of these artworks reflect, refract and absorb light in varying degrees through the silent connection of the artist’s world, their attunement to the new in science and their concern with advancing the potential of light as a source of the sublime.

**Influences on the choice of artworks for analysis**

Heidegger’s *Origin of a Work of Art* and *Being and Time*, my constant companions in the waiting room, combined with a recent archive of original source information from Europe of great artwork influenced my choice of artworks for analysis. In *Origin of the Work of Art* Heidegger speaks of artworks as a sheltered space, in particular the Greek *Temple of Hera* 1, which for me over time became analogous to the sheltering space of the waiting room where warriors accept the challenge to live the present as if it were the future, involving a deconstruction of social, spiritual and cultural layers in order to arrive at a personal truth, a ‘clearing’, a ‘lighting’, an ‘open centre’. It was this experience of the transparency of harmony and releasement that enabled me to make the connection to Heidegger’s concepts of the artist’s truth of ‘earth’ erde, ‘world’ welt. Heidegger considers that it is this ‘truth’ Wahrheit that distinguishes artwork from great artwork. These concepts became the foundation that influenced my choice to focus on three artworks for analysis in this thesis namely *The Art of Painting, Light and Colour (Goethe’s Theory)* - *the Morning after the Deluge* - *Moses Writing the Book of Genesis*, and *Roden Crater*.

The exhibition *Vermeer and the Delft School* I had seen at London’s National Gallery in 2001 clearly reflected the personal truth of seventeenth century
Dutch artist Johannes Vermeer and his world. His fascination with light and his depth of knowledge of the world of light technology made \textit{The Art of Painting 1666-8} an obvious choice for analysis according to Heidegger’s theories of what makes a great artwork. The year 1666 was the pinnacle of scientific and technological advances in light, when the Dutch physicist Christian Huygens proposed the wave theory to explain the behaviour of light. Scientific knowledge of light led to the invention of the camera obscura, meaning dark chamber which riveted the attention of Vermeer and his art world as a new way of seeing for an artist. Both the camera obscura and the Linear Accelerator use mirrors and shaping devices in an attempt to control the scattering of light.

Throughout the experience of the waiting room I was also in the final process of painting \textit{Clearing Centre}, exploring the ambiguity of the reflective surface of the Linear Accelerator where the vulnerable, horizontal position allows the viewpoint of an independent observer while providing an opportunity to reflect on the new in light technology. The colour and composition of this artwork sparked recollection of one of Turner’s most complex paintings; the cone shaped, radiant composition of \textit{Light and Colour (Goethe’s Theory) - the Morning after the Deluge - Moses Writing the Book of Genesis}. This mysterious artwork with its yoking of science and religion, became my second choice of artwork for analysis using Heidegger’s philosophy of world and earth from \textit{Origin of the Work of Art}.

I compare the aloneness of being encapsulated in a lead lined room with radiant light from the Linear Accelerator where no movement is possible, to being a prisoner in Plato’s Cave, where the prisoners’ gaze is directed ahead at
the reflected shadows on the cave wall. My gaze was directed from a horizontal position to the reflection of radiant light on the collimators above. Similarly, the prisoners could not see the direct light source but could see the light in their mind’s eye. At the completion of my encounter with radiant light I emerged to see light in the real world as if for the first time. My third choice of artwork to analyse was James Turrell’s contemporary artwork Roden Crater which has been considered analogous to Plato’s Cave. In his artwork Turrell intensifies the viewer’s experience by using an absence of light in the tunnels of the crater and providing vulnerable, horizontal positioning for the viewer directly below the fumarole to create a perception of intensity in the viewer so that when the experience of light occurs, it appears to be the other side of reality.

**Openness to the mystery of poetry**

Heidegger’s poetic philosophy of allowing ‘things to be’ Gelassenheit, an ‘openness to mystery’, lets the mysterious be seen as mysterious. Thus, using this framework, it is possible for the invisible to be seen as invisible; as sublime heilig. In art, the sublime experience can be triggered by the greatest simplicity, a single line drawn on paper by Botticelli or an expressive flash of colour across the canvas by Van Gogh exemplifying da Vinci’s phrase “painting is poetry without words”. In the everyday it could be the invisible radiant light technology of the Linear Accelerator that heightens our sense of transience, lighting up the ‘clearing’ within our being. “There is no touchstone by which we may reference the sublime, but, once accessed, it offers a place where the soul can breathe” (Exley 1998, p. 63).

Technology in our ‘world’ welt has made it possible to ‘see’, and yet not see, a
world within a world, a world of radiant light. For an understanding of ourselves and our relationship to this obscure light and how it can be represented as form, it is important to have an understanding of natural light. Natural light is composed of the visible and invisible spectrum. The visible spectrum which is so familiar gives off its own light from the sun and the stars making it possible for human beings to see in the world. However, this visible light is only a very small section of the invisible, electromagnetic spectrum of light. This invisible, electromagnetic spectrum comprises radio waves, infrared radiation, visible light, ultra-violet radiation and x and y-rays which are all different wavelengths, frequencies and photon energies. However, these main types of radiation are similar to visible white light in that they can also be reflected, refracted and controlled by human beings to create artificial, invisible radiant light. Physicists and medical engineers create and control artificial sine waves to accelerate electrons on their wave crest. This is the invisible, high energy, penetrating, light technology confined in the Linear Accelerator that I endeavour to communicate in the artwork for my exhibition *Light as Surface and Intensity*.

To understand ourselves and our place in a world of light technology, it is interesting to experience a shift from the practice of western culture’s emphasis on vision to a more comprehensive blind vision; an invisible vision relocated from the human-observer relationship to an observer-image interaction where the ‘unconcealed’ body is revealed on a computer screen. This transformation of representation changes the way we think about ‘seeing’ images and ‘seeing’ human beings, presenting another form of access to human beings and to ‘being’ *existenz* as a mode of revealing. In Chapter two I explore this reorganization and representation of sight in connection with
Plato’s truth and the position of the prisoners in the allegory of the cave, seeing but not-being-able-to-see. Just as scientists and medical engineers are seeing beyond the visible to invisible light, women with breast cancer are seeing beyond the aesthetics of the beautiful body *forma*, to discover within the inner light of *Dasein*, the richness of their ‘authenticity’ and wholeness of being.

**Heidegger’s extension of the theory of the sublime.**

As a contemporary artist walking on the shoulders of giants, my predecessors’ sight, insight, and ‘circumspect’ vision has been drawn upon in order to explore *Light as Surface and Intensity* within the framework of Heidegger’s poetic extension of the sublime. This thesis is divided into three sections, the temple body, the temple mountain and temple earth. The temple body draws upon the sublime experience of radiant light controlled by the medical technology of the Linear Accelerator used in the treatment of patients with breast cancer.

Art and technology are both fundamental “modes of disclosure” (Weisendes Entbergens): art and technology intersubjective, historically developing ways of seeing given to human beings so that they may unveil and understand the beings and structure that exists around them (Heidegger, cited in Biro 1998, p. 200).

The temple mountain, explores Heidegger’s ideal measure of a great artwork in the Greek *Temple of Hera 1* at Paestum and reconsiders the form of Plato’s ‘truth’ *Wahrheit* in Turner’s artwork.

The temple earth examines Heidegger’s concept of *Gelassenheit*, letting things be in the world in a ‘detached’ sense, whilst preserving space for the ‘inner light’ of human integrity. The consuming nature of technology “tends to engulf us” but when this nature is offset or ‘detached’, the freedom of
Gelassenheit creates an ‘open space’ for our innermost authentic selves (Inwood 2000, p.117). To open up a space where humans can be and engage with ‘beings as beings’ emphasizes the urgent need to preserve all the ‘open’ space that is left in the ‘world’. World welt and earth erde need each other but are in constant conflict because earth erde needs to be protected from the excessive demands of a consumer world. I apply Heidegger’s concept of Gelassenheit to great artworks as accessing a ‘clearing’, an ‘open space’ in a technological world just as the Temple of Hera 1 at Paestum gave access in the ancient Greek world welt.

The emphasis of the eighteenth century theory of the sublime was on nature, particularly mountains or desolate and striking landscapes that evoked sensations of awe in the viewer. However, Heidegger’s concept of Gelassenheit, broadens the sublime experience to ‘natural’ beings and their awareness of existence as personal ‘truth’. Passage to the sublime need not only come in the ‘clearing’ from the overwhelming depth and intensity when illness or death are forced upon us but also from the depth and intensity of joy experienced from great artworks.

Heidegger addresses the subject of great artworks in Origin of the Work of Art describing the indefinability of the breath of the sublime as Gelassenheit where ‘earth’, erde and ‘world’, welt, are ‘the becoming and happening of truth in an artwork. This thesis embarks on a journey for a contemporary great artwork of light corresponding in scale to the Temple of Hera 1 and the light technology of the Linear Accelerator with the capacity to touch the clearing in the ‘world’ welt of the viewer, that affirms the value of their human existenz.
Chapter one, the Temple Body.

In Section 1, I examine Heidegger’s *Extension of Kantian Formalism* and set the stage by examining major concepts of Emmanuel Kant’s philosophy in *Analytic of the Sublime*, namely the dynamic and mathematical sublime. Then I open up the theory of the sublime to Heidegger’s concept of *Gelassenheit*. It is within the poetics of Heidegger’s notion of the harmony and releasement of *Gelassenheit* that I explore *Norham Castle 1845*, a late work by Turner. Again, within the framework of *Gelassenheit* I read the contemporary paintings, *Petworth Window 2000* by Miller to discover that Heidegger’s concept bridges both time and history.

Section 2. *The Ruby Light*, takes the view that medical light technology, specifically the Linear Accelerator, has the power to displace and transport us out of the realm of the everyday for a heightened sense of transience. I compare the oncology department to a Greek temple: a space that presents the fullest confrontation with destiny; a space where the mystery of light technology lies in its concealment and a space that gives meaning and direction to life. The Greek philosopher, Plotinus describes such an experience as the truest ‘seeing’. Kant refers to the experience as ‘sublime’ whilst Heidegger calls the experience ‘holy’ *heilig*. Informed by the sense of enclosure felt by warriors, similarities in design between the Linear Accelerator and the camera obscura and their use of light technology are explored. Both the camera obscura and the Linear Accelerator transmit light rays passing through lenses which converge and are brought into focus. I analyse evidence that suggests Vermeer in the *Art of Painting* made use of the camera obscura as a way of seeing his seventeenth century ‘world’ *welt* through optics and
telescopic lenses.

Chapter two, the Temple Mountain.

Section 3. A Way of Seeing challenges John Gage’s pessimistic reading of Turner’s painting, Light and Colour (Goethe’s Theory) - the morning after the Deluge - Moses Writing the Book of Genesis 1843. Within the infrastructure of Heidegger's notion of world welt and earth erde, I analyse Turner's painting to 'unconceal' the layers of struggle that occur in his work. This analysis reaffirms the notion that the sublime experience from nature as catalyst extends to artworks of personal significance. Turner who painted Light and Colour in his seventy first year reached beyond a career in visible light to the privation of not-being-able-to-see invisible light, the invisible light of personal faith. Turner’s ‘personal truth’ emerges in an analysis of his painting Light and Colour. Heidegger considers recognition of the artist’s truth to be the measure of a great artwork, ‘truth as light’ Sein Lichtung, the lighting of being.

Section 4. The Heritage of Contemporary Art.

In Origin of the Work of Art, Heidegger takes the view that the Temple of Hera 1 at Paestum Italy stands as the Greek measure of a great artwork. My research of this great artwork is interpreted through his standard of earth erde and world welt, in order to identify the characteristics that would comprise a comparable great contemporary light artwork. In questioning the origin of great artworks, Heidegger acknowledges the significance of the words of visual artist Albrecht Durer. Durer states, “in truth, art lies hidden within nature; he (sic) who can wrest it from her has it” (cited in Heidegger 1971, p. 70). An analysis of Durer’s “truth” which has its foundation in Plato’s allegory of the Cave, suggests that the meaning of that “truth” dissolved in the twentieth
century into a distortion of disastrous political wars, contradictions and conventionality. However, further analysis of Plato’s allegory of the cave reveals that the conflict arising in seeing but not-being-able-to-see, can be compared to the experience of warriors with the Linear Accelerator. This connection confirms the notion of no one universal “truth”, but the power of “personal” truth in art. In this way Durer’s statement becomes relevant for the twenty-first century in contemporary art with the addition of the word “personal”. “For in “personal” truth, art lies hidden within nature; who can wrest it from her, has it”.

**Chapter three, Temple Earth**


Section 5 makes the claim that for a contemporary artwork to be a great artwork comparable to the *Temple of Hera 1*, it would need to be not only utilitarian, symbolic and a site of reflection but also an historic site in order to resist the materialistic culture associated with the modern ‘world’ *welt*. Emphasis is placed on Heidegger’s criteria for a great artwork in research of the monumental site of James Turrell’s *Roden Crater*, a 500 000 year old, 180 metre high extinct volcano. In accordance with the spirit of *Gelassenheit*, Turrell’s minimal engineering has reshaped the crater bowl while maintaining the integrity of the crater shape. The chambers and passages within the crater resemble an ancient temple observatory dedicated to viewing the sun, the moon, stars and galaxies that pass overhead. It is suggested that *Roden Crater* may prove to be a projection of Heidegger’s vision of a great artwork for the twenty first century that is reflective of his ideals in the *Temple of Hera 1*, expressive of ‘earth’ *erde* and ‘world’ *welt* with ‘the becoming and happening of personal truth’.
Section 6. *My Own Art Practice* recounts my research at the Tate Gallery Millbank in London that holds the Turner Private Collection. This experience provided me with a unique insight into the artwork of Turner through his preparatory sketches and journal entries for major paintings. As my own artwork progressed the significance of this research crystallized in my choices with both composition and colour.

In this section, I also discuss a selection of three paintings from my art practice which are representative of the three Chapters in this thesis: the Temple Body, Temple Mountain and Temple Earth. The oil on canvas paintings are titled *The Clearing Centre, Journey into the Centre* and *Waiting Room*.

Finally, I discuss the impact on my artwork of being present during the dismantling process of the Linear Accelerator at Westmead Hospital. This unearthing of the energy of light technology clearly reflects Heidegger’s philosophy of *Gelassenheit* as a resource that continues for each successive generation. In much the same way each generation adds a layer of meaning to great artworks. The Linear Accelerator is both technology and the remedy for technology; *Gelassenheit* in the sense that this light technology does not distract us from who we are, rather it restores the authenticity of who we are to thousands of women with breast cancer each year.
Chapter One

Light in the Temple Body
Section 1  Heidegger’s Extension of Kantian Formalism

Beyond what is, not away from it but before it, there is still something else that happens. In the midst of beings as a whole an open place occurs. There is a clearing, a lighting.... This open center is ...not surrounded by what is; rather, the lighting center itself encircles all that is.... Only this clearing grants and guarantees to human beings a passage to those entities that we ourselves are not, and access to the being that we ourselves are (Heidegger 1971, p. 53).

Heidegger addresses the space in beings that he describes as ‘not human’, calling it a ‘clearing’ where a ‘knowing’ of the sublime takes place. He explores this space in a collection of essays, *Poetry, Language and Thought*. One of these essays, *Origin of the Work of Art 1971*, explores not only the interrelationship between the artist and a ‘great artwork’ but also ‘something else that happens,’ a third thing that triggers the sublime. Heidegger contends that the ‘open centre’ is a space for ‘the peal of stillness and the stillness is not anything human’; it is a space from which language first speaks, similar not to the empirical sound of church bells at an evening service but rather the sound of silence as the tolling dies away. Heidegger describes this still space as a ‘given’ a ‘clearing...the lighting... the open centre’ an ‘unconcealed’ space at the ‘core of things’, a place where artists continue to think and wonder and viewers experience the sublime in ‘great artwork’. “Life should not be measured by the number of breaths you take, but by those times which take your breath away” (Swinburne 2003, p. 1). The undefinable nature of the breath of the sublime does not mean it need be considered as an obscure experience. The
indefiniteness of a concept hovering is not without direction; indeed its vagueness in residual memory of experience is itself a phenomenon.

Heidegger's philosophy stretches from the poetry of the barely noticeable breath of the sublime *heilig* to the limits of technology, because the well spring source of creativity for both poetry *poeisis*, and the source of technology in human beings is the same. While Heidegger considers the art of ancient Greece was the purest form of *poiesis* ‘bringing forth’ the naturalness in art, his theory frames the ever changing ‘world’ of the contemporary artist. Heidegger considers both technology and the work of the artist as ‘modes of disclosure’, an extension of a‘way of seeing’ *sehen*.

The essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand akin to the essence of technology and on the other, fundamentally different from it (Heidegger, cited in Biro 1998, p. 202).

'Artworks' not only disclose their subject to the viewer, they allow access to the ‘origin’, *Ursprung* of the art process. Heidegger refers to this process as ‘earth’ *erde* and the subject as ‘world’ *welt* making up the two faces of ‘truth’ *Wahrheit* in the artwork. The vagueness in understanding of the ‘sublime’ *heilig* does not mean the experience is unfamiliar or cannot be grasped even though such an experience transcends language. “To sing in truth is another breath. A breath for nothing” (Rilke, cited in Heidegger 1971, p. 139). It is this vagueness in our capacity to register a formidable experience that brings to the deeply effective consequence of the sublime, a sustainable feeling of *transendere*, that ‘breaks into the circle’ in a space ‘known before language’. This is a ‘given’ space with the core potential to engage emotionally, intellectually and spiritually. Hence, to consider the sublime is not necessarily to look for writing
on the subject or a specific theory but to know its space in being and seek the unconcealed ‘truth in nature’, from ‘poetry’ poiesis in the realm of art. ‘From the inventive essence of art, it happens that art in the midst of beings clears an open place in whose openness everything is other than before’ (Heidegger 1971, p. 59).

**History of the discourse of the sublime.**

Heidegger's writing allows for an extension of the archetypal discourse on the sublime in *Origin of the Work of Art*, through his theory of ‘letting things be’, *Gelassenheit*. Heidegger's thought liberated the theory of the sublime from the restraints imposed throughout the history of that theory. In my Masters (Hons.) thesis I explored the sublime from when it was first recorded by Greek Hellenistic writer Dionysus Longinus in a work entitled *The Sublime, the Aesthetic Confrontation with Infinity the Vastness of the Universe* (Longinus, cited in Ashfield & Bolla 1996, p. 12). Longinus wrote in 100 AD of the catalysts for this experience while in 205-270 AD Greek philosopher Plotinus progressed to a deeper dimension of the mysterious phenomenon. “Shut your eyes, and change to and wake another way of seeing which every one has but few use” (Plotinus, cited in Janson 2001, p. 199). This ‘way of seeing’ included concepts of nature itself, particularly mountains or desolate and striking landscapes that produced sensations of awe in the viewer. Longinus identified five sources of sublimity. These are boldness and grandeur in thought, the power to raise intense emotion, powerful style, the choice of noble subjects and composition of dignity (Longinus, cited in Ashfield and Bolla 1996, p. 23).

Over time the meaning of the sublime expanded to include not only literary criticism on topics such as psychology and painting but also moral philosophy.
Writers were challenged by the human experience of the sublime and the elevated response of human nature. Notions of grandeur, the distant terrifying, indistinct, dignified and the unspeakable were all experiences from ‘within’ to ‘beyond’ and subject to debate. Longinus’ conception of sublime experience was debated again in England and Europe in the mid-eighteenth century as a central component for criticism of art. This period of history from 1750 to 1850, known as the ‘Age of Reason’, included Romanticism which “flourished from about 1800 to 1840, coming between the movements Neo Classicism and Realism” (Croix & Tansey 1986, p. 785). Both of these movements approached the sublime of Romanticism in different ways, prompting debate among philosophers including Edmund Burke in Britain and Emmanuel Kant in Germany. British philosophical debate during the eighteenth century prepared for and influenced the Kantian Analytic of the sublime. Burke published A Philosophical Inquiry into the Origin of our Idea of the sublime and the Beautiful in 1757 describing the modified state of terror when nature is encountered from a position of safety. Burke states that

...if the pain and terror are so modified as not to be actually noxious; if the pain is not carried to violence, and the terror is not conversant about the present destruction of the person, as these emotions clear the parts of a troublesome encumbrance, they are capable of producing delight; not pleasure but a sort of delightful horror; a sort of tranquility tinged with terror (Burke, cited in Crowther 1989, p. 8).

Burke fragmented and fractured the experience of the sublime in order to create as full a principle as possible. He analysed two sources from which the experience of the sublime can arise: firstly, the notion of terror from overwhelming objects in nature, secondly, experiencing the brink of danger from a position of safety (Burke, cited in Ashfield & de Bolla, 1958, p.139). However, this argument that overwhelming fear is the catalyst that
precipitates the experience of the sublime severely limits the experience to the unpredictable and disastrous in nature.

**The Philosophy of Emmanuel Kant**

Kant’s theory of the sublime is more comprehensive than that of Burke. Burke was concerned with fear, whereas Kant extends his thinking on feelings and the relationship of feelings to morality. Kant asserts his independence from Burke’s view in the very first sentence of *Observations*. The sublime “…is not so much the properties of objects as subjective capacity for feeling which determines the nature of our pleasurable or displeasurable responses” (Kant, cited in Crowther 1989, p. 11).

Kant’s *Analytic of the sublime* (1789) brought into focus different but related aspects of the theory: namely terror, transcendence, eternity, infinity, nature and morality. Kant’s theory is grounded in the belief of the Enlightenment in human capacity to transcend nature and the moral confines of church and state.

Bold, overhanging, and, as it were threatening rocks, thunderclouds piled up to the vault of heaven, borne along with flashes and peals, volcanoes in all their violence of destruction, hurricanes leaving desolation in their tracks, the boundless ocean rising with rebellious force, the high waterfall of some mighty river, and the like, made our power of resistance of trifling moment in comparison with their might. But, provided our own position is secure, their aspect is all the more attractive for its fearfulness; and we readily call these objects sublime because they raise the forces of the soul above the vulgar commonplace and discover within us a power of resistance of quite another kind (Kant, cited in Meredith 1991, p. 110).

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1 Enlightenment flourished in the 18th century stressing tolerance, reasonableness, common sense and encouragement of science and technology (Bullock, Stallybrass & Trombley 1977, p. 272).
The mathematical sublime.

Kant further separates the theory of the sublime into two major concepts: the mathematical and the dynamic sublime. In the mathematical sublime, infinity is experienced in the overwhelming sense of scale found in the vastness of space in the natural world. Kant describes this as thaking

“... the eye some time to complete the apprehension from the base to the summit; but in the interval the first tiers disappear before the imagination has taken in the last, and so the comprehension is never complete” (Kant, cited in Crowther 1989, p. 103). In trying to fathom the “infinite” there is a ‘clearing’ beyond the imagination causing a sense of pain, a shattering of reason and imagination. This in turn provokes a pleasurable experience which alters the state of consciousness powerfully enough to touch a spiritual need for God. Kant argues that the aesthetic of the sublime is grounded in human
moral worth. “The pain of confrontation with the problem of “infinity” causes a respect for our own destination and ultimately gives way to feelings of satisfaction” (Kant, cited in Meredith 1991 p. 110). Kant calls this elated sense of relief a negative pleasure - frightening, fascinating yet different to the notion of the beautiful.

Heidegger’s theory paves the way for the poetic sublime, rejecting the Kantian philosophical view that philosophy must be done from a detached, disinterested point of view and arguing that reality can be accessed through involved commitment of the individual, giving meaning to their world welt. For everyday practices to give meaning to lives, they must be focused and accepted by the community because without meaningful practices a community would be worried by nihilism. Goldsmith, in The Future of Art 1999 claims that the sublime in art is a direct response to nihilism. Heidegger’s philosophy is recognized as having influences from historically wide and complex sources, including Socratics, Aristotle, Aquinas, Kant, Hegel, Husserl and Nietzsche. Nietzsche’s revolutionary theory about the nature of Greek tragedy and civilization in The Birth of Tragedy 1872 shows great admiration for classical Greece. He was interested in the notion of conflict between two basic tendencies: the Apollonian desire for clarity and order represented by the god Apollo and the Dionysian tendency, a wild irrational drive towards disorder, represented by the god of wine, Dionysus. Appreciation for the themes of classical Greek art is manifest in Heidegger’s Origin of the Work of Art 1931 where he argues that the ancient Greek Temple of Hera 1 at Paestum is the measure for great artworks. Although Nietzsche values art, his major theory in The Genealogy of Morals is that all human behaviour is basically motivated by the “will to power”. Creativity is
considered only from the perspective of the artist. In making this argument, Nietzsche launches a strong critique of Kant's writings on art, which he considered approached the artwork only from the perspective of the viewer. The innovation of Heidegger in *Origin of the Work of Art* is to recognize the interconnection that encompasses the work being of the artist, ‘world’ *welt* ‘earth’ *erde* and truth in the artwork, and the critical dimension of the preservers of the artwork. The overlapping reoccurring theme of truth in art is considered by Nietzsche and again by Heidegger. Nietzsche assigns truth to a somewhat artificial role in art within the framework of feelings, tragedy and nihilism, where truth is an effective rhetoric that reflects the values of the powerful winners in history.

Truths are illusions about which one has forgotten that is what they are; metaphors which are worn out and without sensuous power; coins which have lost their pictures and now matter only as metal, no longer as coins (Nietzsche, *On Truth and Lies in an Extra Moral Sense* 1873).

Heidegger's diametrically opposed view of truth enters another realm in *Origin of the Work of Art*, where he argues that the beginning and happening of truth is unconcealed at the centre of *welt* and *erde* in the artist's encounter with the new.

Truth establishes itself in the work. Truth is present only as the conflict between lighting and concealing in the opposition of *weld* and *erde*. Truth wills to be established in the work as this conflict of *welt* and *erde*. The conflict is not to be resolved in a being brought forth for the purpose, nor is it to be merely housed there; the conflict on the contrary, is started by it (Heidegger 1931, p. 65).
Although Friedrich’s painting *Monk by the Sea* is perhaps the best illustration of German Romanticism, it is its universal dimension which makes this artwork a poetic source of inspiration worthy of consideration in relation to Heidegger’s extension to the Kantian sublime ‘in the midst of beings as a whole...an open place occurs. There is a clearing, a lighting... This open centre is not surrounded by what is; rather the lighting centre itself encircles all that is’ (Heidegger 1971, p.53 ). Friedrich conveys the infinity of the mathematical sublime with its eerie apprehension through the measurement of space in the low foreground and middle ground which merges with the expanse of the sky. It is this ground, this ‘sheltering agent’ that Heidegger calls ‘earth’ erde, with all its mystery, that is evoked in the painting through the Monk gathering his cloak about himself, as if to seek the answer to the question of the meaning of being. ‘The Temple in its standing there first gives to things their look and to men their outlook on themselves’ (Heidegger 1971, p.43). In this context Heidegger is referring to the ‘earth’ erde of the site by the sea of the ancient Greek *Temple of Hera* 1. However, Heidegger also alludes to a transparency of ‘earth’ erde and being. It is this transparency of ‘earth’ erde and being in *Monk by the Sea* that evokes the undefinable nature of the breath of the sublime, the oneness of temple body, sheltering a stillness within that is not ‘anything human’.

**The dynamic sublime.**
2. William Turner *Snow Storm Hannibal and his army Crossing the Alps 1812*. Oil on canvas (146 x 237.5) Tate Gallery, London.

A further aspect of Kant’s theory of the sublime is the “dynamic state of imagined fear” which leads us to recognize that some natural phenomena are mighty enough to make all physical resistance futile. An example of the dynamic sublime can be seen in William Turner’s *Snow Storm Hannibal and his army Crossing the Alps 1812*. This depicts Hannibal, a miniature figure in a painting of defeat and destruction, with troops nearing the end of their goal to conquer Italy from the northern alps but overwhelmed by the force of nature in winter. The elephants, silhouetted in the distance, would have been suffering from the rigors of the elements, slowing Hannibal and making his army susceptible to attack from native Swiss tribesman. The storm, in full fury with clouds swirling around the sun’s eerie light, eclipses the army and sows the seeds of delusion. Kant calls this feeling, “the dynamic sublime”, where in the flash of an instant, the conflict between imagination and reason
becomes an experience which symbolizes the “moral extension” of human existence. When Hannibal’s army experienced the mighty storm they would have known the “dynamic sublime”.

Kant’s argument is similar to that of Burke in that the dynamic sublime is still precipitated by fear. Kant claims that the dynamic sublime is a state of mind generated by the contemplation of objects in nature that give rise to a feeling of fear which has its source in the self.

If we are to estimate nature as being dynamically sublime, it must be represented as a source of fear. For in forming an aesthetic estimate the superiority to hindrances can only be estimated according to the greatness of the resistance (Kant, cited in Crowther 1989, p. 110.)

Kant argues that the sublime experience is created from the level of resistance between a feeling of pre-eminence of being above nature and an awareness of physical helplessness against the force of nature. This level of self preservation plays an important role in the agreeable experience of the dynamic sublime; being safe, mixed with the uneasiness of “nature as might”. Kant explains, “the boundless ocean rising with rebellious force is all the more attractive for its fearfulness” (Kant, cited in Crowther 1989, p. 110).

**Adaptation of the sublime in Contemporary Art.**

The history of art is not a story of uninterrupted progress from past to present but rather a story of how one event led to another and how the entire past is prologue to the present. Kant’s extraordinary *Analytic of the Sublime*, which was written during the colonial and scientific era of the eighteenth century, offers a philosophy of the sublime for his time. However, concepts can be considered centres of vibration that become movable bridges over time
(Deleuze 1994). From this point of view, philosophy can be seen as perpetually digressing back and forth informing the present, connecting with problems, restraining or giving meaning to our ‘world’ welt.

If knowledge of the sublime is limited to one historical time, culture and philosophical discourse it will always give rise to misleading controversy when quoted in another time and culture, causing a progressive narrowing and levelling of meaning. The philosophy of the sublime with its capacity to humanise remains Kant’s guiding insight. However, what is problematic is his austere linking of the sublime experience and the presupposition of the existence of “morality” as a universal law. It is this realm of “morality” in Kant’s theory that limits the sublime experience to those with religious, especially Christian beliefs. With the eighteenth century decline of religious authority, Kant’s notion of “morality” in the contemporary secular world of the twenty first century is a matter of controversy.

Heidegger’s philosophy of Gelassenheit, letting things be, is an ‘opening up’ of welt to what it means to be human, ‘to be’ different with an identity that gives purpose and meaning to life without the restrictive theory of either fear or “morality”. Heidegger extends opening up of welt to great artworks, with their role to ‘make expressly visible to a world’ what is already in existence. ‘Genuinely poetic projection is the opening up of that into which the human being, as historical, is already cast’ (Heidegger 1971, p. 71). The artwork clears what is usually veiled and withdrawn in the welt, articulating what is implicit but obscure in language. Underpinning the contemporary welt of the everyday is technology as a projection of being. Heidegger’s philosophy of harmony, detachment and ‘releasement’ means that state-of-the-art
technology need no longer be all consuming or threaten to ‘engulf us’ because it need not affect the inner light of *Dasein*. Within this approach to openness, the sublime remains as timeless, fresh and vital in the twenty first century as it was when a highlight of the eighteenth and nineteenth centuries (Inwood 1999, p. 42).

The need to bring together knowledge of the past and the sublime experience of artists is being recognized by galleries through ambitious exhibitions reaffirming the capacity of the sublime to ‘humanise’ in a technological age and preventing human beings from becoming disposable objects. To accentuate this quality the Tate Gallery in Liverpool organized the exhibition *Original Eyes* in 1991. Paintings from the mid seventeenth century to the mid nineteenth century 1750’s to 1850’s were presented with work from Turner positioned alongside work by Klee, Picasso and Rothko to demonstrate the links and similarities between artists working with the sublime in very different periods of history. It is inconceivable that these diverse artists would be unaware of the eighteenth century philosophical writing of Burke and Kant. Turner’s transformative vision of light in the ‘everyday’ context of his own time selectively responded to scientific and philosophical developments from 1820’s. Similarly, artists in our time are giving expression to their experience of the sublime responding to a technological *welt* and using that technology as a poetic tool in their art practice.

**Heidegger’s philosophy applied to Turner’s *Norham Castle Sunrise*.**
To view the painting of *Norham Castle Sunrise* on the Tweed River is to be transported back in time to Turner’s ‘earth as nature with the world’. Born in 1779, Turner lived and worked mostly in the early nineteenth century but used mostly eighteenth century concepts and techniques. Perhaps more than any other work, *Norham Castle Sunrise* has become the icon of late Turner, protecting landscape erde, and his process of ‘truth in seeing’ for our welt. What is Turner protecting? In a luminous, shimmer of light, almost transparent, Turner secures erde with the same kind of a watercolour subtraction seen in the sketches of his journals and this subtraction speaks to the viewer as ‘the sound of silence after the tolling of the bell dies away’. The viewer is taken to the limit of sensory experience to erde, to a time before
Norham Castle rose from the rock. Heidegger suggests that this form of ‘unveiling’ or subtraction, this light of truth in Western art, began in Greece as *Aletheia*. Heidegger refers to this ‘truth’ as *Wahrheit*. The ‘unconcealed’ Castle gives the appearance that this dwelling is the light source, creating its own luminosity as surface, its own presence of human ‘dwelling, at-homeness’ resting high above the veiled valley.

‘World’ *welt* and ‘earth’ *erde* the two faces of ‘truth’.

The *welt* of Turner in his artwork was in some ways established by his father, taming and grounding pigments from the *erde* to be used by his son in his paintings and research. Turner’s preparatory watercolours of *Norham Castle Sunrise 1845* are sketched from many different angles, exploring the effects of light and atmospheric changes by utilizing various properties of the ground in the paper. Turner experimented in journals made from Ralston paper in gray, blue or buff, in many cases using the same brushload of paint on each in turn. “This practice amply justifies the assumption that materials and techniques found in one painting are common to others of that same date” (Townsend 1999, p. 17). However as Heidegger explains in *Origin of the Work of Art* there is something else that occurs. It is not just colour and brushstrokes but the artwork consecrates its *welt* with ‘dignity and splendour’ allowing it to stand forth as ‘holy’, *heilig*.

World is never an object that stands before us and can be seen. World is the ever-nonobjective to which we are subject as long as the paths of birth and death, blessings and curse keep us transported into Being (Heidegger 1971, p. 45).

Turner’s artwork holds open his nineteenth century *welt* and keeps it open allowing the *erde* of his pigments to glow effortlessly. For the viewer, the artwork is about the light of *Norham Castle Sunrise 1845*. It is not about the
struggle with pigments as they have been seamlessly re-concealed in the erde of the painting. Whenever the viewer experiences in the artwork a spark of unity between the opponents welt and, erde then words fail to express the tranquility of that unity.

Gazing at Turner’s favourite subject and last artwork, Norham Castle Sunrise 1845, the viewer could be forgiven for thinking this idyllic light drenched painting does not in any way suggest erde resistance. However, if we consider that Turner travelled alone on horseback with a journal that fitted into his greatcoat pocket and equipment in his saddle bags, we can then imagine the breadth of erde’s resistance. The physical difficulties encountered by an artist riding from London to the Southern Uplands, the border of Scotland and England, would have caused the need to travel lightly with the barest of personal necessities. Turner’s art equipment also reveals erde’s resistance in the particularly strong, absorbent drawing paper he included to withstand the harsh elements. His medium was watercolour, a medium held in low esteem by his peers, but essential for research for one travelling under these conditions. The border of Scotland with rolling moors, broken in places by rocky cliffs and the tops of windswept, barren hills could inspire him even in summer to seize the moment to record the light. This ‘conflict’ is recorded in his journals as quick pencil annotations, raw intensity and immediacy of washes and forms, partly coloured in paint. He relied on his memory to later fill in the gaps.

It is well documented that after each visit Turner returned home, using different rooms to obtain suitable lighting to work up his sketches but there was never enough knowledge of erde’s most elusive subject: light. Erde’s
resistance continued unrelenting, in conflict with Turner’s probing *welt*. Until finally, after revisiting Norham Castle seven times, Turner succeeded in ‘bringing forth’ *poiesis* the, naturalness of light, in his painting *Norham Castle Sunrise 1845*. His intimate knowledge of light’s fleetingness was ‘unconcealed’, brought forth in an unconventional way with the transparency of watercolours. However, conflict reoccurred when the elusive effect of watercolour on paper, was replaced by canvas and oil pigments. In this process of transferal the *poiesis*, the naturalness of light, evaporated causing Turner to re-evaluate the process of his research. Turner’s methods were innovative so instead of painting in the traditional way with oil as the medium, he used diluted oil pigments, glazed to replicate the way he had originally recorded light with watercolour in his Journals (Townsend 1993, p. 70). This solution accounts for the invisible background of familiarity and ‘everydayness’ that is in turn re-given to us, the viewers of his work. Turner’s ‘way of seeing’, *Norham Castle Sunrise 1845* allows light ‘to be’ *Gelassenheit*, an ‘openness’ a ‘releasement’ to the mystical in light. The mystical that is the realm of art allows people to ‘see’ what cannot be communicated in language.

**Heidegger’s philosophy in Contemporary Art**

Some contemporary artists are already independently re-evaluating the sublime experience in their own work and ‘listening’ to the artwork of other artists from indigenous cultures who have a far deeper understanding of *erde* than western artists. How can Heidegger’s philosophy be seen as liberating the sublime in contemporary art? Heidegger’s confrontation with western philosophy on the subject of art was the overturning of the practice of art ‘aesthetics’ and its relation to human feeling and experience, which he considers marks the point of decline in great artwork.
Aesthetics takes the work of art as an object, the object of *aisthesis*, of sensuous apprehension in the wide sense. Today we call the apprehension experience. The way in which man experiences art is taken to provide information as to its essence. Experience is the source that is the standard not only for art appreciation and enjoyment but also for artistic creation. Yet perhaps experience is the element in which art dies. The dying occurs so slowly that it takes a few centuries (Heidegger 1971, p. 79).

Burke’s and Kant’s traditional view of fear and morality limits underpinning their theories sublime. However it was the post eighteenth century notion that ‘knowledge of truth’ about the world was the exclusive realm of ‘reason and science’ taking over the realm of art that had made it ‘great’. The aesthetic role for art implied that for an artwork to be successful it should be one with ‘aesthetic appeal’ and therefore beautiful. In this way, art became trivialised, an option rather than a ‘need’, and artists were marginalised in their own culture. Instead, Heidegger replaces this practice of aesthetics with ethics, Plato’s theory of ‘truth’, *Wahrheit* revealing itself in the ‘art work’ (see Section 4).

With ‘truth’ as disclosure reinstated as the foundation of art there is an opening up of the ‘clearing’ *Ereignis* that occurs in the artwork to become something to be taken seriously in the community. “What makes art great is not only and not in the first place the high quality of what is created. Rather, art is great because it [answers] an absolute need” (Heidegger cited in Young, 2001, p. 11). Heidegger considers that the experience of the ‘sublime’ *heilig* is created by an invisible background of truth, the thread of familiarity and the transparency in a culture that creates an ‘openness’, to the mystical; the mystical as a realm of art seen so clearly in Australian Aboriginal and indigenous artworks. In this way Heidegger’s thinking re-establishes the position of the ‘sublime’ *heilig* in contemporary art.
Heidegger’s Philosophy in Garry Miller’s Paintings.

A contemporary example of sensory phenomenon of light itself, can be seen in the paintings of artist, Garry Miller who powerfully seduces the viewer with deep blue and white light.

Blue is a mysterious colour, hue of illness and nobility, the rarest colour in nature. It is the colour of the shadow side, the tint of the marvelous and inexplicable, of desire, of knowledge... (Theroux, cited in Saunders 2001, p. 58).

4. Garry Miller, *Petworth Window*, 2000 (left); 90.5 x 82.5 cm 5. Garry Miller, *Petworth Window*, 2000 (right) 90.5 x 82.5 cm

The two paintings of *Petworth Window* by Miller are hung in Petworth House in Sussex, which is historically associated with artist William Turner. This was his sanctuary between the 1820’s and 1830’s where he was able to study and contemplate light, free from convention or influence from his peers (Smiles, 2000, p.12). Over one hundred and ninety years later, Miller’s 1999
residency at Petworth House continues in the Turner tradition of painting light. Turner's light paintings remain a centre of vibration for ‘being’ energized, ‘being’ refreshed, ‘being’ interconnected through time. Heidegger’s concept of, erde and, welt making up the two faces of ‘truth’ Wahrheit not only regresses back in art but also moves forward, to ‘unconceal’ the new ring vibrating from the light of Miller’s Petworth windows.

The ‘interconnectedness’ of light and being.
The experience of ‘interconnectedness of light and being’ becomes clear whenever we think of gazing into the light of a fire in a darkened room. The barrier between consciousness and dream state dissolves so that there is no boundary, but a space for the viewer to pass back and forth within the light. Heidegger uses ‘light’ and ‘sight’ metaphors when writing about ‘self awareness’ and ‘world awareness’. Light is so everyday that it is often taken for granted. It is only when there is a break in the smooth light pattern of the everyday that the interconnectedness of light and being is consciously considered. At this considered level there are certain structures which artists reveal, not just accidental structures but essential ones such as colour and form, to evoke a feeling of the sublime in the viewer. Miller has selected blue to evoke the “shadow side of light”, blue as the “tint of the marvellous and inexplicable” and blue as the desire for knowledge of light (Theroux, cited in Saunders 2001, p. 58).

The “shadow side” of light.
Miller chooses a mysterious blue not to express the concept of light in Turner’s world but rather, the nature of light’s “shadow side”; its mystery, its invisible physical presence, elusive to visual art and science. The minimalist form of
Miller's two paintings evokes a slippage between the physicality of light penetrating the viewer's space and light as infinity. This effect on the viewer creates a feeling of being trapped like a prisoner in a darkened welt. As prisoner, all that can be seen is ‘light as light’, a radiant beam emerging through apertures in both windows, one barred and the other gridded.

In the first window, Miller accelerates the charged particles of light into an elongated beam, directed through an intersecting isocentre controlled by heavy dark columns on either side. In Miller’s second window, the travelling wave of light is slowed by a grid which captures and accelerates the light through its hollow cavities to create a field of energy. The sensation of light’s energy permeating the confines of the viewers' space creates an awareness of the sensitivity of light, not light that illuminates objects in the room but rather, the absorption of light for itself as sensing experience both intimate and distant. Miller’s Petworth Windows is an example of Heidegger’s ‘interconectedness of light and being’ as an experience, of heliotropic² sensory synaesthesia³.

**Welt and erde in Miller’s Painting.**

The Greeks believed that night and darkness were a creative period that “preceded the creation of all things expressive of potential and germination” (Cirlot 1993, p.223). The Greeks in their time knew and understood what was in their ‘world’ welt. For them welt consisted of ‘earth’ erde, sky and the gods which were all interrelated. Since welt is a framework for what is happening

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³ Synaesthesia: a sensation produced in one physical sense when stimulus is applied to another sense, as when the hearing of a certain sound induces the visualisation of a certain colour. Macquarie Dictionary 1981.
in the present, when applied to the artwork it becomes a ‘happening of truth’ and ‘opens up a world’; 

\textit{welt} in this sense being the same as ‘personal truth’. This philosophy becomes clear when viewing Miller’s painting with its cropping of light controlling and shaping the beam by means of an aperture on our ‘world’ to evoke its widening and narrowing. Perhaps this could be interpreted as evocative of the widening of Miller’s world of techno -scientific globalization, but also of a narrowing in the sense of communal spirituality.

\textit{Petworth Window on the left:} The dark marginal sides in the painting define the light field to a higher intensity along the central axis and progressively there is less intensity away from it in order to focus the beam at the viewer. This travelling light wave is directed through and centred on a central axis at a point in space, the isocentre. This technological reading is the hallmark of a contemporary \textit{welt}. Heidegger explains that rather than feeling imperiled by new technology, we can think of it of as our latest understanding of being, a \textit{welt} where beings are not engulfed by technology but rather kept alive through their own freedom of personal ‘truth’. In order to preserve this thinking in a community and progress in ‘world’ understanding, technology can be thought of “as a gift” that motivates human beings to greater heights (Dreyfus 1993).

\textit{Petworth Window on the right:} The meditative aspect of Miller’s painting is in its symmetry which engages the viewer in contemplative silence with both positive and negative reactions. A reaction to the positive aspect of light could be to consider the potential of light for germination and light as fundamental structure of the universe. A reaction to the negative aspect of light could be to consider a world threatened with the privation of light through humankind’s
misuse of the erde. ‘Night and darkness’ in the painting inter-relates with erde, the sheltering agent out of which arises the ‘being’ of the viewer in the welt. The atmosphere of gloom as the moon struggles to penetrate the mystic nothingness pervades the space that evokes ‘being’ Dasein, existenz in the viewer, making a primal connection to light in its passiveness. Within that passiveness, “germinates” the anticipatory promise of the light that is to come with the day. One aspect of light is that it presents the day leading to the ‘concealment’ of the another aspect, night. Cirlot states that the concept of “night like water is associated with fertility, potentiality and germination”, that anticipatory period that precedes the day (Cirlot 1993, p.228). As a contemporary concept, light as light is erde’s pivotal natural resource, untapped, unlimited. It is and a challenge to science to control this with technology, for a community that receives it to make a better welt.

The community as ‘preservers’ of the artwork.

Miller’s residency at Petworth House follows Turner’s historical tradition of working with the concept of light, but Miller is not from Turner’s historical ‘world’ so his work is of a different ‘world’. In Heidegger’s essay entitled Origin of the Work of Art 1971, he explains it is necessary for each ‘community’, Gemeinschaft to clarify and understand the thrust of the artwork of its time allowing it to seep into everyday aspects of their lives. The artist, in helping people to ‘see’ sehen, communicates seamlessly in paint what cannot be said in language. For Miller’s contemporary paintings to work he must reveal in them his place in the ‘world’ welt just as Turner did before him. In this way, Miller opens up the everyday technology of his ‘world’ welt and establishes a meaningful difference in his interpretation of light. There is the breathless sense of peering beyond the painting to see the glow of ‘light as light’ as if it is
trapped in condensate, with all the mystery of cosmic energy. Opening up and communicating a new vision of light to a community depends on the level of scientific knowledge already in that community for the impression of the new to linger as a ‘mode of revealing’.

**Technology as ‘mode of revealing’**

Art **Kunst** and technology **Technik** are not collective terms for two isolated things that we might ordinarily find in the ‘world’... at their most basic levels, art and technology are both ‘modes of revealing’ **Weisen des Entbergens**: intersubjective ‘historically developing ‘ways of seeing’ given to human being so that they may unveil and understand beings and the ‘world’ that exist around them (Heidegger cited in Biro 1998, p.200).

In this statement Heidegger is referring to the interconnectedness of art and technology that reveals the historical **welt** and the relationship of human beings to that world. Living in a technological world with computers becoming faster and more affordable, our culture is thought by some to be one of flexibility and efficiency but also a world of complexity. Heidegger gives us a timely reminder that technology is not something new, but rather, **techne** is as old as civilization itself. **Techne** according to Greek interpretation is not so much a way of doing things but rather of ‘knowing’, a way of ‘revealing’ things that precedes any of the making or the doing. “Ultimately the technology was thought and then thought through” (Inwood 1999, p. 209). This Greek concept of **techne** or ‘knowing’ can be seen in both the technology of Turner’s art practice and technology of Miller’s art practice.
Technology in Turner’s Paintings.

Until the nineteenth century, oil paints were made by hand in the artist’s own studio. Turner’s initiative, foresight and fearlessness in using the technology of newly manufactured paints, was being at the ‘cutting edge’ in comparison with the widespread suspicion regarding their use by other artists of the same period (Townsend 1999, p.39). According to Townsend, Turner used almost all of the pigments first manufactured during his lifetime. This indicates Turner’s level of departure from the traditional use of pigments even though information on their stability was not available in his lifetime. Cobalt Blue was the first newly available pigment that Turner used in his studies for *Norham Castle Sunrise 1845* and *Guildford from the Banks of the Wey*. This bold initiative is recorded as the earliest use of cobalt blue in the collection of the Tate Gallery in London (Townsend 1999). The most dramatic colour change in the art establishment came in 1814 with Turner’s use of chrome yellow and pale chrome yellow in the sky in the same year as its manufacture. Since then, the manufacture of oil paints has been refined by technology until today the pigment of the old masters is enclosed in capped tubes, labeled and ready for instant use; technology that is now part of Miller’s everyday.

Technology in Miller’s paintings.

The culture of twenty first century technology is so much a part of the everyday that it is often not consciously considered. This is the background familiarity that underpins Miller’s paintings *Petworth Windows 2000*. For the contemporary artist a camera is just an extension, a part of their everyday equipment. Reflecting this transparency, Miller’s compositions are cropped as if to position the viewer within the chamber of a camera looking through a

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4 “Only three pigments have not been found: iodine, scarlet, cadmium yellow and zinc chromates” (Townsend 1999, p. 41).
macro lens to exclude the artificial light in order to create an illusion of sensory deprivation. The camera, as controlling device, is designed to focus perception on both the sense of enclosure and exposure. When peering into a camera’s viewing chamber, light is excluded and yet trapped, floating, suspended like fog for an instant of shutter time. A similar effect can be found in Miller’s composition of the grid where there is a sense of being momentarily positioned, powerless within a chamber, with fragments of scattered light filtering through from an unknown source beyond. Whether the ‘mode of revealing’ is in Dasein or technology, they allude to the power of controlling light, an unknown yet fragile force.

Art and technology are ‘modes of revealing’ for humankind and their welt structure. However, regardless of science and technology, regardless of the time, the erde component will always be shrouded in mystery. As each successive generation seeks a measure of their existenz there is a constant, a need for a space to listen to the ‘breath of silence’. The realm of art can provide that space.

For artist, there exists in the world a bewildering variety of everyday images in the *welt* that can be the catalyst for expression of the sublime. For Dan Flavin it was the industrial fluorescent lights illumination of surface, for Mark Toby it was lights of the city of New York and for James Turrell light as light seen from within an extinct volcano (see illustration 6, 7, and 29). The ‘everydayness’ with its subsequent technology is both sensitive to *Dasein* and a space that expresses possibilities for the sublime in art. Heidegger’s focus on this aspect of human existence when questioning ‘being’ itself, enables an intimate sensitive space of self awareness.

**The ‘intelligibility of the everyday’**.

An enquiry into the ‘everydayness’ in art would mean research into what is so familiar it is not consciously considered as part of the everyday background. Consideration must be given to the terms in which ‘everydayness’ is
understood in culture and Heidegger suggests it is an interconnectedness of humanity that unifies all cultures, *Gelassenheit*. Cultures have this shared meaning of humanity regardless of ‘separateness’, with a space or a ‘clearing’ for art, nature, space, life and language. Heidegger argues that “any understanding of what it is for a human ‘to be’ changes every time a new ‘artwork’ is produced in a culture” (Heidegger, cited in Dreyfus 1993, p. 297). Cultural changes over time give rise to new meanings in the ‘everyday’ that find a focus for expression in art and then that focus remains a part of that culture, a reflection of direction or an understanding of the unspoken struggle for life.

The philosophical framework of Heidegger pries us loose from the Kantian philosophy of fear and morality, providing an added dimension that ‘allows things to be’, *Gelassenheit*. The openness of *Gelassenheit* makes it possible to explore the poetry of the ‘sublime’ *heilig*, as an experience beyond language or even beyond the need to define the mystical.

...even when all possible scientific questions have been answered, the problems of life remain completely untouched. Of course there are then no questions left and this itself is the answer. There are indeed things that cannot be put into words. They make themselves manifest. They are what is mystical (Wittgenstein, cited in Rorty 1993, p.339).

Exploration of the still spaced escribed by Greek philosopher, Plotinus (205-270 AD) “which everyone has but few use”, requires connection with another region on the same plane. This is a plane explored by Miller, where links and similarities between artists working with the sublime can bridge different periods of history. Here lies our contemporary space that resonates with Heidegger’s articulation of ‘intelligibility’ that is the ‘being of things’
(Heidegger 1996, pp. 204-5). That deeper everyday dimension involves communication that makes use of silence in language, not necessarily a matter of speaking but rather an understanding of the breath of ‘something’ most effectively communicated by keeping silent. Silence, essential to the grasping of sublime understanding communicated to us throughout history, is not merely an ‘intelligibility of things’ involving silence but also a listening. Perhaps this space, the breath of the unsaid, is the dimension of existence where the sublime experience can be found even in the everyday simplicity and ‘lustre of light on a stone’.
Section 2  

**The Ruby Light**

‘Every questioning is a seeking. Every seeking takes its direction beforehand from what is sought’ (Heidegger 1956, p. 3). The direction of this questioning takes its position from the perception of the sublime, and what is being sought is the notion that reality can be thought of in terms other than substance. This thinking would allow opportunities for the sublime to access the truth of art in the new.

Could the medical technology of light have the power to displace and transport us out of the realm of the everyday? The historical and cultural dimensions of people have always included ways of making and controlling natural light to satisfy their needs, desires, security and comfort. Through time thousands of tools, machines and techniques have been invented using light technology as a source of power to make life easier and the twenty-first century is no exception. Adding another link to the chain of light technology is the Linear Accelerator used in treatment for Breast Cancer, creating and controlling radiant light that has the power to give life but also the power to take life away. An introduction in the Radiotherapy Information Guide only hints at the technological power of radiant light.

Radiotherapy is a treatment which uses radiation to destroy cancer cells. It works because cancer cells are more sensitive to radiation than normal cells. If a small dose of radiation is given everyday for thirty-five days, normal cells can recover from radiation but cancer cells cannot. Radiotherapy is given to the breast to reduce the chance of
cancer returning to the area after surgery. Treatment is planned on the first visit where you are asked to lie on a hard flat bed of a simulator. Radiation therapists take X-rays or a CT scan of your chest and they may make some permanent marks called tattoo’s on your skin. You will need to be treated at the same time everyday. Radiotherapy is given by a Linear Accelerator (Westmead Hospital 2001 p. 5).

The Waiting Room.

The compelling analysis of the technological sublime begins on the first day of a visit to the Cancer Oncology Department where a feeling of the awesome is experienced. This is awesomeness that lies in concealment, concealment beyond the horizon of our conceptual understanding. Upon entering the building there is nothing ‘ordinary, reliable or familiar’, rather a waiting room with doors leading to other rooms. Yet there is a discernible stillness about the people waiting, beyond the ordinary demeanor of waiting, waiting silently or speaking in hushed tones with a similar reverence to that found in a cathedral.

This is not a cathedral with beautiful Renaissance windows, perforated spire dome or molded arches. This is not a cathedral yet there is the same atmosphere of quiet, the same harmony, the same expression of value and experience etched on the faces of those present. Nonetheless it is a place where all those who enter, grasp the strong uniformity of interior that bears witness to a modern day place for the worship of technology.

In an atmosphere of expectancy, the waiting begins with only photographic scenes of sublime wilderness dotted along the walls. This is not a cathedral but has the atmosphere of a cathedral. Heidegger’s claim that ‘truth happens awesomely’ explains the sudden realization that this congregation of people,
young and old, are all in their primordial space of ‘being - towards - death’ with each and every person’s temporality revealed and confronted etched into the fabric of their being. The flow of their everyday existence has been disrupted, disclosing the other side of their being which Heidegger calls ‘the epistemological depth’. An image used by the poet Rilke to convey this concept is the moon “... behind the side illuminated by and for us lies an immeasurable ungraspable area of darkness” (Rilke, cited in Young 2001, p. 40). Young describes this as the “dark light of ecstatic intoxication’ similar to a ruby where light comes to shine through its darkness” (Young 2001, p. 40).

Clearly, oncology patients are in uncharted regions of ruby light creating a sense of mystery but like the precious stone, the shining rises up in them from an inner sphere. Heidegger argues that the inner sphere is entwined with the destiny of being and after being discovered, it can close over again and remain concealed or it can make itself known through something but the inner sphere continually veils what it is in itself (Heidegger 1996, p.27). Kant describes this appearance of veiling of the ‘inner sphere’ as “empirical intuition”. Regardless of the name this is not the experience of the everyday, not the same as ‘being in the world’. ‘The objective presence together with the physical and the psychic is optically completely different from the phenomenon of being in the world’ (Heidegger 1996, p. 190).

The waiting room was not at all ‘familiar reliable or ordinary’ but rather a place of unconcealment, a transparent place, an eminent place transformed by the inner welt of warriors. A trace of this inner welt could be seen in their eyes. ‘Experience as the self disclosure of an unfathomable ‘mystery’ acquires radiance, becomes, as one might also say numinous, a holy place’
Radiation therapists speak the name of a warrior to be led down the corridor. It does not have the atmosphere either of a corridor or a cathedral, but more like that of the passage leading to the cella deep inside an ancient Temple. As the footsteps die away, silence reigns again, echoing within each warrior in their alone space that forbids intrusion.

Beyond the waiting room is a place of similar reverence, a place of mysterious ritual and precision. Imagination soon transforms the radiation therapists into high priests and priestesses. The name of the warrior is spoken again and together they disappear into a room for disrobing and exchanging everyday clothes for a gown. Once gowned the warrior begins a passage of solitary preparation by waiting once again, this time alone. Perhaps this is the time to mentally review life, discard or reconcile relationships, compromise in impossible situations, until, like the ‘setting forth’ of a great artwork that ‘sets up’ a new world, the being of the warrior is unearthed and ready to ‘shine through its darkness’.

Once again the name of the warrior is called and they are led into the room. Here exalted is a mighty modern god, the Linear Accelerator, god of light from where all hope comes. Kant describes the experience of bewilderment and perplexity at the scale of something that cannot be seen in its entirety and the feelings of inadequacy that result.

For here a feeling comes home to him of the inadequacy of his imagination for presenting the idea of a whole within which that imagination attains its maximum, and, in its fruitless efforts to extend this limit recoils upon itself, but in so doing succumbs to an emotional delight (Kant, cited in Crowther 1989, p. 104).
In front of the Linear Accelerator is what could be thought of as a sacrificial altar with specialists waiting in attendance speaking a strange unfamiliar language: “open, short, bore, long, low field, midfield, shielded, unshielded, mobile, fixed, gradient, strength, echo planner, phased array, surface coils etc”. As is the practice, they do not communicate with the warrior for fear of losing focus. Once on the table for purification, the warrior, without any shield, is raised high and encapsulated by the vastness of technology and confronted by what appears to be the crystal eye of the Linear Accelerator.

Everyone else leaves the room, leaving only a red light burning like a sanctuary lamp indicating the presence of the radioactive light beam. For the warrior it is a breathless, timeless moment that could have been from a ritual of Greek antiquity. Then as now, the sun was the hub of the cosmos and the element in which the supreme goddess revealed herself. “The sun had purification and cathartic powers and its rays descended to earth to lift the soul of the initiate towards itself” (Gage 1993, p.26).

Now, as in antiquity, light in itself is a perfect image of oneness, of wholeness hoped for by the warrior lying in the epicentre as the beam of light targets the body and plumbs its depths. In the safety of an adjacent room the invisible image of the body is made visible to the priests and priestesses. The unfathomable depth of the warrior becomes an illuminated surface reproduced on a screen for the medical viewers to see, while the warrior has only imagination stretched to the limit and the experience of the sublime.

When the sanctuary lamp goes out it is not the priest and priestess that return but rather nurses and radiation technologists speaking in an ordinary,
reliable, familiar farewell, language. “We will meet again at this time everyday for thirty five days days”.

**The Linear Accelerator**

.....the sun whose light and warmth we make use of everyday has its circumspectly discovered, eminent places in terms of the changing usability of what gives us: sunrise, noon, sunset, midnight (Heidegger 1996, p.96).

![Linear Accelerator Image](image)


If we accept the theory that in times of expansion and discovery, civilization needs ‘space’ to reflect and consider the future, then the sublime in art can provide that space. The historical *welt* of nature in eighteenth century colonialism became the catalyst for the experience of the sublime reflected in the art of that time. It follows that if Heidegger’s notion of ‘changing world
usability’ of light is applied to the radiant light technology of the Linear Accelerator in the twenty-first century, artists could respond to this discovery reflecting their ‘circumspect’ way of seeing into new artworks. In this way the experience of radiant light could become a catalyst for the sublime in contemporary art.

Heidegger notes that the light we make use of everyday has its ‘eminent places’ where the resource is used. When this notion of an eminent place for light is applied to the Linear Accelerator there is an awareness of the scale of complexity in light technology, an awareness of the overwhelming level of human creativity in its design, and an awareness of the healing affect on of light on warriors who access its power. That power gives the warriors another sunrise, another noon, another sunset, and another midnight. Clearly, the Linear Accelerator is a measure of the twenty-first century technological welt but it is in its measure of the earth erde that it becomes an even more powerful standard. Heidegger calls that standard, the ‘earth aspect’ of the work that does not deplete the resource but rather brings the resource out of inconspicuousness and places it on display. An example of this philosophy can be seen in the Linear Accelerator where the resource of radiant light continues to be created to give to the welt dignity and allow it to stand forth as heilig. In Origin of the Work of Art, Heidegger argues that the erde aspect, in this case radiant light, is sublime, heilig.

It is here at earth’s isocentre where light technology meets the warriors isocentre of existenz. Over time the healing, life giving power of radiant light has generated a communal belief that the Linear Accelerator as protector of the light becomes the embodiment of the light and is referred to as heilig. In
this way, light manifest in the Linear Accelerator has come to resemble the Ancient Greeks temple, ‘by means of the temple the god is present in the temple’.

**Linear Accelerator technology.**

Physicist Gary Arthur uses the simple analogy of a surfer to comprehend the light technology of the Linear Accelerator. The surfer launches into the wave at a precise time, riding along at the speed of the forward crest. The water particles just go up and down and do not move forward yet the top of the wave travels forward. The surfer continues to ride at the speed of the wave, provided the wave is powerful enough. However, if the timing is incorrect and the surfer slips backwards over the crest, the rider will only bob up and down as the wave passes underneath making only slow movement possible.

Similarly, light particles called conduction electrons, are captured and bunched on the front of an advancing moving electric “E” field, in a sine wave pattern that moves from left to right. The electrons are accelerated just to the right of the sine wave crest, gaining megavoltage energy in each successive microwave cavity or they drop backwards and are lost (Fletcher 1984, p. 110; Morton & Karzmark 1989, p. 20).
To control the dose of radiation, an open lead collimator is used to protect or shield the surrounding tissue from heavy radiation, thus normal tissue damage is diminished. Shielding is possible using high density materials such as lead or lead amalgams. One centimetre of lead will absorb close to 95% of the betatrons 18 MeV electron beam. The Linear Accelerator can provide a peak electron energy of between twenty five and fifty MeV electrons and when combined with photons gives a superior beam distribution. The light beam of Radiotherapy works by damaging the DNA in the nucleus of each cell of the cancer patient. DNA is a structure which consists of intertwined helics. The various parts of the DNA molecule are arranged in a particular sequence which is a vital code for proteins which have important functions inside and outside the cell. Radiation breaks the backbone of the molecule and when
strands join together, this vital code is broken. As there is no alternative treatment to electron light beam therapy in breast cancer, the Linear Accelerator offers significant survival rates to a woman whose being is threatened (Morton & Karzmark 1989).

10. Diagram of a high energy **Linear Accelerator** identifying major components housed in the stand and gantry (Morton & Karzmark 1989, p. 26).
Having explored the structure of the Linear Accelerator and the physics of the radiant light it creates and controls, I will now explore the warriors' interaction with the technology in response to the words of the Radiation Technicians; "We will meet again at the same time everyday for thirty-five days". These words 'set up' a dance with the healing light of technology, an
experience of metamorphosis where the ‘concealed’ within becomes transformed and a new rhythm of life imparted. This is a different kind of time, not the average, everyday, public, conception of time or a time with past present or future. This is a time when the sanctuary lamp is on, fourteen seconds of timelessness; a timelessness for being, for existence, for a pouring in of light.

**The Lunar Journey of the warrior.**

This dance with the light of technology is to experience the poetic sublime which can be likened to the poetry of Rilke where the moon has surface changes that accompany its phases, particularly the moon’s partial progressive disappearance and the growth of the crescent moon into the new moon.

The warrior too has surface changes to the body form where the cancer cells disappear and are replaced with the growth of new cells thus restoring new life to the warrior. In drawing the analogy of the experience of the warrior to the moon and its journey through the night, emotions ‘unconcealed’ of fear, danger and partial blindness in vision are compensated by insight. The notion of a lunar journey became the inspiration for Greek myths and legends, so in a contemporary *welt* it may well be tales of experiences with the Linear Accelerator that become the source of inspiration.

A significant aspect of the moon concerns its close association with night, maternal, enveloping, unconscious and ambivalent because it is both protective and dangerous and the pale quality of its light only half illuminates objects (Cirlot 1993, p. 216).

The half illumination of the lunar journey defines this time in the life of the warrior where what cannot be seen is “replaced by an insight that becomes stronger more luminous and more enlightening” (McLoughlin 2002, see Appendix 1).
The Ruby Light.

Heidegger (1996) uses the term ‘everydayness’ which also has temporal connotations and suggests human existence as a sequence of days in the progression of time. Repetitive experiences and ritual practices create an opportunity for meditative experience where in the depth of the mind a huge reservoir of unexpressed creativity can flow. Meditation is not an escape from confronting situations but it can be a way of dealing with them more effectively. Concentrating on mere traces etched into the mylar surface by radiant light from the Linear Accelerator can create a heightened awareness, a ‘knowing’ or an openness to light in its astonishing mystery. Again the words of Rilke that refer to this ‘knowing’ are a reminder of the darkened other side of the moon; that side averted from us which can be likened to light shining through a ruby. The analogy of the other side of life to light shining through a ruby creates an awareness that the ‘other side’ of being is a space rather than a void; a space with a “plenitude of all the unknowable facets of beings even allowing us to face death without anxiety” (Rilke, cited in Young 2001, p. 146).

Everyday for thirty five days, the radiant light beam becomes longer and stronger until the fourteen seconds seems timeless. Everyday the experience has subtle changes made different by adjustments of the collimators in the Linear Accelerator that control the power and complexity of the light beam as it dances off mirrors and lens and filters onto the glass at the isocentre. Everyday, fourteen seconds becomes an intimate experience with light reflected as colour that is sometimes warm and advancing, sometimes cold and retreating and sometimes a flicker of almost invisible tones. These transitory colours can trigger memories of jewelled fragments of great
artworks; great artworks by artists, separated through time, but timeless in their choice and use of colour that evokes the sensation of light.

To the warrior gazing up at the fine red cross of the isocentre marked on the glass of the treatment head, the light beam emerges as a reflected flash of colour, perhaps triggering the memory of a scatter of light in paintings by Vermeer or Turner’s light in the sky or Bonnard’s light on bathroom tiles. Whatever is reflected from the light emerging from inscrutable darkness, that space of high intensity, when reconstructed in the mind’s eye, can become a touchstone for the sublime. The caption exhibited with Turner’s painting of the story of Noah best describes the experience.

The ark stood firm on Ararat; th’returning sun Exhaled earth’s humid bubbles , and emulous of light, Reflected her lost forms, each in prismatic guise Hope’s harbinger, ephemeral as the summer fly Which rises, flits, expands, and dies (Turner, cited in Gage 1993, p. 201).

12. J.M.W. Turner Light and Colour (Goethe’s Theory) - the Morning after the Deluge - Moses Writing the Book of Genesis 1843 oil on canvas 78.5 x 78.5 Tate Gallery London.
Everyday, fourteen seconds of connection to a flash, a radiant stimulus of light so fundamental to life that it seems to touch the deepest substratum within the warrior. This inescapable, evocative experience of the perception of light and the phenomena of colour is not just an experience of light reflecting colour but almost an experience of light within the colour, seen even with eyes closed. Light and life are archetypal concepts that were given prominence in Enneads by Plotinus, the Greek philosopher who taught in Rome in 205-270 AD. Plotinus theorised about light and was “sensitive to the subjective manifestations of colour” (cited in Gage 1993, p.27).

Here we put aside all learning; disciplined to this pitch, established in beauty, the quester still holds knowledge of the ground he rests on, but suddenly swept beyond it all by the very quest of the wave of Intellect surging beneath, he is lifted and sees never knowing how; the vision floods the eyes with light but it is not a light showing some other object, the light is itself the vision (Plotinus, cited in Gage 1993, p. 26).

The ancient tradition of interpreting light and colour was just as mysterious when analysed by Plotinus and in many ways retains an aspect that is ‘unfathomable’ in the twenty-first century. Indeed, his phrase “the quest of the wave of intellect surging beneath” could be applied to the way the physicist struggles to create an imaginary image of sine waves of light from the Linear Accelerator. The warrior “sees never knowing how” but with the detachment of one blind creating a intensity in the mind’s eye that Plotinus describes as “that other way of seeing”. Heidegger describes that “other way of seeing”, as ‘circumspect’ vision, allowing the warrior to complete the filtered fragment of colour as a great artwork in the mind’s eye. “Great artwork not only brings the mystery to presence but is itself mysterious” (Young 2001, p. 50).
The Art of Painting. 1666 - 8.

The artwork ‘sets up’ a welt, brings it out of inconspicuousness and into salience then places it ‘on display’. But it does not, says Heidegger, just do that. The setting up is not ‘bare placing’. Rather the work ‘consecrates’ its world, invests it with ‘dignity and splendour’ allows it to stand forth as ‘holy’ heilig. The artwork then brings its world to charismatic salience (Heidegger, 1971 cited in Young 2001, p.38).

![Image of Johannes Vermeer's The Art of Painting](image)

13. Johannes Vermeer the Art of Painting c. 1666-8 Oil on canvas 120 x 100 cm Vienna, Kunsthistorisches Museum.

The Art of Painting by Johannes Vermeer has an air of tension, as if time is standing still, as if the mystery of erde, and welt has expanded into another realm. Welt that resembles the side of the moon that we see, the ‘illuminated surface’ of an uncharted and unbounded space, and erde disrupting the surface and allowing dignity and splendour to shine forth as sublime heilig.
Heidegger’s philosophy of what constitutes a great artwork is the intimacy of welt and erde. Welt, meaning the intuitive knowledge gleaned by the artist from their everyday life, about science, literature and their artistic environment. When this intuitive knowledge of welt in the artwork is permeated by erde, in this case the nature of light, ‘knowing’ in its historical context and artistic tradition brings forth the poiesis of the artwork into ‘charismatic salience’.6

The seventeenth-century is considered the Netherland’s Golden Age, the age when it became the world’s major sea power and developed a colonial empire. By the time Vermeer had completed The Art of Painting 1666-8, the Netherlands had fought three naval battles with England and kept leadership of the seas. Expanding trade made Amsterdam the world’s major commercial city and gave the Dutch the highest standard of living in the world. Before the Golden Age, most artists painted only for churches, nobles or royalty, however change brought outstanding cultural achievements with Dutch artists painting the ordinary, reliable, and familiar of their everyday and these artworks were in demand from businessmen who bought the paintings for their homes. Some of the artists of this tradition were Pieter de Hooch, Frans Hals, Rembrandt, Jacob van Ruisdael, and Johannes Vermeer.

**The welt of The Art of Painting.**

In the Netherlands in 1608, Hans Lippershey invented a telescope with a converging objective lens and a diverging eye lens and the Dutch became fascinated by optical technology such as microscopes and telescopes.

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6 At the exhibition of Vermeer’s work in 2000 at the National Gallery in London the doors had to be closed. This preventative measure of crowd control was caused through visitors inside coming to a complete standstill in front of the charismatic *The Art of Painting*. So absorbed were the visitors that they failed to move on, so creating congestion at the entrance of the gallery.
Throughout the seventeenth century, optical devices use of optics such as mirrors and telescopic lenses or a combination of both were used to create living projections in the technology of a camera obscura. Knowledge of interpreted facts suggest that Vermeer used these projected images as a compositional device in his paintings, however the only source of information is in the paintings themselves that disclose a new way of seeing his world (Liedtke, Plomp & Ruger 2001). *The Art of Painting* reflects the scientific issues surrounding light optics at Delft in the 1660’s. It is an ideological painting within the historical context and in an artistic tradition where the use of optics, namely lens and mirror in a camera obscura, were connected. In 1666, Isacc Newton discovered that white light is made up of many colours. At the same time the Dutch physicist, Christian Huygens proposed the wave theory to explain the behaviour of light. However, it would have to be the versatile Dutch art historian Constantijn Huygens, scholar of classical civilization, metaphysics, science and the humanities, who generated the blend of scientific and artistic knowledge in the Delft environment. Not only is it known that Huygens corresponded with the scientist Descartes about optics but it is also known that he was a collector of art including the work of Vermeer. “The use of the camera obscura is attributed to both Fabritius in *A View of Delft* as well as Vermeer” (Liedtke, Plomp & Ruger 2001, p. 125). This suggests that in all probability it was Huygens who would have shared his knowledge, in particular the camera obscura, with Vermeer.

The world in which Huygens and Vermeer lived which was in some ways larger than ever before and in other ways very small makes it almost unthinkable that they were not in contact (Liedtke, Plomp & Ruger 2001, p. 14).
The period during which Vermeer painted *The Art of Painting* 1666-8 was at the pinnacle of scientific and technological advances in the study of light, a time which changed forever the fascination of seeing for artists. The invention of the camera obscura, meaning dark chamber or closed room, had riveted the attention of the art welt as a new way of seeing. The camera obscura was a box containing a mirror set at a 45 degree angle with a double convex lens placed in the front end. The image of the object was transmitted through the lens and appeared on the mirror. The mirror then reflected the image upwards to a ground-glass screen on the top of the box where it could be easily sketched by the artist.

*The Art of Painting* 1666-8, is an artwork that reflects the seventeenth century Dutch obsession with light and the depth of knowledge of that welt of light technology. Vermeer's profession involved the illusion of rendering three dimensional space in two dimensions and as he lived in Delft all his life, it would have been unlikely not to have personal connections with those concerned with light technology. With all this knowledge and technology available, it follows that Vermeer would have been familiar with how light responds using various lens.

Knowledge of light that shows itself in technology at the same time continues to ‘conceal’ itself and it is this mysterious characteristic of light technology that Heidegger calls the hidden meaning in technology, the openness to the mystery. In his painting, Vermeer draws our attention to the image of a golden chandelier that even in all its artificial glory sheds no light. Perhaps Vermeer is drawing our attention to the concept of a blindness in the knowledge of light, pointing to those with knowledge of light but who cannot
‘see. Mere openness to light technology is not insight, for insight requires a releasement from technology in order to preserve the true nature of what it means to ‘be’. ‘If releasement towards things and openness to the mystery awaken within us, then we should arrive at a path that will lead to new ground and foundation’ (Heidegger, cited in Dreyfus 1993, p. 309). It takes the combination of openness to the mystery of technology, together with the insight that comes from releasement to create the basis of new ground and foundation that is so engaging in *The Art of Painting 1666-8*. Vermeer never sold *The Art of Painting 1666-8* so perhaps he considered the painting to be a measure for himself of a new way of seeing.

Kemp, in *The Science of Art* imagines a working procedure for Vermeer with the camera obscura.

The artist, much like the photographer, composes his picture by adjusting the location of his subjects, the strength of light and the position of the device, to achieve the desired effects. The basic outlines of the forms in their spatial array are then recorded on the screen. These outlines can be transferred to the painting surface, re-inverted, by one of the standard methods such as pricking. The painter next takes down his camera construction and sets up his stool and easel, the legs of which can be seen in the mirror of the *Music Lesson* (Kemp cited in 1990, pp. 194-96).

Viewed in the context of Heidegger's philosophy in *Origin of the Work of Art*, it would be consistent that the artist explore the technology of science of his time. The fascination of the new challenges the artist to unconceal a more circumspect vision than that in science which is a reflective ‘measure’ of their generation in attunement with their *welt*. American Graphic artist Joseph Pennell in 1891 first pointed out this attunement to the new in the photographic perspective of Vermeer’s *Officer and Laughing Girl* where the two figures sit close but opposite the corner of the table. Pennell argues that the
officer’s head is twice as big as the girl and in perfect perspective whereas a seventeenth century painting with figures in a composition, are equal in size (Steadman, 2001). The size of the artist is twice the size of the model in *The Art of Painting 1666-8* indicating the perspective is indebted to new optical knowledge. Scholars have drawn attention to Vermeer's very distinctive way of showing highlights on reflective surfaces such as the polished brass upholstery pins on the chairs. In reality, highlights take their shape from the light source that it reflects which in Vermeer's case would be from a window indoors and rectangular in shape. However, in *The Art of Painting 1666-8*, Vermeer has painted the polished brass pins on the chairs as true circles indicating the effects of a slightly unfocused, optical image. Art Historian James Welu suggests that the camera obscura was known to be used widely in the eighteenth century for copying, enlarging and reducing maps and points out that Vermeer’s depiction of maps in his paintings with passages of very soft focus would indicate optical knowledge and experience from a camera obscura (Steadman, 2001). This is relevant to the hypotheses of Seymour (1964), Schwarz (1966), Fink (1971) and Wheelock (1977) that the mystery of optical instruments of all kinds is reflected in Vermeer’s artworks. The significance of Vermeer sheltering optical knowledge in *The Art of Painting 1666*, is the way the artwork rises above technology of light to even greater heights unconcealing an attunement to his *welt* that verifies science is not the sole custodian of ‘truth’.

Vermeer’s *The Art of Painting 1666-8* is singled out for speculation because of the signifying force of the details, the visual experience and the way the light generates curiosity about an optical culture. In a brief reading the painting depicts two spaces; the narrow space in front of the tapestry and the artist’s
studio. The artist who is perhaps Vermeer himself, is painting a beautiful young woman standing before a light wall in the pose of Clio, the muse of history. The painting includes several artistic features that are worthy of being considered in more detail: the chandelier, the tapestry, the map of the Netherlands, the model and the artist with his painting on the easel.

**Erde in The Art of Painting.**

Heidegger calls the ‘epistemological depth’ to being, *erde* an aspect of nature that is ‘closed’, ‘not mastered’.

> Earth is the unfathomable darkness which constitutes the other side of the clearing that is ‘world’ the side of [Being] averted from us unilluminated by us. Being is thus ‘world’ and Earth taken together (Heidegger cited in Young, 2002, p.40).

The *erde* aspect in *The Art of Painting* is the nature of light that is in contrast and conflict with *welt* conveyed through the notion of blind vision where Vermeer has painted the artist engaged in a representation of painting but the source of the vision is concealed by the rear view of the artist facing the viewer. Vermeer’s painting of the artist, is distinguished by the back of the artist which not only conceals vision but also reveals a vision. Vermeer has painted the artist in *The Art of Painting* 1666-8 dressed in a black and white doublet with slashes on the back and and sleeves that can be read as both the mysteriously disconcerting and the concealing nature of light. The dramatic choice of light “slashed” by dark rays suggests the contrast and conflict between *erde* and *welt* in the artwork. When conflict between *erde* and *welt* disolve in poetic harmony a disclosure of ‘truth’ *Wahrheit*, within the artist shows itself confidently.

> The slashed sleeves of the artist are meant to be theatrical so as to identify the character as someone out of the ordinary. Costumes clarify roles, because of this it is possible to be in the picture but out of
it at once. The short doublet is called an innocent and was usually worn by a trendsetter (Liedtke, Plomp & Ruger 2001, p. 368).

The Tapestry.

Another *erde* aspect of *The Art of Painting* is the outer compositional space suggested by the heavy tapestry drape, partially drawn back, creating a spatial organization which can be read as an invitation to the viewer to enter a private *welt* similar to the entrance to a cave or womb. *The Art of Painting* 1666-8 invites the viewer to venture past the tapestry, past the waiting chair and into the privacy of the artist’s studio. There is a silence in this painting evoked by the artist’s back creating a barrier that forbids all but ‘looking’ at the subject that is not quite ready for cultural display. Although only the intimate first moments of a painting on canvas have been conceived by the artist, the subject is already complete in the artist’s mind’s eye, while the viewer is engaged in a struggle to ‘see’ a subject that is yet to be developed.

Clio the Muse of History?

In the far left hand corner of the map is the profoundly mysterious face of the model posing as Clio, identified by her costume as the muse of history (Ruger 2001, p.64). Clio’s body turns towards the direction of light hinting that she could be the muse of the history of light. Assuming this to be Clio, the laurel crown would suggest that the honour and fame of those who bring forth ‘new’ knowledge of light will survive through history. Clio’s body language, of both turning towards the artist but also gazing downward, indicates a connection between the two aspects of her pose. She turns towards the artist assuming the connection to be Vermeer, with eyes downcast as if to shield them from the intensity of a light source. Perhaps this light source could be interpreted
as a rebirth in the knowledge of light. Clio’s true focus is on a mask of sunlight’s energy, directly on the table in front of her. This focus suggests that while the new in scientific knowledge of light has been unmasked, the mask is now in Vermeer’s studio with something else remaining to be unmasked. Perhaps that something else is the artist’s way of seeing a light that is beyond the exclusive realm of science.

The Illustrated Map of the Netherlands.

Viewing the painting from a frontal position, the viewer engages in the full impact of Vermeer’s reproduction of a complex *Illustrated Map of the Netherlands* by Claes Jansz Visscherap. Vermeer elevates the map to occupy a third of the space in the composition of *The Art of Painting* 1666-8, thus giving it a prominence that suggests the map is not just a backdrop for the painting but the focal point of prosperous Delft, the home of Vermeer.

The seventeenth century saw the city of Delft emerge as an an important artistic centre, sustaining a vibrant community of accomplished and innovative masters in many fields. Johannes Vermeer is of course, the towns most famous artist but painters such as Carl Fabritius, Pieter de Hooch, Paulus Potter and Emanuel de Witte also made important contributions to the artistic production of the city (Ruger 2001, p. 11).

Four key images are juxtaposed onto The *Illustrated Map of the Netherlands*: the chandelier with its blind light, the blind model image of history, the blind image of the artist and the birth of history on the canvas. The *Illustrated Map of the Netherlands* can be read as the awakening of the new ground and foundation being laid by Vermeer who is projecting that history of light technology onto the map of the Netherlands. Kemp points to a broader truth, where the technology of light has taken artists beyond science.
...the most advanced thought of the Scientific Revolution was moving to a philosophical and technical position in the mathematical and physical sciences, which took them increasingly beyond the range of ready applicability to the needs of art (Kemp, cited in Liedtke, Plomp & Ruger 2001, p.125).

In *The Art of Painting 1666-8*, if we allow our gaze to rest on the shoulder of Clio and then shift it to the shoulder of the artist, we will notice that the figures almost but do not quite meet. There is a gap that Heidegger calls the ‘rift’ *riss* between the uncomprehending expression on the face of history and the image of an artist confidently repainting history. This ‘rift’ in the artwork is the intimate space that demarcates the ‘concealing’ factor in *erde* and the unconcealing of *welt* and represents the immeasurable distance of creation itself; that distance where out of the void nothingness becomes being. Again, perhaps Vermeer is endeavouring to clarify the blind vision of scientific knowledge of light while leading the way to unconceal circumspect vision of light as the base for a new artistic tradition. The ‘task is to see the enigma of art, not to solve it’ (Heidegger, cited in Young 2002, p. 50).

In *Origin of the Work of Art*, Heidegger argues that history often presents only a fragment of former glory but in that fragment is a glimpse of the whole past. He cites a fragment of the Greek *Temple of Hera 1* and argues that the temple is still present even in its fragment. Similarly, if the *The Art of Painting 1666-8* is considered a fragment in the history of light technology, in that fragment is a glimpse of the whole of the Golden Age, the foundation on which to build knowledge of light technology.
The link between *The Art of Painting* and today's light technology.

The rendering of scattered light, atmospheric effects and perspective by Vermeer can be seen as the visual expression of the Golden Age of light in the Netherlands. This knowledge included the light technology of the camera obscura used in shaping and controlling the beam of light as a compositional aid in art practice. Vermeer’s technical mastery in rendering this scattered light can be seen on the weave of tapestry in *The Art of Painting* 1666-8 and in his painting *The Milkmaid* 1657-8. This scattering of light energy, this flare of white light effects can be seen to full effect on the bread and in the wicker of the basket; “the highlights sprayed like cream on every piece of bread and the handle of the basket are artistic analogies to texture and the brilliance of sunshine at the same time” (Ruger 2001, p. 59).

The design of the Linear Accelerators used for total body irradiation was invented by Friedrich Dessauer in 1908 for treatment of superficial cancers. The link between *The Art of Painting* 1666-8 and today’s scientific light technology is in the design. Both the light technology of the camera obscura and the Linear Accelerator use the shaping of light beams as their energy source to radiate an object. Although the camera obscura is miniature in comparison to the Linear Accelerator, both inventions make use of mirrors and lens in an attempt to control the scattering of light.

The Linear Accelerator of 1909, cumbersome by comparison with the camera obscura, is a lead lined box for total body irradiation using three x-ray tubes to focus the beam of radiation from a distance of 250 cm onto the patient. Although light beam shaping and collimators were used as a protective technique to limit the area for treatment, scattered light radiation still
occurred, blurring into other organs and putting them at risk (Morton & Karzmark 1989).


15. Diagram: Linear Accelerator, (Fletcher 1909, p.112).
On a line graph in physics, light has many forms of radiation, ranging from radio waves, microwaves used in radar, heat rays and X-rays to cosmic rays and ultra violet and infra-red rays. The visible light which human beings can see in their everyday is only a relatively small part of light. However, for the physicist, who works with Linear Accelerators as one form of electromagnetic radiation, light technology is at the cataclysmic brink with the potential to change human society. Whilst the physicist sees the invisibility of radiant light as not unusual, just light outside the range of sensitivity of the receptors in the human eye, it remains to be seen how the contemporary artist will see this obscure form of light. It is to be hoped that just as the artist Vermeer responded in the seventeenth century to another way of seeing light, so too artists of the twenty-first century will use their ways of seeing to once again take the knowledge of light beyond the realm of science.

The history of light is not a story of continuous progress from past to present but rather a narrative of how one discovery in light led to another and how knowledge from the past is the foundation of tomorrow’s world of light technology. Light encompasses a wide range of meanings according to its specific use in religion, physics, medicine or art but these light meanings, scatter onto other areas of meaning where the scattering can be taken to a new level. For example, light specifically in religion can be mental or spiritual enlightenment, a metaphor for truth. In physics, the meaning of light is thought of as radiant energy where electromagnetic radiation travels in sine waves generated by speed per second. In medicine, light is considered as a wave used in technology or as the source affecting the organs of sight. In art, light is that which makes things visible, as all colours depend on light.

7 Interview with Gary Arthur, physicist for Linear Accelerators, Westmead Hospital, Sydney May 29, 2002.
and the artist creates the effect of light falling on objects. However, the artist can draw on a combination of meaning from the areas of religion, physics, medicine or art, to make light visible in a composition that can be profound or not profound, small, gentle or delicate. Heidegger argues that ‘light is a phenomenon that shows itself in itself’ (Heidegger 1996, p. 27).

In both the light world experience of the physicist and the light world experience of Vermeer ‘truth happens awesomely’.

“the novice and the mariner both see the same visual experience whereas the former sees an ice flow ... the latter sees an iceberg and in doing so experiences the sublime” (Young 2002, p. 43).
Chapter Two

Light of the Temple Mountain
A Way of Seeing

The eye is not wholly dependent upon an outside and alien light; there is an earlier light from within itself, a more brilliant light which it sees sometimes in a momentary flash. At night in the darkness a gleam leaps from within the eye: or again we make no effort to see anything; the eyelids close; yet a light flashes before us; or we rub the eye and it sees the light it contains. This is sight without the act but it is the truest seeing, for it sees light whereas its other objects were the lit not the light (Plotinus, 205-270 AD cited in Gage 1994, p.27).

In this section, I offer an analysis of William Turner’s painting, *Light and Colour (Goethe’s Theory)-the morning after the Deluge-Moses writing in the Book of Genesis* 1843. This will explore the phenomena of Light and Colour, Science and Religion. These will be interpreted within the framework of Heidegger’s philosophy of what constitutes a great artwork, *welt* and *erde*. To ease the flow of the text, future reference to Turner’s painting will adopt the shortened version of the title *Light and Colour*.

**Reading Van Gogh’s Peasant Boots in the framework of Heidegger’s welt and erde.**

Heidegger argues in his philosophy that when *erde* as nature within the *welt* that, is applied to great artworks, it reveals a *welt* that is in conflict with human beings who tame and use the *erde* on which the *welt* rests. He argues that great artworks reflect this struggle as *erde* fights back to reclaim the control of *welt*. From within this conflict evolves a harmony between *erde*
and welt because they both need each other (Inwood 1999). Although in *Origin of the Work of Art* Heidegger mentions only three modern artists beginning with Van Gogh, art historians would argue that the first of the modern painters was Turner. This discourse continues to be a source of debate as recently as 2003 at an exhibition of Turner’s paintings in London, where Andrew Motion wrote in his review, “The essential Turner at his most uncluttered, exquisite and marvelous anticipates Monet’s first ventures into Impressionism” (Motion 2003).

Before proceeding with an analysis of how Heidegger’s philosophy can be used in a reading of Turner’s *Light and Colour*, it seems appropriate to review Heidegger’s choice of modern artist, Van Gogh and his painting *Peasant Boots*.

Heidegger’s lecture *Origin of the Work of Art* suggests it is possible to experience the sublime with all the depth and intensity of everyday life whenever joy, suffering and death enters peoples lives. Heidegger singles out *Peasant Boots*, by Van Gogh as an example of a great artwork capable of being of overwhelming personal significance to the viewer. Such an emotional experience evokes a heightened awareness of existence, that is a catalyst for
the experience of the sublime from nature, broadening this from the early eighteenth century Kantian sublime to encompass the worth of natural beings. The intimate painting of *Peasant Boots* expresses such personal limits of emotion in beings, that there are no perfect words to express the experience, just a thoughtful silence that whispers softly after the conflict between *erde* and *welt* has died away.

Heidegger refers to *Peasant Boots* as ‘things-to-hand’, which appear as just a woman's common pair of work boots, resting in a corner of a room bathed in early morning light. However, the powerful method of painting these peasant boots suggests the ‘immense possibilities of toil’ that bridge time to resonate within the clearing, the lighting centre *seins Lichtung* of the viewer to become a touchstone for the *heilig* experience (Crowther 1999, p. 161). Heidegger explains that *Peasant Boots* are expressive of *erde* in the artist’s choice of colour and subject, as the boots contrast with the gentleness of the background light to bring them into ‘charismatic salience’. Van Gogh's emphasis on the materiality of the pigment and unearthing style reflects a knowing of the everyday gestures of the peasant women in the field. The boots are heavily creased, well worn leather with the traces of earth from the fields still clinging to the soles, with their character made striking by the pool of natural light where they rest casting a slight shadow. One moulded boot with the ankle support collapsed, looks slightly weaker as if it has borne the weight of a heavier load. This is the boot that is casting the shadow whilst the other boot inclines towards the light source. The boots are lightly touching at the lace, with the insteps catching the light. This evokes an intimate, reading in their closeness to nature as if their unique character was in synergy with each other as well as the peasant women they supported. There is an almost
human air of expectancy as if knowing that this moment of first light is the time when they become one with that invisible woman and her welt. The air of mystery surrounding the invisibility of the woman is graphically encoded in the boots with visual information. These traces of the invisible peasant ‘unconceal’ the conflict between the welt and erde of everyday simple, hard, honest toil. In the artwork that conflict seems to have dissolved in harmony.

All indications from research suggest that the welt of the peasant woman that Van Gogh captured in Peasant Boots was painted around the same time as The Potato Pickers 1885 at Nuenen in the southern Netherlands. The rolling landscapes of these Southern Uplands with naturally fertile soil make possible the farming of oats, rye and vegetable produce. Both paintings are in sympathy with the honest roughness of these people working close to nature. Although romantic images of peasants were painted by many nineteenth century artists and enjoyed by the middle class, Van Gogh’s personal struggle was with the unique character of these labourers, formed by their intimacy with nature.

Heidegger suggests that the struggle with such a concept for an artwork is formed in a space that is not obvious to human sight but similar to the space where the viewer experiences heilig-a space normally concealed or hidden or covered up. Heidegger argues that in this clearing, the lighting centre, seins Lichtung, this unobtrusive ‘space’, the subtle everyday practices of erde are coordinated. When the space is unconcealed there develops a relationship with ‘a thing’ which, in the case of Van Gogh, is the paintbrush in his hands and in the case of the peasant it is her boots. When this subtle everyday relationship with these ‘things to hand’ is captured by an artist it can be recognized in the
lighting centre of the viewer where it may be possible to trigger the experience of the sublime. From the unconcealed clearing, Van Gogh has painted a pair of boots and in so doing unconcealed the welt of the female peasant who moulded the boots. Even though she is invisible, traces of her and her welt are disclosed to all those who view the work through the centuries.

It is at this point that the complexity of Heidegger’s two concepts erde and welt begin to emerge. In Being and Time, Heidegger speaks about the multiplicity of the word welt.

World is used as an ontic concept and signifies the totality of beings which can be objectively present within the world...Again, world can be understood as that “in which” a factual Da-sein “lives.” Here world has a pre ontological existentiell meaning. There are various possibilities here: world can mean “public” world or of the we or one’s ‘own’ and nearest (domestic) surrounding world (Heidegger, 1996, p.61).

Heidegger speaks of an even more intimate notion of welt, describing it as a knowing or exemplary relation of the lighting centre Lichtung of beings, to the welt. If this knowing of the welt of which Heidegger speaks has no external characteristics it must be inside the being and therefore invisible. How then does this inner welt with an essence of knowing, become visible? According to Heidegger, the inner welt shows forth in a great artwork which sets up welt and brings it into ‘charismatic salience’, placing it in front of the viewer. This welt is revealed through the natural act of painting and the artist’s choice of subject such as tools or equipment used by human beings in their ‘everyday’ life. This is what is captured so effectively in Peasant Boots 1885.

**Heidegger’s notion of what makes a great artwork.**

Heidegger’s notion of what makes Peasant Boots great, is that erde reveals not
only the expressive ridges of paint that seem to echo the furrowed fields but also becomes an historical record of the owner of the boots having been in the welt. In an interpretation of Heidegger’s philosophy of erde Dreyfus argues that the Temple requires the stone out of which it is made in order to show man’s place in the world (Dreyfus 1993, p.300). An understanding of this concept of erde as nature in conflict with welt can be seen in Van Gogh’s composition of Peasant Boots 1885. Whilst the boots of the peasant are grounded in erde, the role of the peasant woman in her welt of toil and the act of farming, is always in conflict with erde. Heidegger argues that to capture the conflict of erde in an artwork is to capture something that can never be mastered: the concealed, the disconcerting, that region of mystery that surrounds our existence as beings. The concept of Heidegger’s erde has the effect of setting forth the painting or placing it on display. This erde speaks in the artwork as a disclosure of ‘truth’, Wahrheit, nourishment, protection and life and sometimes has an ancient mythic and primeval sense to it.

Young’s summarises Heidegger’s ideal of what constitutes a ‘great artwork’ from the Origin of the Work of Art.

The great artwork... is something which, first brings ‘world’ out of the background inconspicuousness and into the clarity of foreground salience, second allows it to be transparent to earth so as to appear as ‘holy’ (and hence commanding), and third gathers together an entire culture to bear witness to the numinous salience of world which happens in the work (Heidegger, cited in Young 2001, p. 52).

For an artwork to work, an understanding of the artist’s intention must be as clear and coherent to the community as possible. Dreyfus explains,

Heidegger calls the way the artwork solicits a culture to make the artwork explicit, coherent and encompassing the welt aspect of the work. He calls the way the artwork and its associated practices resist the totalization, the erde (Dreyfus, 1993, p. 300).
It is not enough to have one or the other to realize the ideal. Both welt and erde are an integral part of the artwork, whether it be the conflict between the welt of agriculture and erde of the peasant as depicted in Peasant Boots, or the conflict between an ancient Temple and the communal beliefs of the people. The Temple, made out of stone, reveals the site of a community in the welt, to become the pivotal point that clarifies and unifies the culture of the community. The conflict arises between welt and erde when the community evolve and organize governing codes of practices within the Temple. Heidegger explains that the Temple is an erde structure whilst the practices and organization of those practices are created and imposed by natural beings. So whenever there is such organization of beliefs there will always be some ‘resistance’, some conflict within that structure.

Similarly, in a painting, no interpretation can ever be completely accurate as no one knows all the layers of mystery that surround the existence of the artist and so there remains a struggle between erde and welt. Indeed, there is sometimes a struggle within the artist, who may not see the full meaning of the artwork until long after it is completed.

**The people’s endowment of J.M.W. Turner’s welt.**

Whenever art happens–that is whenever there is a beginning–a thrust enters history, history either begins or starts over again. History means here not a sequence of events of whatever sort, however important. History is the transporting of a people into its appointed task as entrance into the people’s endowment (Heidegger 1971, p.77).

Heidegger considers that an artwork that enters the ‘peoples endowment’ is a gift of erde to the community that ‘...gathers together an entire culture to bear witness to the numinous salience of world which happens in the work’. If the artwork finds ‘preservers’ when it is first projected into a community
then the artwork enters into the culture of the people to become accepted by each successive generation that protects, keeps and seeks its ‘truth’ Wahrheit. With every series of great artworks exhibited some aspect is added to the layered constellation. An example can be given with Turner’s paintings when in October 2003 the Tate Gallery Millbank showed the people their endowment in an exhibition entitled “The Floating World” of Venice. Critic and writer Andrew Morton was prompted to ask “how do you deal with Turner whose images of Venice are so intensely sympathetic to the place, that they have come to seem integral to it?” (Morton 2003).

John Constable, another great master of landscape painting, recognized the transient quality of erde in Turner’s artwork when he pointed out that Turner “seems to paint with tinted steam, so evanescent and so airy” (Constable, cited in Morton 2003). In the twenty first century Turner’s great artwork continue to ‘be’ for successive generations, housed in the Clore Gallery, part of the National Gallery in London, where their endowment is preserved by the world community. Tate Gallery has organized the Turner Prize annually since 1984 to acknowledge the commitment and innovation of Turner to his art practice and recognize developments in contemporary art. Each successive choice of contemporary artwork carries forward the legacy of Turner.
The sublime experience expressed in artworks need not be limited to Kantian ‘nature as catalyst’ but can extend to the poetry of artworks with personal significance for the viewer. The initial impact of Turner’s painting *Light and Colour* is a dazzling, swirling beam of light in warm colours from white
through to golden reds. Although the title is explicit, there is an intriguing mix of science and religion that shrouds this artwork in mystery for the twenty-first century viewer. Heidegger argues in *Origin of the Work of Art* that whenever successive generations seek to unconceal the relevance of an historical artwork in their contemporary *welt*, its poetry begins or starts all over again.

When *Light and Colour* 1843 was painted, Turner was seventy one years old, so his late artwork appears to be the culmination of a lifetime’s fascination with the fleeting expression of light. By 1843 his paintings far outstripped his contemporaries so it would not have been of primary concern to him for the title of his artwork to be understood by his peers. Although his peers puzzled over the meaning of Turner’s artwork, he remained indifferent.

**An optimistic reading of Light and Colour.**

In his book *Colour and Culture*, Gage (1993) argues that Turner’s painting *Light and Colour* is an “eccentric treatment of Noah’s story” and clearly reads the overall theme of the artwork as one of “pessimism”. I would argue that there are many interpretations of the word *eccentric*. If Gage intended eccentric to mean irregular or deviating from the recognized or usual character, then he is correct. If Gage intended the word to mean the Ptolemaic system, the circle on which the sun moves about the earth which is slightly off centre, then he is also correct. Clearly, the painting is unlike any other Biblical work on the Deluge but a challenge can be made to Gage’s reading of Turner’s painting as being “pessimistic”. If Turner intended to convey pessimism, the painting would be gloomy, requiring little in the way of colour to evoke the Deluge with the belief that evil and pain in the world was not
compensated by good and happiness. The painting would use strong imagery in its composition to convey the notion that the existing world is the worst of all possible worlds and that all things tend towards evil. Turner’s painting is unlike either of these “pessimistic” concepts. Perhaps Turner’s intention was primarily not about the visual image but conveying the invisible through a way of seeing. This way of seeing is demonstrated by Van Gogh when he makes the absent woman, present through the image of her boots resting in the light. “The eye is not wholly dependent upon an outside and alien light; there is an earlier light from within itself, a more brilliant light which it sees sometimes in a momentary flash” (Plotinus, cited in Gage 1994, p. 27).

**A reading of light and colour in Turner’s painting.**

The sheer transparency of light in *Light and Colour* 1843 appears to pass through the luminous white at the centre of the work then reflects back from the canvas to convey a creative force, an energy and a feeling of lightness. This effect provides a contemplative focus that is central to the phenomenology of the sublime experience. The general effect of the seeming absence of image bears similarities to leaving a lightened space then entering a darkened room. After a few moments, when the eyes have adjusted, the image begins to emerge from the canvas. The viewer experiences this optical sensation of the artist’s welt, an isolated moment of intense pleasure where the brilliance of light is absorbed and transmitted, creating a sense of oneness and spiritual revitalization. The materiality of things, the density of events, space and time continue to appear insignificant in comparison with this burst of golden light. When the figure of Moses, the focal point, finally emerges he is depicted as a remote, miniature figure almost invisible in the shimmering luminosity that surrounds him. Smiles tentatively supports this view of
“optimism” whilst acknowledging the mysteriousness of *Light and Colour* 1843. “This painting might seem to offer a vision of optimism referring to God’s covenant to humankind through the agencies of Noah and Moses and Jesus himself” (Smiles 2000, p. 66).

The modest size and simplicity of Turner’s Moses emerging from the light conveys a central but quite distant figure. It is at this point that this painting stimulates thinking about other possible readings. Could the figure in *Light and Colour* allude to Turner himself - painting the *Book of Light*? Perhaps the sheen on the canvas became a mirror to the image of Turner himself and in the act of creating the artwork, there was a rivalry of representation between the blurred figure of Moses the lawgiver, and Turner the artist. The deliberateness with which Moses is using the writing implement suggests it could have personal significance for Turner. If through role reversal Moses becomes Turner’s self portrait, this would account for the portrayal of the figure as insignificant in the *welt* compared with infinity. Self portraits involve mirroring, so the writing implement in the hand of Moses would become both the paintbrush and the invisible arm of Turner.

If *Light and Colour* 1843 evolved into Turner’s self portrait, the modest size and simplicity of the diminutive image would be no more than a mere token portrait whereas the expressive luminous rendering of light is a true reflection of Turner’s *welt* and culture. Although from 1780 to 1851 Turner painted over 540 oil paintings and 1600 watercolours, he declared that “the only secret I have got is dammed hard work” (Smiles 2000, p.12). Turner, confronted with his seventy years of recording light and landscape faced the reality that even his legacy is insignificant compared with what he re-
presents in his paintings: an infinity of light.

An explanation of the significance of the mirror as a symbol in art contributes another possible layer to the reading of Light and Colour 1843 as a self portrait of Turner. The surface of the mirror has long been associated with imagination invested with magical qualities in its ability to reflect the reality of a visual welt. However, a mirror fluctuates between the image being absent and being present in a way that has been likened to the symbolism of the moon or a door at the crossing from life in this world to the other side of life.

Further evidence that the mirror is lunar is afforded by its reflecting and passive characteristics, for it receives images as the moon receives the light of the sun. A mirror also takes the mythic form of a door through which the soul may free itself ‘passing’ to the other side (Cirlot, 1971, p. 211).

The self reflective image on a mirror surface can be confrontational, evoking all the insecurities and uncertainties of ‘truth’ Wahrheit. Light and Colour 1843 is not only Turner’s endowment of personal truth but also the technical process of expressing his emotional response to light. It points the way for the next generation of artists to analyse light.

**A reading of (Goethe’s Theory) in Light and Colour.**

To clarify Turner’s welt it is necessary to see the place of Goethe in that welt. Goethe, poet, thinker and artist, was internationally famous for taking an anti Newtonian position to Opticks in the nineteenth century. Goethe’s theory was a three part study written in 1810 titled Fahrbenlehre (Theory of Colour) which directed the attention of scientists to the physical and psychological aspects of colour phenomena. Goethe’s emphasis was on the complementary polar structure of colour from light to dark using red and green, orange and
blue and yellow and violet. Goethe experimented with the reception of complementary polar colours on the retina of the eye. “Painting is truer for the eye than reality itself. It presents what man would like to see and should see, not what he habitually sees” (Goethe, cited in Gage 1995, p. 202).

Turner experimented with the polarities of light and dark in his painting and would therefore have been aware of the relevance of the poet’s theory (Smiles 2000, p. 66). Goethe argues that colours are divided into two symbolic lists: the “plus” listed colours associated with warmth and happiness using red, yellow, and green and the “minus” list of colours using blue, blue green and purple associated with anxiety. Turner challenged this theory by using a “plus” palette in *Light and Colour* 1843 whilst emphasizing the need for a touch of blue, a “minus” colour to act as a contrast. Turner then produced a companion painting, *Shade and Darkness-The Evening of the Deluge* in a palette of “minus” colours of gloomy dark blues that required a contrast of “plus” colours. In this way, Turner demonstrates that whilst scientific theory informs the welt of the artist, the transparency of personal truth *Wahrheit* happening in the artwork overrides scientific theory.

At first glance, the inclusion of *Goethe’s Theory* in the title of the painting *Light and Colour* could be interpreted as a gesture of endorsement. However, Gage in his book *Colour and Culture* suggests it was more likely Turner wished to draw attention to the fact that Goethe had not paid enough attention to shade in his Theory. Turner, through his experiments in artworks using Goethe’s “plus” and “minus” colour concepts, both explored and clarified the resistance of artists to the imposition of scientific theories that restrict artists’ creativity. If Turner was concerned that Goethe’s scientific theory could
restrict artists’ choice of colour in painting, then it is conceivable that he would explore that theory in order to draw attention to the value artists place on Wahrheit and freedom of expression.

Heidegger argues in Origin of the Work of Art that whenever an artist interprets their welt there is a ‘transparency of truth’ and an openness to the knowledge of the day. Clearly, Light and Colour (Goethe’s Theory) captures that attunement to the science of light but the artwork also conveys an awareness of the limits of seeing light and the mystery of erde beyond those limits. The light that is inaccessible is then supplemented by a different way of seeing - the light from the artist’s inner welt. Heidegger argues that, once encountered, this inner light is no longer under the control of Dasein. It is interesting to note the similarities between Heidegger’s philosophy and that of Plotinus when he writes about a different way of seeing.

The eye is not wholly dependent upon an outside and alien light; there is an earlier light from within itself, a more brilliant light which it sees sometimes in a momentary flash. At night in the darkness a gleam leaps from within the eye: or again we make no effort to see anything; the eyelids close; yet a light flashes before us; or we rub the eye and it sees the light it contains. This is sight without the act but it is the truest seeing, for it sees light whereas its other objects were the lit not the light (Plontinus, cited in Gage 1994, p. 27).

The artist arrives at this momentary flash through the personal struggle between welt and erde where ‘truth happens awesomely’. Turner explores the scientific theory of his welt but resists its domination of erde and the naturalness of expression in Light and Colour 1843, allowing the mystery of light ‘to be’. Sometimes the resistance between welt and erde has a positive outcome in that the resistance itself has revolutionary ramifications that generates a culture’s history. In Turner’s case, his later work was not fully
understood by contemporaries, and in the isolation that comes with the climax of a lengthy career, is the potential to generate artwork that propels the beginning of a revolutionary modern experience in painting.

To explore this point of resistance or conflict, it is not necessary to look any further than Goethe himself, who was so resistant to Newton’s theories about light that he formulated his own theory on the subjective effects of light and colour within the structure of science. Although it was in 1666, that Newton described the splitting up of white light into its component colours when it is passed through a prism, these scientific solutions to problems were still of interest and widely discussed by the community in England in 1843. Evidence of resistance to Goethe’s Theories by artists in the art welt can be deduced from the fact that “only two artists in the nineteenth century engaged with Goethe’s theory in any thorough going way. One was Turner and the other Runge” (Gage 1993, p. 203).

Again, if we consider Heidegger’s concept of erde as speaking in the artwork as a disclosure of ‘truth’ Wahrheit, it becomes clear that Turner could only protect and nourish the integrity of his life’s work with light by accepting the challenge from science and exploring light with the knowledge available at that time. Being aware of Goethe’s theory, Turner was able to justify his resistance by an analysis of the shortcomings of the theory in practice, namely that Goethe had only defined darkness as “an absence of light”. In reference to the shortcomings of Goethe’s theory Turner wrote, “...nothing about shadow or shade as shade and shadow pictorially or optically” (Turner, cited in Gage 1993, p. 204). It follows that whenever there is a prominent debate about the scientific theory of light, the struggle and resistance within
the structure of institutions would filter into the art world to challenge artists. In this way *Light and Colour* (Goethe’s Theory) becomes an historical endowment to future generations that records the debate and also reveals change.

By way of contrast, twenty first century scientific debate about the theory of light is recorded in a photograph showing atoms and photons of light trapped inside a cloud of Bose Einstein Condensate, chilled to a point close to zero where they behave as a super single atom. The subject of light’s energy that baffled Turner and Goethe continues to be one of the most mysterious yet most useful concepts that has enriched fundamental ideas about nature. In the twenty first century the history books will need to accommodate another paradigmatic shift in knowledge of light.

**The relevance of Light in the twenty first century.**

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For those physics students who learnt that the speed of light is the most constant quantity in the universe, 299,776 km per second, it may come as a
surprise to learn that Professor Lena Hau at Rowland Institute in Cambridge Massachusetts, has succeeded in completely stopping light for one thousandth of a second. This knowledge of the power of light will offer unimagined future technological benefit to medical science. It is a discovery which will change the twenty-first century welt of the everyday by making possible the building of light powered super computers with awesome capacity. Whenever a shift occurs in a culture, it instigates a scientific revolution. Scientists ‘see’ things differently and the welt changes. Both Turner and the scientific welt of his time would have been aware of the polarities in ‘seeing’ between the theories of Goethe and those of Newton. Thus, it follows that Turner’s inclusion of Goethe’s name in the title of his painting could have been to acknowledge welt changes that were taking place, heralding a paradigmatic shift and yet another way of seeing the potential of light.

A reading of religion from Turner’s painting Light and Colour.

The ark stood firm on Ararat; th’returning sun
Reflected her lost forms, each in prismatic guise
Exhaled earth’s humid bubbles, and emulous of light,
Hopes harbinger, ephemeral as the summer fly

In Light and Colour 1843, Turner combines light from both science and religion in his welt. Turner encapsulates the religion of his welt in the quote above that accompanied the ‘artwork’ when it was exhibited. Turner used poetry and titles to puzzle the viewer thus creating an aura of mystery in his paintings. One obvious enigma in the prose about the aftermath of the deluge is the absence of Noah as the central character of the biblical story about the deluge whereas Moses has centre stage in the painting according to the title. Turner uses the words, “hope’s harbinger” suggesting hope goes before and
makes known the approach of something else. But what? Turner produces images from his imagination together with images he absorbed of biblical heroes and ties them with personal experience to formulate a complex concept for viewers of a different time and culture who read his legacy. Turner reaches into events of the Old Testament but not to make these events visible. The “Deluge” had already been depicted so Turner could explore what is invisible in religion such as traces of the light of faith in Noah and Moses. Perhaps when Turner wrote “hope’s harbinger that is “ephemeral as the summer fly” he was referring to personal faith.

Faith is invisible but its power and energy can be made visible by traces suggestive of unyielding courage in the face of obstacles. *Light and Colour* 1843 portrays an almost invisible camouflaged figure of Moses against the background of an almost invisible crowd of people that fuse into the light, perhaps suggestive of the generations who came after him to build a great nation. In the foreground of the artwork only the “earth’s humid bubbles” rise to the surface, just a trace of the invisible damned who perished in the perilous waters of the deluge. Noah, his family and the ark are also invisible but the erde of Mt Ararat is visible. The dove Noah sent as a messenger is invisible but the composition is constructed from an aerial perspective suggestive of being seen through the eyes of a bird. What is overwhelmingly visible is the luminous intensity of the light, traditionally equated with the spirit but also the hallmark of Turner’s artistic career.

Complexity comes in what is ‘undisclosed’ erde, nature, that which is not mastered, the concealed and the disconcerting whilst for the artist erde is also the mystery of pigment. Turner argues that it is a “sacrilege to pierce the
mystic shell of colour in search of form” (Smiles 2000). From this viewpoint Turner’s approach to biblical subjects could be described as nothing less than radical. *Light and Colour* 1843 evokes the experience of finding the centre and reaching back in time to the light of Moses’s *existenz*. In the painting *Light and Colour* Turner juxtaposes a cord stretching from Mt Ararat towards the centre with what appears to be a rope looped in the figure eight, the symbol for infinity. “This is equivalent to finding the ‘Centre’ which forms such an important part of all mystic thought” (Cirlot 1971, p. 172).

There is a gap between this untied cord and the figure of Moses. This bears similarities to that gap between the finger of God and the finger of Adam in Michelangelo’s famous image on the Sistine Chapel fresco. This small gap represents the immeasurable distance of creation itself, the interstice across which the spark of life must travel, that distance where nothingness becomes being. Heidegger in *Origin of a Work of Art* identifies this gap as ‘rift’ *riss*. It demarcates the conflict between the self concealing *erde* and the unconcealing push of *welt*. It is in that intimate space where something comes into meaning, where the painting itself becomes an act of faith, that personal truth of human longing breaks through the consciousness as *erde*.

One wonders if an event or experience of the sublime in Turner’s *welt* triggered the need to respond in such way with the painting of *Light and Colour*. It is well documented that in 1843, Turner visited the village of Goldau in Switzerland. If we look at his pencil and watercolour study, *Goldau* is depicted with a scarlet sunset and figures subordinated to its light and taking on the camouflage colour of the rocks. Turner similarly treats the figure of Moses as part of mystic light.
Turner, an experienced traveller, would have known that Goldau was a village that had been destroyed by an avalanche in 1806. From eye witness accounts it appears this mass of partially melted snow slid down the mountain slope enveloping the village and all its inhabitants. The only remaining trace of Goldau is in the memories of those who still live in nearby villages such as in the following eyewitness account.

The summer of 1806 had been very rainy, and on the 1st and 2nd of September it rained incessantly. New crevices were observed in the flank of the mountain, a sort of cracking noise was heard internally, stones started out of the ground, detached fragments rolled down the mountain; [Rossberg] at 2 O'clock on the afternoon of the 2nd of September, a large rock came loose, and in falling raised a cloud of dust. Springs of water ceased at once to flow; pine trees reeled; birds flew away screaming. There was a loud and grating sound like thunder. The whole surface of the mountain seemed to glide down...Nothing was left but the bell which hung in its steeple found a mile off...The houses of Goldau were literally crushed beneath the weight of superincumbent masses (Murray, cited in Wilton 1985, p. 68).
In *Light and Colour* Turner expresses none of the romantic horror in either the tragedy of the Deluge nor *Goldau* when incessant rain caused the mountain to collapse, but the faith of the tiny community is recognized living beneath the sublime grandeur of nature. Turner portrays this community as insignificant and subordinate, living in the shadow of the mountain and going about their everyday activity of fishing. He chooses camouflage colours that merge with the rocks as if one with their *welt*. The painting has a long receding perspective which takes the eye deep into a swirling glow above the mountains that seems to be “the light not the lit”.

It could be assumed that Turner knew of this eyewitness account because he uses prose that contains a phrase from the Goldau official report to accompany *Light and Colour 1943*. Turner chose the phrase, “*the birds forsook their nightly shelters screaming*” (Wilton 1985, p.68).

The apocalyptic disaster at *Goldau* and the eyewitness record of the words “it rained incessantly” could have triggered Turner’s memory of the ancient biblical story of Noah and the deluge. Turner’s painting is significant because it is an optimistic historical reflection of how science and religion can have a synergistic relationship that ‘......gathers together an entire culture to bear witness to the numinous salience of world which happens in the work’ (Heidegger, cited in Young 2001, p. 52).
Turner’s everyday *welt of religion*.

Turner’s inclusion of the Biblical text .. *Morning after the Deluge-Moses Writing in the Book of Genesis* in the title of *Light and Colour*, indicates the prominent ‘everyday *welt* of the Christian religion in England in the nineteenth century. However, in a contemporary secular society it is hardly surprising that the viewer of the painting is puzzled by Turner stating that it is Moses rather than Noah in the vortex of his painting about the Deluge. Moses lived almost a thousand years after Noah. Although such bewilderment would make it easy to accept that this painting is a self portrait of Turner, the specific nature of the religious title requires an analysis into the original text from the Bible to interpret the significance for Turner.

From Genesis, the story of Noah.

The flood continued upon the earth for forty nights and forty days. As the waters increased they lifted the ark, so that it rose above the earth. The swelling waters increased greatly, but the ark floated on the surface of the waters. Higher and higher above the earth rose the waters, until all the highest mountains everywhere were submerged, the crest rising fifteen cubits higher than the highest mountain. All creatures that stirred on earth perished: birds, cattle, wild animals, and all that swarmed on the earth as well as all mankind (Genesis 1:17-22).

From Exodus, the story of Moses.

Pharaoh’s daughter came down to the river to bathe while her maids walked along the river bank. Noticing the basket among the reeds, she sent her handmaid to fetch it. On opening it she looked and lo, there was a baby boy, crying! She was moved with pity for him and said, “It is one of the Hebrew children.” Then his sister asked Pharaoh’s daughter “Shall I go and call one of the Hebrew woman to nurse the child for you?” “Yes do so,” she answered. So the maiden went and called the child’s own mother. Pharaohs daughter said to her, “Take the child and nurse it for me, and I will repay you.” The woman therefore took the child and nursed it. When the child grew she brought him to Pharaohs daughter, who adopted him as her son and called him Moses;
for she said, *I drew him out of the water* (Exodus 2: 1).

A significant connection between Noah and Moses is that both men were “drawn out of water” and survived in an ark. The Hebrew word for the basket Moses survived in is also an “Ark”. To explain the early history of the faith of the Hebrew people, Moses, one thousand years later, wrote the book of Genesis. This describes Noah as the only God fearing man of his time and recountshow he was chosen to keep his family and animals alive during the Deluge. Noah warned his countrymen for one hundred and twenty years that the flood was coming and during that time Noah kept his faith in God. He took into the Ark his family and enough birds and animals to repopulate the earth while the rain poured for forty days and forty nights (Genesis.7:12, 14).

The biblical story states that when the flood subsided, God recognised the faith of Noah and commanded his descendants to respect human life. The faith of Noah and his family was passed down from generation to generation until the numbers grew into a nation of millions who were eventually rescued “in faith” by Moses. The Bible states that the connection between the lives of Noah and Moses that spanned time is “faith”


> Faith is the realization of what is hoped for and evidence of things not seen....By faith Noah warned about what was not yet seen... By faith Moses left Egypt not fearing the kings fury, for he persevered as if seeing the one who is invisible (Hebrews 11).

“Faith is the realization of what is hoped for and evidence of things not seen”. Perhaps for Turner the painting *Light and Colour* became not so much about the Old Testament or indeed science but more about exploring the boundaries in personal truth *seins Lichtung* of not-being-able-to-see, the invisible light of
faith at the limits of life. As Turner’s life came full circle from seeing to an acceptance of not-being-able-to-see, *Light and Colour* 1843 combined technical mastery with poetic sensibility to create a painting of light that blinds as it perceives ‘insight’. Everyday lives are, for the most part, lived in swirling mists with just a dash of heroism. If on occasion, limits are broken, there emerges a moment of in-sight. To experience ‘in-sight’ is to know a cathartic moment, a moment of total understanding that seems to hold the meaning of life itself. In the fading year of his life, Turner’s painting allows us a glimpse of the transparency of personal truth of his unconcealed inner world, the “light not the lit”.

The transparency of personal truth or unconcealed light of Turner encoded into his painting cannot be glimpsed by a mere description from the artist.

...his life partook of the character of his works; it was mysterious and nothing seemed to please him so much as to try and puzzle you or to make you think so, for if he began to explain, or tell you anything, he was sure to break off in the middle, look very mysterious, nod, and wink his eye saying, “make that out if you can” (Roberts, cited in Smiles 2000, p. 14).

Robert’s description of Turner suggests that for the artist, language is inadequate to describe the mysterious inner world unconcealed in artwork. Perhaps the words that Turner cannot articulate are Heidegger’s concept of *sein-Lichtung*, the clearing or lighting of being considered the purest of forces, the medium that holds one being to another, expressing the centre of all beings. The mystery of this silent centre comes from being drawn into its boundless draft where the body form acts as a barrier and refuses further access. This barrier between life and after life mirrors the centre at the being of the one who ventures. Rilke evoke the boundless space of *sein-Lichtung* and
its force of gravity in the words, “regaining yourself even from things in flight: Centre, strongest of all”!

**Gelassenheit in Light and Colour.**

*Gelassenheit*, at the limits of optical perception, is where all resistance in the artwork between the opponents *welt* and *erde* dissolve into the subject. That intimacy between *welt* and *erde* within the subject creates a spark of unity in the artwork that can become the beginning of a culture’s history.

In the final analysis of *Light and Colour* 1843, all that remains of the title in the painting is *Light* an impression, an impression that is compelling as one of Turner’s most mysterious paintings. Heidegger’s philosophy applied to Turner’s painting is concerned with the limit of sensory experience where all traces of *erde*’s apocalyptic turbulence are obliterated by the immediacy of light. All traces of the monumentality of being in the *welt* become a mere illusion at one with the source of light. What remains with the viewer is *Gelassenheit*, the composure of an everyday glance at early morning light.

The mystery that remains in Turner’s artwork cannot be locked into something representational because that would defeat *Gelassenheit*. Great art has the transparency of truth regardless of time, and regardless of knowing the intentions of the artist. Knowing is an ‘invisible world’ but the traces show forth in the artwork. Turner himself describes the struggle for the artist in a manuscript for one of his lectures while Professor of Perspective at the Royal Academy. “...the imagination of the artist dwells enthroned in his own recess and must be incomprehensible as from darkness; and even words fall short of illustration, or become illusory of pictorial appreciations” (Turner,
cited in Smiles 2000, p.14). Turner in his artwork was dealing with the new light at the limit of life itself, which takes his painting *Light and Colour* to the limit of art, the poetic sublime.

The more one tries to find in the new the truth of art, the more the sublime will be seen as essential to the understanding of art, and the human response to the sublime will become an essential part of art, of not only the aesthetic experience but also of theory (Goldsmith 1999, p. xv).
Insight from not-being-able-to-see the invisible light of faith underpins Turner’s painting, *Light and Colour Goethe’s Theory—the morning after the Deluge Moses writing in the book of Genesis* 1843. The struggle in the painting between the two elements *erde* and *world*, unconceals the transparency of *Wahrheit*, the hallmark of a great work of art. This struggle bears similarities to climbing a mountain, where there is greater consciousness of the weakness of stumbling feet than the view, the grandeur, or even the upward progress.

In the previous section, I explored the significance of ‘not-being-able-to see’ and discover that this phenomenon of ‘in-sight’ is often more illuminating and enlightening than sight itself. The feeling of fear even at the suggestion of sight privation is central to the theory of the sublime. Heidegger explains that fear radiates its harmfulness and even if what is threatening us with privation passes us by, the experience is even more intensely felt. ‘That what is harmful, approaching near, bears the revealed possibility of not happening and passing us by. This does not lesson or extinguish fearing but enhances it’ (Heidegger 1996, p. 132).

In *Origin of the Work of Art*, Heidegger selects five artworks as representative of great artworks: Van Gogh’s *Peasant Shoes*, the *Temple of Hera* 1 at Paestum, Bamburg Cathedral, , Klee’s paintings and Japanese No Plays. In this section, I analyse the philosophical underpinnings of another great artwork, the
Greek *Temple of Hera 1* with the view of applying that insight to the poetic sublime in contemporary artwork. The *Temple of Hera 1* is sometimes referred to as the Basilica to distinguish it from the Roman built temple of Hera 11 on the same site nearby. In questioning the origin of great artworks' Heidegger acknowledges the words of visual artist Albrecht Durer. Durer states, “in truth, art lies hidden within nature; whoever can wrest it from her has it” (Durer, cited in Heidegger 1971, p. 70).

What is meant by “in truth” in Durer’s statement? It will be necessary to explore this sixteenth-century notion of truth that Heidegger applies to the *Temple of Hera 1* in order to see if his meaning of truth has been distorted over time and if it is relevant in its original form to contemporary art.

Durer’s reference to truth is an inheritance from the Greek Philosopher Plato’s *Theory of Forms* which includes the ideals of Good, Truth and Beauty. Plato (427-347? BC) argues in *Republic* Book v11 that a world lies behind what we
experience in the everyday and what we encounter in the world is only a copy, or reflection of the true Forms. Plato develops this idea of true Forms in the dialogue allegory of the prisoners in the cave in Republic where he describes a dark cave.

From the opening of the cave, the path descends and part of the way down there is a fire. Just below the fire there is a road with a high wall. Even lower are men, their legs and necks shackled so that they cannot move at all and can look only towards the back of the cave. They cannot see the entrance, fire, road or wall. Other persons, some silent, some speaking, walk on the road behind the wall carrying human images, shapes of animals and tools. The prisoners cannot see these people although they sense their presence. As the shackled men are looking away from these things, all they can see are the shadows of the moving images, animals, shapes and implements that are cast onto the wall in front of them by the fire. The prisoners can see nothing other than these shadows on the wall and eventually treat the shadows as reality. In naming the shadows of images they would imagine that they are naming real things. If one of the shackled prisoners should speak, the others would assume because of the echo of the voice that one of the shadows had spoken (Plato, cited in Craig 1935, p. 207).

If the prisoners were to be freed from their chains, they would leave their cave and discover the real world. At first the direct light of the fire and the sun would blind them because they are so used to thinking that the shadows are reality, they would not have believed anyone who told them that the shadows are in fact an illusion.
One well known interpretation of Plato’s allegory is that of the ascent of the philosophers ‘soul’ out of the ignorance produced by sensations in the outer world and into inner knowledge. The fire represents the sun which allows humans to see the outer world. The shadows on the wall represent the object that the sun enables the senses to see, which are in fact only appearances of reality. The sun represents the light of the inner soul, the good which gives access to reality and truth of themselves. Plato suggests that the general terms of our language are not names of the physical objects that we can see. They are actually names of things that we cannot see, things that we can only grasp in the mind’s eye. Only when the prisoners are released can they turn their heads and see the real object, thus realizing their mistakes. Plato’s aim is to demonstrate that we can acquire concepts by our perceptual experience of physical objects but the concepts that we grasp are not on the same level as those we perceive.

Heidegger argues that one of the ways in which truth happens is the ‘work-being of the work’. ‘Setting up a world and setting forth erde, the work is the fighting of the battle in which unconcealedness of being as a whole is won’ (Heidegger 1971, p. 57). Perhaps the Wahrheit of which Heidegger speaks is that invisible something where ‘silence conveys a message more effectively than words’. Perhaps it is this communication of the notion ‘in truth’, in this invisible something that is the hallmark of a great artwork.

Seeing ‘in truth’ Wahrheit.

When an artist represents an object or image, the representation is one step removed from what the artist perceives. Perhaps the concept, in truth, for Durer means trusting only to the extent that the viewer believes appropriate
while at the same time, trusting in there being reasons for the artist's interpretation, reasons why they see what they do. For example, medical opinion confirms that the blind person cannot see but that medical truth differs from the truth of a blind person who see a catalogue images in their mind’s eye. (See transcript of interview with Helen McLoughlin in Appendix.) The mind’s monocular way of seeing becomes an extension of binocular sight that includes things that allow for a certain respect for differing truth.

An artist can trust in what they believe to be truth in their personal world and it follows that trust in what the artist believes to be truth can become a self-sustaining power for the life of the artist. Should this origin of power be effectively transferred to their artwork, then the artwork itself will reflect or challenge community thought thus becoming something representative of that community in time and place.

In the transendere from the limitations of binocular vision, to monocular vision of the mind’s eye, truth is unconcealed. Heidegger distinguishes transendere as a leap into a new paradigm that secures Dasein’s freedom. Dasein’s transition from being to being as a whole, determines the beginning of what that person is to be. Inwood clarifies this when he says that Heidegger's account of truth is no longer something we need to be certain of. “The quest for truth is not a quest for certainty about what we already know or believe, but a quest for disclosure of hitherto unknown realms” (Inwood 1999, p. 230).
Plato claims that the world of pure Forms in which the ultimate and unchanging truths of mathematical figures and relationships exists is the real world, whereas the world we see of mere appearances is the unreal world of illusion, of change and death. However in spite of this clear distinction made by Plato, Greek art displayed clearly discernible stages, experimenting while holding onto the older forms. “Development and change were inherent in Greek culture as recognizable forms as in the recurring stages of human life” (Croix & Tansey 1986, p.128).

In *The War Lover; a study of Plato’s Republic*, Craig argues that we can think our way through the forms of light but it is not plausible to suggest that there is a relationship between imagination and images or truth and the shadows on the wall. We ‘see’ them just as we ‘see’ the more substantial objects that cause them and we accept the difference or gap. Whatever we ‘see’ in our imagination has a different status.

The physics of light ensures that the perceived images are always less distinct than the objects which cast them, what one imagines is not always less clear than what one perceives nor is it always less true (Craig 1994, p. 278).

The influence of Plato’s allegory of the cave is not confined to the Greek Academy but remains in use to the present day as a figurative way of giving meaning. In the Christian world during the Middle Ages the allegory was used to describe conflict and immortality of the soul. The cave philosophy was again revived during the Renaissance by the Medici family in Florence whilst at Cambridge University in the mid 1600’s an important group became known as the Cambridge Platonists sought to harmonise Religion with Politics.

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During the 1400’s the Medici family famous patrons of the arts, established a Platonic Academy in Florence as a centre for the study of the Philosophy of Plato. (Sol, Vol. 15. World Book Encyclopedia. 1977, p. 50.)
In the twentieth century the allegory of the cave has been invoked to explain war and its first casualty: truth.

**The Allegory of the Cave for the twenty-first century.**

Plato uses the allegory as a special type of comparison between the complexity of seeing what is already known and the different kind of seeing necessary for the “disclosure of hitherto unknown realms”. The Cave was his device to demonstrate the unfamiliar philosophy of seeing but not-being-able-to-see. Although the image of a cave with shackled prisoners, puppeteers and firelight may seem dated and unfamiliar in the twenty-first century, interesting parallels can be drawn when the image of the Linear Accelerator is substituted for the cave, warriors with prisoners, radiant light instead of firelight and radiation therapists instead of puppeteers.

**The contemporary image for Plato’s Cave**

While for Craig the darkened cave suggests the *temple body* of being, that enclosure for the light of the spirit, (Craig 1935) Heidegger refers to the ancient Greek aspect of enclosure as being in the *temple mountain*. An interpretation of Heidegger’s association of enclosure with *temple mountain* could be in its relation to the alchemy of the hollow mountain, the hollow being a cavern known as the “philosophers’ oven”. However, a similar contemporary analogy to Plato’s allegory of the cave could be the space where the Linear Accelerator creates radiant light. The connection to Plato’s cave is in the warriors’ sense of entrapment or enclosure associated with the walls of concrete and doors of lead that enclose the Linear Accelerator to prevent radiation from escaping. In this space of containment the warrior, defined and regulated, moves from time to timelessness and from space to spacelessness.
Because radiant light is incompatible with natural sunlight the warrior must also endure the privation of light itself. Over time, the sense of enclosure and deprivation of natural light in everyday life evokes a primordial sense of loss, a world of overwhelming gloom.

In this way the image of Plato’s shackled prisoners facing the wall is comparable to warriors being treated with radiant light from the Linear Accelerator. The prisoner is in chains whilst the chains that bind the warriors are of a different kind. There is the reality of avoiding sunlight and facing death but a greater reality is dealing with the imprisonment of the perfect body myth, created and manipulated by contemporary society. Similar to the prisoners, the warrior is positioned prostrate on the Linear Accelerator with no movement possible, side and ceiling lasers binding at the isocentre. Similarly, Plato’s prisoner’s gaze is straight at the reflected shadows on the cave wall, whilst the warrior’s gaze is directly above the reflection of radiant light off the collimators. Neither the prisoner nor the warrior can see the direct light source but they can see the light in their mind’s eye.

Plato’s “puppeteers” behind the stone bridge can be contrasted with today’s radiation therapists shielded behind a thick wall from the penetrating light of radiation. Both Plato’s prisoners and the warrior are captive in time. Neither the prisoners can see the controlling puppeteers nor the warrior the radiation therapists, however both puppeteers and radiation therapists can observe their captives and control their light. Just as the puppeteers control images for the prisoners, the radiation therapists are controlling the computer image of radiant light that penetrates the temple body of the warrior. Whilst the prisoner sees the shadows as reality, the warrior sees the reality of radiant
light as colours reflected off the walls of collimators of the Linear Accelerator. My imagination transports these colours into canvasses by Vermeer, Turner, Monet, Bonnard and Rothko. These images alluded to, have the appearance of being ‘real’ because of the heightened awareness created by not-being-able-to see, the deprivation ritual of captivity.

Plato’s image of firelight can also be seen as analogous to the radiant light of the Linear Accelerator. The reality of firelight whilst invisible to the ‘prisoner’ facing the wall, is visible in a reflective controlled form. This projected light is controlled by the puppeteers as reflected light forming images on the wall of the cave. For the prisoner, there is no need for proof that a more powerful light exists. Similarly, the warrior is captive in the concrete and lead lined room and cannot see the invisible radiant light. However the reality is in the traces of the light’s invisible presence known to the warrior in three ways. The radiation therapists leave the room sealing the entrance, then a red light glows on the concrete wall indicating the presence of radiant light. Eventually, the warrior sees the invisible light reflected on the collimators of the Linear Accelerator positioned above the body, indicating the presence of radiation. Thirdly, this everyday ritual surrounding the presence of radiant light unconceals a clearing, a space within the warrior for ursprung, that primordial spring of existenz. At the spring of existenz the warrior knows releasement.

Just as the prisoners are freed from their chains, there comes a time when the warrior too is freed to discover the real world of sunlight; but it is never the same as it was. At first stability is shaken, everything in the light of the sun is blinding because they have become used to thinking of light as radiant
reflection perceived by all the senses. Now, if the warrior told anyone about what they had seen it would be dismissed as just an illusion. But the warrior has been cut loose from a familiar world with its familiar way of seeing. They no longer think about the early morning light as it shines through the window as just time for the day to begin, and then not give the light another thought. As if a veil has been forever lifted, warriors see light *knowing* the overwhelming power of its completeness within the vastness of their being: the poetry of the sublime

However temporary this way of thinking, it is real and it is liberating. Craig’s notion of the Cave perhaps more profound, is of a temple body, “from which the divine part of the soul—that which is pure soul—longs to escape. For it is the Cave of the body that is shackled and hence shackles us” (Craig 1994, p. 282). Craig explains that whilst we cannot trust implicitly in all perceptions, we do rely on them while maintaining trust in our ability to recognize the ‘gap’ Heidegger refers to this gap as the ‘rift’ or *riss* whilst in visual language Michelangelo portrays the ‘gap’ of critical importance as *existenz* between the finger of God and the finger of Adam in the fresco on the Sistine Chapel. Similarly, Turner represents the ‘gap’ as the space between the untied cord and the figure of Moses in *Light and Colour (Goethe’s Theory)* - *the Morning after the Deluge* - *Moses Writing the Book of Geneses* 1843 (see Section 3, p. 68).

To experience this way of thinking, this sublime abstract so similar to the state of Plato’s prisoner, where stability is shaken in the direct, glaring light of the sun, is to take the concepts of light and truth to quite a different level. This is a level where the deep sense of wonder, the personal truth of existence makes everything previously known and perceived in everyday life a mere
shadow of illumination. In this way, truth will always exist in the extraordinary human spirit.

**No one truth to provide ‘stability’**.

In spite of the disintegrating effects of untruth, truth exists. In our contemporary society, a paradigm of knowledge and reason based on the unshakeable certainties of a unified truth to provide the stability craved for in relation to the great mysteries of human existence, does not exist. The reasoning for this destruction traces the theory of the Sublime from a period in history known as the Age of Enlightenment, approximately the beginning of the Industrial Revolution (Hamilton 2001).

The Guillotine at the time was seen as an important advance. It was a scientifically designed, precision instrument. It was noble or sublime because of that precision, which ensured equality even in death and guaranteed speedy painless dispatch (Hamilton, cited in Hubl 2001, p. 276).

The Sublime was subverted by totalitarian regimes in the form of Marxism, Nazism and Stalinism imposing their version of truth which gave rise to some of the most hated tyranny of reason in modern history. When the truth of these totalitarian regimes became clear, people became disillusioned with the manipulation of truth and the full horror of its view of the world. It was argued that to tell the truth was to claim authority over people, to create divisions where those with truth were superior and disbelievers were inferior. Conforming to one truth or one way of viewing the world leads to dissenters and often the ruthless consequences of imprisonment or death. The World Wars of the 20th century meant that the human desire for the stability of a set of knowledge and reason based on certainties could be manipulated so
that truth could be a dangerous illusion (McGrath 2002).

In the contemporary *welt* those questing after the truth in art to which Durer refers must be prepared to be confronted. Contemporary thought discourages anything that leads one group of people who see themselves as superior with the stability of one truth, in order to prevent the pitfalls of political totalitarianism. Some would argue that the people of the 21st century are free to choose whatever truth they like yet all viewpoints of the world in the 21st century are not equally valid. Post modern and contemporary society is characterized by technological ability to control the world of nature and create a world of illusion. This new found power of contemporary society creates an emerging world of globalization, a culture where images, stories and rhetoric are used to manipulate people into buying shadowy products, contriving political leaders or creating a culture of fear. Carelessness with the truth has opened the door to an insensitivity in humanity where truth, while being there, is extremely difficult to recognize. Even the truth in physics lessons that the speed of light, supposed to be the most constant quantity in the universe, has now been disproved as was seen in Professor Lene Hau’s success in stopping light (see Section 2, p. 92).

Does this mean contemporary art is no longer in truth? Heidegger highlights the logical and the sensory that intervenes between ourselves and reality in the form of unconcealedness of being that he calls that lighted realm. The great task in contemporary art is not so much to casually dismiss Plato’s notion of truth to which Durer alludes but to look for truth in the personal ‘lighted realm’ of *Dasein* and enclosing *welt*. With the ability to control the *welt* of nature with technology, comes the need to look at
Craigs's notion of “the cave as body”. Then, a contemporary example of Plato's allegory of the cave becomes clear. The warrior in the waiting room does not seek truth in the outside world but an abstract personal truth wholly within themselves. It follows that with the addition of the word personal to Durer's quote concerning art, truth remains relevant to contemporary art. For in personal truth, art lies hidden within nature. Whoever can wrest it from her has it.

Heidegger's prefers the term holy heilig to the synonym ‘sublime’ because the word sublime translated into German is das Erhabene (noun) which means noble pertaining to the nobility or noble as in behaviour. By using the term heilig, Heidegger interpretation of the sublime becomes poetically personal thus distancing himself from a word associated with fear smeared with the blood of the French Revolution.

The unfathomable depth and mystery of Dasein when expressed creatively becomes the key to what Heidegger describes as transporting of a people into its endowment. It is this mystery that makes the artwork sublime heilig. Dasein in the past and Dasein today provide the invisible connection making possible the qualities of 'great artworks”, to transcend time. In eighteenth and nineteenth-century philosophy the heart of the sublime is the idea of magnitude so vast as to baffle conceptual comprehension (Young 2001, p. 43).9

For Heidegger the continuity from Greek past to the present is not a progression of events but continuity viewed through the unconcealedness in the being of the artist. ‘Setting up a world and setting forth the earth, .... the

9 See Section 1 for the Mathematical Sublime and the Dynamic Sublime.
fighting of the battle in which unconcealedness of beings as a whole or truth is won’ (Heidegger 1971).

The measure for ‘great artwork’

This section analyses Heidegger’s choice of the Temple of Hera 1 at Paestum as an example of great artwork representative of twenty-first century. In his writing about he Temple of Hera 1 Heidegger points out the utilitarian, symbolic and reflective aspects that made the ancient Greek artwork great, aspects that become an extension and fulfilment of what was transparent in the lives of the community. Heidegger’s quote contends that the artwork, in this case the temple, sets forth the erde as a sheltering place, providing stability for religion, concepts and values of the people. The erde on which the artwork stands becomes the symbolic mountain for the spirit erde of the people that receive it, a symbol to reach for that not only opens up their welt with clarity and illumination but keeps their welt open. Alone these aspects are nothing, but when the artwork encapsulates the welt and erde of the community it becomes something more: temple mountain, temple body and temple earth.

Standing there, the building rests on rocky ground. This resting of the work draws up out of the rock the mystery of that rock’s clumsy yet spontaneous support. Standing there the building holds its ground against the storm raging above it and so makes the storm itself manifest in its violence. The lustre and gleam of the stone, though itself apparently glowing only by the grace of the sun, yet first brings to light the light of day, the breadth of the sky, the darkness of the night. The temple’s firm towering makes visible the invisible space of air. The steadfastness of the work contrasts with the surge of the sea. Tree and grass, eagle and bull, snake and cricket first enter into their distinctive shapes and thus come to appear as what they are. The Greeks early called this emerging and rising in itself and in all things phusis. It clears and illuminates, also that on which and in which man bases his dwelling. We call this ground the earth (Heidegger 1971, p. 44).
Parallels can be drawn between the utilitarian, symbolic and reflective aspects of creating a great artwork that represented the Greek community and a contemporary artwork that is representative of people today in a national gallery. The parallels of struggle and challenge becomes clear when two words are substituted in Heidegger's description of the *Temple of Hera 1*: the words *Temple of Hera 1* for “contemporary artworks” and the word ‘storm’ for “controversy”

**Contemporary art in a rearrangement of Heidegger’s text.**

Standing there, contemporary artwork rests on rocky ground......Standing there the contemporary artwork holds its ground against the storm of controversy raging above it and so makes the controversy itself manifest in its violence. The lustre and gleam of the contemporary artwork, though itself apparently glowing only by the grace of the sun, first brings to light the light of the day, the breadth of contemporary artwork and the darkness of the subject. The contemporary artwork makes visible the invisible space of air while its steadfastness often contrasts with the surge of controversy that rages in the community. The contemporary artwork’s own repose contrasts with the surge of the community rage and during that controversy the subject of the contemporary artwork enters into its distinctive shape and thus come to appear as it is. The Greeks called this ‘emerging and rising in itself’ and in all things *phusis*. It clears and illuminates the contemporary art as well as where humans base their dwelling. We call this ground the *erde*... which is that whence the arising brings back and shelters everything that arises without violation. In the things that arise *erde* is present regardless of time as the sheltering agent that can be seen in contemporary artworks. Contemporary artwork opens up a *welt* and at the same time sets this *welt* back again on *erde*
which itself only thus emerges as native ground. Contemporary artwork in its standing there, first gives to things their look and to men their outlook on themselves. This view remains as long as the work is a work, as long as the god has not fled from it’ (End of my contemporary rearrangement).

_Temple of Hera 1 as contemporary ‘sign’, Zeichen._

21. Corner of the Temple of Hera 1, Paestum. c. 550 B.C.
In acknowledging that the Temple of Hera 1 is a great artwork, the problem will be to confront what is that something that makes it great and where can that same something be revealed in contemporary artwork?

Out of a familiar, reliable, ordinary community at Paestum in Southern Italy something extra-ordinary, something uncanny was conceived. For both architect and community, the nature of truth in unconcealment prevailed and a Temple rose in honour of Hera, wife of the god Zeus, goddess of fertility, a symbol who represented the concepts of life and death. It was this Greek expression of these concepts that gave to the modern world the best preserved sixth Century Doric temple, known as the Basilica, at Paestum. “From the lifeless ground, birth is given to a bud” (Crane, Gregory R. (ed.) 1997).

In the modern world we know that the clear sign Zeichen that represents these concepts of life and death is connected to the sacred light of the Olympic Flame. From the light of the sun in the Temple of Hera in Olympia, the flame is lit symbolizing the rebirth of dead heroes and this light burns endlessly during the events held. The famous Greek poet Costis Palamas, wrote the Olympic Hymn to celebrate “the beginning of the clearing, the light” to be sung from within the temple.
Olympic Hymn

Immortal spirit of antiquity
Father of the true, beautiful and good
Descend, appear, shed over us thy light
Upon this ground and under this sky
Which has first witnessed thy unperishable flame
Give life and animation to those noble games!
Throw wreaths of fade less flowers to the victors
   In the the race and in the strife!
Create in our breasts, hearts of steel!
Shine in a roseate hue and form a vast temple
   Oh, immortal spirit of antiquity.

(Translation: Katerina Sarri 2002).
This celebration of life and truth is still the official Olympic Hymn today and speaks to us as poetry and artwork we cannot imagine our world being without. What was it in the architecture of the Temple of Hera 1 that inspired the poet Palamas to the composition of such a lasting powerful hymn?

Heidegger states, ‘a building, a Greek temple portrays nothing. It simply stands there in the centre of a rock cleft valley’. But it was here in this earth that the architect chose the site for the Temple of Hera 1, goddess of fertility. In all probability it was here for the architect in the centre of this valley that the bud of an idea emerged: the poetic sublime.

The word ‘temple’ derives from the root tem-’ to divide’. The intersection of two straight lines, the division of space at a point above the head, according to the Etruscans, was symbolic for a division of the heavens and the point of intersection a projection of the notion of the Centre (Cirlot 1992, p.332). It is this notion of space, the mystic Centre, this paradisaic state that endures and is of great significance in Heidegger’s choice of the Temple of Hera 1 at Paestum as a great artwork. Cirlot explains that the focal point of this intersection of the two worlds of heaven and earth, is created by the temple columns and entablature. Reached by a flight of steps at this point is the altar, identified as the temple mountain top. Once reached the traveller breaks free and transcends to the transparent level of purest light and truth. Aristotle, (384 - 322 B.C.) Greek philosopher and pupil of Plato, stipulated that ‘the site for a temple should be a spot seen far and wide which gives due elevation to virtue and towers over the neighbourhood’ (Plato, cited in Croix & Tansey 1986, p. 139).
The task of implementing an idea to create something that elicits Aristotle’s “due elevation of virtue” is appreciated by Plato. “Gods and Temples are not easily instituted, and to establish them rightly is the work of a mighty intellect” (Plato, cited in Croix & Tansey 1986, p. 139).

Aristotle’s criteria for the site of the temple and Plato’s appreciation for the architectural work, supports Heidegger's argument that the high quality of what is created and an absolute need for the artwork in the community is what makes an artwork great. Croix & Tansey (1986) explain that the Greeks created temples which began as a need for the protection of the sculpture of their gods. In time, Greeks seemed to have considered this protection not as a building but rather a monumental piece of sculpture for their god until the belief arose that the qualities of the god were embodied in the buildings themselves and capable of evoking human response. This explains Heidegger's reasoning that ‘by means of the temple the god is present in the temple’.

For the Greeks, this absolute need for art was not just an appendix but as natural as breathing, as natural as language, the substratum of their everyday way of life (Croix & Tansey 1975). It is this notion of the Greeks experiencing their art as natural that Heidegger is alluding to when he so memorably describes the Temple of Hera 1 as the measure of a great artwork.

...it is the temple work that fits together and at the same time gathers around itself the unity of those paths and relations in which birth, death, disaster and blessing, victory and disgrace, endurance and decline acquire the shape of destiny for human being (Heidegger 1971, p. 44).
Art - enduring the hint of ‘truth’.

What is that elusive hint that makes the Greek Temple of Hera great? A poet receives hints and passes them on to the people. Plato declared that if a temple were to be judged it must be by the ‘standard of truth, and by no other whatever’ (Croix & Tansey 1986, p. 142). Plato was referring to the Greek insistence on the pure order of Geometry which means measure of the earth. Geometry is the study of spatial order and orientation through measure and relationships of forms. Geometry, mathematics and astronomy were considered “the science of temporal order through the observation of cyclic movement became the basis for the science of natural law as it is embodied in the archetypal forms of the circle, square and triangle” (Lawler 1995, p. 6).

Geometry, mathematics, astronomy, and music were the Quadrivium that “constituted the major intellectual disciplines of classical education” (Lawler 1995, p. 6). The aim of this education was for the mind to become a channel through which earth could receive the abstract, cosmic life of the heavens.

So it follows that for the Greeks to measure the earth by laying out rectangles upon the earth was a metaphysical as well as a physical and social dimension. Lawler argues that these universals were embodied in the Greek temples to specify the association between events of the heavens and the spatial relationships of order on earth. Geometric diagrams can be contemplated as still moments revealing a continuous, timeless, universal action generally hidden from our sensory perception. This seemingly common mathematical activity can become a discipline for intellectual and spiritual insight (Lawler 1995, p. 6).
Clearly, this contemplative, intuitive, exact activity of geometry was applied to the design of the Temple of Hera 1 in the decision for the entrance to face east. In this way the cult statue was illuminated by light from the rising sun and easily seen from the outside. Janson (2001) argues in History of Art that the Greeks were allowed to see the cult statue in the dimly lit cella but most religious rites took place at altars set up outdoors with the temple facade as a backdrop. For the cult statue to be seen, implies that the religious ceremonies would have been in the morning with the people’s back to the sunrise. While they were gathered in front of the altar with the temple as backdrop, the first rays of light would illuminate one step, another step, a third then the stylobate of the temple with the light gradually rising and reflecting off the fluting of the front six Doric columns of limestone. Croix and Tansey explain, “when the sunlight strikes sharply on the shaft the fluting throws numerous shadows of graduated width and darkness that leads the eye around the shafts in a series of graded steps” (1986, p.144).

The Doric order is massive in appearance with twenty flutings meeting in sharp ridges emphasizing their roundness and verticality. “The fluting of the columns implies, explains and emphasizes the form and function of the column stressing the verticality” (Croix & Tansey 1986, p. 144). With the proportion of fluting on the columns stressing verticality it follows that the gaze of the community gathered before the altar would be dazzled by reflecting light creating a measure of unity between earth and sky. Their glance would pass upwards to the sky while they themselves stood on the earth. Between earth and sky is what Heidegger calls a ‘dimension’ that is lightened and so can be spanned, a dimension up to the sky and down to the
earth. “Man spans the ‘dimension’ by measuring himself against the heavenly” (Holderlin, cited in Heidegger 1971, p. 220). One could speculate that as the sun rose higher beaming into the cella of the temple onto the cult statue of Hera an optical illusion could occur as the eyes of the community adjusted to the reflected light. Perhaps this is what Heidegger meant by *phusis*, an emerging of the cult figure of the goddess of Hera from the lit centre as an expressive after image.

The lustre and gleam of the stone, though itself apparently glowing only by the grace of the sun, yet first brings to light the light of day the breadth of the sky, the darkness of the night. The temple's firm towering makes visible the invisible space of air (Heidegger 1971, p.44).

In this way the experience of the great art of the temple mountain became a gauge of the ‘measure against which man measures himself’.

What is the measure for humans measuring? God? No. The Sky? No. The manifestness of the sky? No. The measure consists in the way in which the god who remains unknown, is revealed as such by the sky. God’s appearance through the sky consists in a disclosing that lets us see what conceals itself, but lets us see it not by seeking to wrest what is concealed out of its concealment but only by guarding the concealed in its self concealment. Thus the unknown god appears as the unknown by way of the sky’s manifestness. This measure is the measure against which man measures himself (Heidegger 1971, p. 223).

Heidegger explains that to take measure in this dimension is to discover an element that provides the cultural stability for humans dwelling in a community (Heidegger 1971, p.44).

Jay, in the chapter aptly titled, *The Noblest of the Senses*, states that although there have been dissenting voices, it is generally agreed that classical Greece privileged sight over the other senses.
Even linguistic evidence has been abducted to show scattered verbs employed during the Homeric period to designate aspects of visual practice coalesced into only a few during the classical era, suggesting an essentializing of vision itself (Snell, cited in Jay 1993, p. 23).

Jay further explains that the visual seemed so dominant in Greek philosophy that contemplation of the visible heavens, praised by Anaxagoras as the means of fulfillment, was extended to become the philosophical wonder of all that was on view. Truth, it was assumed, could be as naked as the undraped body. “Knowledge (eidenai) is the state of having seen” (Snell, cited in Jay 1993, p. 24).

**Stability, as foundation for great contemporary ‘artwork’**.

Jay cites Hans Jonas in his essay *The Nobility of Sight* to outline the implications of this visual bias both for Greek thought and for the history of western philosophy and art. “The very contrast between eternity and temporality rests upon an idealization of ‘present’ experienced visually as the holder of stable contents as against the fleeting succession of non visual sensation” (Jonas, cited in Jay 1993, p. 24).

Heidegger explains that philosophy from the time of Plato has always been oriented primarily by seeing as a mode of access to beings and to being. He has applied this same early Greek meaning of sight including insight, that catalogue of images in the mind, to his interpretation of the *Temple of Hera* as a great artwork. ‘The lustre and gleam of the stone though itself apparently glowing only by the grace of the sun yet first brings to light the light of the day’ (Heidegger 1971, p. 44).
The natural design of human eyes is to look rather than see because of their frontal position, focus and parallel divergence. On the other hand, the Greek way of seeing is the fusion of sight and insight, described by Heidegger as a ‘circumspect’ way of seeing and more profound. ‘Circumspect’ in that the combination of sight and insight creates an unconcealed space between physical sight and insight’s catalogue of images. In this way the physical eyes become a system for gathering information necessary because humans cannot perceive panoramic views. When this circumspect way of seeing is applied to standing in the presence of the Temple of Hera 1, a transparent space is unconcealed not only allowing for the temple to show itself, but layering its meaning and its ground. This ground is its stability and it is this stability Heidegger means when he states welt and erde meet each other. In applying the Greek dual mode of seeing as access to the sight of the Temple of Hera 1, Heidegger suggests to us that we see artwork of our welt in a similar unrestricted circumspect way. ‘A temple reveals the rock on which it rests, the storm that buffets it, and the stone of which it is made’ (Heidegger 1971, p.20).

It is this notion of the stability of light where welt and erde meet in an artwork that is epitomized in the Temple of Hera 1. The stability of light was achieved not only through the assembled tapering columns but also in the way the Greeks enhanced the columns expressive character by fluting the shafts and then capping them with large flaring capitals to catch the light.

The temple work standing there, opens up a world and at the same time sets this world back again on earth, which itself only thus emerges as native ground. The temple in its standing there, first gives to things their look and to men their outlook on themselves (Heidegger 1971, p.20).
There remains Heidegger’s last concept in his description of the *Temple of Hera* 1 as measure for ‘great artwork’.

‘This view remains as long as the god has not fled from it’.

![Image of the Temple of Hera and the Temple of Poseidon in Paestum, Italy.](image)


**but... the god has fled from the Temple of Hera 1.**

For each generation in *welt* there is a renewed need for a measure, a striving to express personal truth in form. This need for renewed measure becomes clear when we look at the site of the *Temple of Hera* 1. Nearby is a second temple, the *Temple of Hera* 11 created eighty to ninety years later by the Romans later about 460 BC. The Romans too had a need to express their essential differences, their own temple mountain distancing themselves
from the spirit of Greek architecture. The Roman architecture of the *Temple of Hera* 11, became the symbol of their community measure, borrowed from the Greek style but with architecture more tapered and refined, with Doric columns quite different to the original Greek columns. Roman architecture was illusionistic in its use of white stucco, smoothing over imperfections in the exposed stone so lending the appearance of marble. For this second Roman *Temple to Hera* 11 to be created at all, confirms Heidegger’s view that great artwork regardless of time, provides that stability so necessary for a community to express their welt and take measure of the erde.

‘From the lifeless ground, life is given to a new bud’.

The light in which the landscape and things that surrounded the life of the Greeks stood, gave to everything a clarity and unquestionable presence that left room for doubt regarding the accessibility of nature to man, only late and only as a result of thought’s experience with itself (Blumenberg, cited in Jay 1993, p. 22).

The ‘unquestionable presence that left room for doubt’ is the mystery, the silent communal stability of light at the centre of the great artwork of the *Temple of Hera* 11. This same unquestionable presence that left room for doubt can be seen in the temple body of those warriors waiting for the light of the Linear Accelerator. The warrior of the waiting room does not seek truth in the outside world but rather discovers a personal truth within their temple body, in a discontinuous, spiritual evolution. The warrior moves from this flawed exterior to the interior, from space to spacelessness from time to timelessness from the visible to the invisible into the unfathomable depth and mystery of their being. This seeking of personal truth within the temple body also creates a process of stability through which both the material and spiritual sense travel. In contemporary society it is the body form that is worshiped to
becomes a kind of shrine whereas the warrior has climbed that temple mountain to find within the body a temple far greater. Rainer Maria Rilke in an excerpt of the Seventh Elegy explains,

Temple are no longer known. It is we who secretly save up these extravagances of the heart. Where one of them still survives a Thing that was formerly prayed to worshipped, knelt before—just as it is, it passes into the invisible world. Many no longer receive it, yet miss the chance to build it inside themselves now with pillars and statues: greater (Rilke, The Seventh Elegy).
Chapter Three

Light from Temple Earth
James Turrell and the Philosophy of Heidegger


The great artwork... is something which, first brings ‘world’ out of the background inconspicuousness and into the clarity of foreground salience, second allows it to be transparent to earth so as to appear as ‘holy’ (and hence commanding) and third gathers together an entire culture to bear witness to the numinous salience of world which happens in the work (Heidegger cited in Young 2001, p. 52).

Although it is unlikely there could ever be a contemporary artwork in the Western world with the same access to beings and to being as the Temple of Hera 1, nevertheless, every culture creates their measure. Just as in the past, there have been exceptional artworks of significance with light as the fulcrum, it follows that there could be a similar contemporary light artwork beyond aesthetics in the twenty-first century. In Origin of the Work of Art Heidegger’s key concept is that great artwork is the happening of ‘truth’ Wahrheit. Its greatness is established from being accepted by a culture as was the Temple of Hera 1 by the Greek people. The replacement of the older ethical conception of art as truth was a gradual overtaking from Platonic theory
whereas the practice was replaced by science in modernity. Heidegger argues in *Origin of the Work of Art* that knowledge of truth about the welt is not the sole province of reason in science, indeed for science to assume the historical role from art distinguished as great relegates great artwork to aesthetics taking no account for the ‘work-being’ of the artist contained within the artwork. Aesthetics neither allows for ‘truth setting itself to work’ nor allows for art answering an ‘absolute need’ in the community (Heidegger 1971).

In this section, I explore light in a contemporary artwork beyond the boundary of aesthetics, expressive of both the temple erde nature beneath our feet and the temple erde that is within the body itself: the erde quality known to warriors who experience radiant light. Heidegger eloquently describes the erde on which the *Temple of Hera* rests but only vaguely alludes to the temple erde within the body. He leaves the poetry of temple erde to Rilke who describes this inner space as a ‘depth dimension’.

**The sphere of temple ‘earth’**.

However vast the “outer space” may be yet with all its sidereal distances it hardly bears comparison with the dimensions, with the depth dimensions of our inner being, which does not even need the spaciousness of the universe to be within itself unfathomable. Thus, if the dead, if those who are to come, need an abode, what refuge could be more agreeable and appointed for them than this imaginary space? To me it seems more and more as though our customary consciousness lives on the tip of a pyramid whose base within (and in a certain way beneath us) widens out so fully that the farther we find ourselves able to descend into it, the more generally we appear to be merged into those things that, independent of time and space, are given in our earthly, in the widest sense worldly existence (Rilke, cited in Heidegger 1971, p. 130).

This is the erde where creativity take place, a space so vast that even the distance and time pertaining to the stars does not compare with Rilke’s “depth dimension of our inner being”. It is from the base of this depth dimension
within the artist that truth, the opening of being, is brought forth in their practice. Similarly, it is from this base within that the viewer discovers and experiences this truth from great artwork. Plotinus, referred to this inner space as a space “we all have but few use” which indicates the impulse for artists throughout time to provide great artworks to fill this absolute need in the community. Great artwork of the past not only communicates the extraordinary, but has preserved within the artwork a layer of familiar background, of the welt when the artwork was created. When that artwork of the past is viewed by people today, the layer of background familiarity is not easily recognised because it has become historical. Therefore, it remains for each successive generation to create their own great artwork for their time, reflective of the extraordinary, for those seeking a consciousness of erde beyond Rilke’s “tip of the pyramid” (Heidegger 1971).

**Seeking the reflective, symbolic and utilitarian in Contemporary Art.**

The temple for the Greeks was both an objective and subjective space, the “tip of the pyramid” whose “base was both within and beneath” (Rilke 1971). To the Greeks, the temple was utilitarian, but also a place for reflection and symbolic of the sublime in their time and place in history. Although a technological transformation of the world by science separates the artists of ancient Greece from the contemporary artist, their vision and power to create still stems from the same source in the artist regardless of time. In seeking a contemporary great artwork that allows reflection in a similar way to the great artwork of ancient Greece, the contemporary artwork will need to be a space for ordering the light of the heavens. With the ordering of light, as in the Temple of Hera 1, it follows that the mystery of light can be channeled...
to the community, to erde, in the “deep dimension of their inner being” (Rilke1971).

To become a contemporary great artwork that is symbolic of the twenty-first century just as the temple was symbolic of ancient Greece, the contemporary great artwork will need to be in a place where the artist and the community set up a welt and set forth the erde, incorporating its cosmic life into the artwork in such a way that it shapes and becomes the culture of the viewers. In this way the symbolic in an artwork looks both to the past and the future thus evoking a silent space between reality and imagination. The symbolic in art, when linked to the sublime, makes its presence felt in the mystery of the invisible and the relationship between the inner and outer erde; transcendere. The powerful aspect of the symbol comes forth when Hegel connects the symbolic to the sublime.

It is here that symbolic art reaches its apogee. When meaning predominates an empirical externality is put aside, we witness an elevation of the inner life of the spirit, an overcoming of the finite. This is what the sublime is (Hegel, cited in Goldsmith 1999, p. 61).

The sublime in an artwork is beyond the aesthetic of the object in its encounter with the unknown which emerges from within the creation of the artwork in what Heidegger calls a ‘happening of truth’.

In seeking a contemporary great artwork that is utilitarian, the project will need to stabilise the community by providing a space for the ‘festival’, a space for the bereaved and be a source of timeless wonder. Heidegger in his description of the Temple of Hera refers to the utilitarian as welt that ‘shapes the destiny for human beings’.
It is the temple work that first fits together and at the same time gathers around itself the unity of those paths that first fits together and at the same time gathers around itself the unity of these paths and relations in which birth and death, disaster and blessing, victory and disgrace, endurance and decline acquire the shape of destiny for human beings (Heidegger 1971, p. 45).

For the contemporary artwork to be a great artwork, comparable to the Temple of Hera 1, it will need to be not only utilitarian, symbolic and reflective but a site deep in time that can resist the materialistic culture associated with the modern world. In Origin of the Work of Art 1971, Heidegger points to the utilitarian in contemporary art when he argues that the artwork should not belong in a museum as an ‘object’ but rather to an historical community as a public manifestation of personal truth in wert. In choosing the Temple of Hera 1 as an example of great artwork from a modern point in time, Heidegger adds life and conceptual values to the temple. In this way the temple is no longer isolated in its own existence but is symbolically significant for contemporary art, adding value without losing historical validity. “In the symbol, the particular represents the general, not as a dream, not as a shadow, but as a living momentary revelation of the inscrutable” (Goethe, cited in Cirlot 1993). As symbol, the notion of temple transcends history to become universal, interrelated with contemporary art and a pointer to the unknown within us all.

Seeking the contemporary ‘great artwork’.

To find a contemporary artwork reflective of the Temple of Hera 1, it is necessary to recall the architectural scale of the temple. Covering a site of 1225 square metres, the Temple of Hera 1 is 24 metres by 51 metres, a scale in contemporary art which immediately brings to mind the Californian Light and Space Movement of the late 1960’s and early 1970’s. For these modern
artists Robert Irwin, Michael Heizer and Robert Smithson abandoned the galleries and museums in the 1970’s to transcend history and become universal. This meant creating grandiose, conceptual earthworks utilising America’s vast expanse of open sky and the immensity of desert. Like a modern Stonehenge or an Egyptian Pyramid, these earthworks capture the imagination that inspires a community.


Heidegger points out that a great artwork depends on a community to ‘receive it’ and ultimately to ‘preserve it’. When Heidegger drew attention to the *Temple of Hera 1* as an example of a great artwork, he was suggesting the artwork becomes much more for the community. The temple was utilitarian, symbolic and reflective of the demands of Greek religion and a part of the subtleties of Greek everyday life. The community who participated in the
artwork perceived what was extraordinary in the work and then added their own subjective dimension. Upon this added dimension rested the cultural and historical stability of the community.

If Heidegger’s philosophy is applied to the work of artists from the Californian Light and Space Movement and Walter de Maria’s The Lightning Field, the artworks fulfill the scale aspect but fall short when compared with the utilitarian, symbolic and reflective aspects in the everyday background familiarity of the Greek community. However, in the generation of artists that created earthworks was another artist working with light, James Turrell. Although associated with these “earthworks” artists, Turrell’s use of light as the medium was not considered to be of the same significance. Nevertheless, his early work was to become the foundation for the creation of an artwork far greater than the artworks produced by the Earth and Space Movement.

To explore a connection between the personal truth of Turrell’s use of light in his artwork and the Greek notion of light, it will be necessary to recall the words of Plotinus (see Section 3. A Way of Seeing).

The eye is not wholly dependent upon an outside and alien light; there is an earlier light from within itself, a more brilliant light which sees something in a momentary flash. At night in the darkness a gleam leaps from within the eye; or again we make no effort to see anything; the eyelids close; yet a light flashes before us; or we rub the eye and it sees the light it contains. This is sight without the act but it is the truest seeing, for it sees light whereas its other objects were the lit not the light (Plotinus, cited in Gage 1994, p. 27).

Turrell points to the defining moment in his life, the moment of personal truth that influenced his career as an artist, sculptor and architect, to advice
from his Quaker grandmother in the Meeting House. “Look inward and greet the light”. The breadth of that statement reawakens the very foundations of our visual perceptions echoing the words of Plotinus, “This is sight without the act but it is the truest seeing for it sees light whereas its other objects were the lit not the light”. If we compare the concept of Plotinus with Turrell’s simplicity and directness when describing his artwork, the similarities are remarkable. Turrell writes “Behind the eye, seeing is what goes on once we close our eyes and allow our minds to see for us” (Turrell, cited in Rose 2001, p.181). He further states, “I have an interest in the invisible light, the light perceptible only in the mind... I want to address the light that we see in dreams” (cited in Brown 1998, p.13). In art and architecture light is used to illuminate other things but Turrell’s interest is in light itself being the thing. Adopting light as the raw material, just as other artists might use paint, Turrell is involved in receiving, capturing, subduing, and retaining light, that material of which space is made. “My art deals with life itself. It is not the bearer of the revelation, it is the revelation” (Turrell, cited in Adcock 1985, p. 127).

**Welt in Roden Crater.**

Heidegger suggests that in a great artwork, the artist brings *welt* from an unobtrusive background and projects it into prominence. This philosophy is informed by Aristotle’s vision that the site of a great artwork “should be a spot seen far and wide which gives due elevation to virtue and towers over the neighbourhood” (Aristotle, cited in Tansey 1975, p. 139). The artwork that James Turrell is bringing out of background inconspicuousness is *Roden Crater*. This 500,000 years old extinct volcano, one hundred and eighty metres high ‘towers’ over the plain of the Painted Desert in Arizona and is
seventy-two kilometers from the town of Flagstaff in a remote location not affected by artificial light. Turrell describes the site as “achingly beautiful” and the scale “slightly wider than the island of Manhattan and slightly taller than the Chrysler Building” (Failing 1984, p.73).

Heidegger thinks of the artwork as more like a project which sets up a welt in which choices can be made by those who view the work. In his description of how he found the site for his artwork, Turrell stresses the innate monumental site of Roden Crater over the surrounding environment. Turrell records that even at the initial stage of developing Roden Crater, the natural spatial order evoked an impact of contrasts in the viewer between the concept of infinity and temporality. For centuries, Roden Crater had already been fulfilling a timeless, absolute need in the stories of people, their civilisations and their fascination with heavenly phenomena. Over time, human beings have been driven by a desire to climb the slopes of Roden Crater evidenced in the seventy-six metre path which has been worn away from the plain to the summit. This step by step exhausting climb to the sky with its historical and cultural dimensions, becomes a spiritual journey of discovery and change. Viewing platforms at compass sites to the north, south, east and west have been etched over time into the ascent to the summit, marking either spaces of rest or notable spaces reflective of light over the Painted Desert. These worn viewing platforms are the traces of those pilgrims Rilke describes as spiritually bereft and in need of solace. “Thus, if the dead, if those who are to come, need an abode, what refuge could be more agreeable and appointed for them than this imaginary space?” (Rilke, cited in Heidegger 1971, p.130).

Turrell was asked in an interview for the Journal Aperture how he chose his
project Roden Crater and the answer, which follows, will be analysed within Heidegger’s philosophy of welt, erde, and Gelassenheit, Heidegger’s poetic extension of the Kantian Sublime. Turrell describes seeing Roden Crater for the first time and his need as an artist to be part of the invisible harmony that rules the universe.

I flew all the Western states looking for a site and found Roden Crater, a volcano on the edge of the Painted Desert. Rather than impose a plan upon the landscape, I decided to work in phase with the surroundings of the volcano. The site is approached from the west driving across the desert. The road makes a half circle on the north side of the crater and comes up a ravine on its northeast side. At the top of the ravine you reach a walkway that follows the circular malapai rim of the fumarole on the northeast side of the crater. The walkway is approximately 76.2 metres above the plain and gives the first expansion of space. From here, a trail proceeds up the side of the fumarole. At the top of the fumarole there will be several different spaces, which are themselves pieces which work with the space of the sky. Some of the events in spaces might occur daily, some semiannually, equidistant from the solstices and others will be infrequent. From these spaces on top of the fumarole, a tunnel extends 315.4 metres and is aligned to capture the southern most moon set. The tunnel is a semicircular arch 3.5 metres in diameter and 2.7 metres tall. It will allow full vision of the lunar disc when the alignment occurs. As you proceed up the tunnel you will be able to see the sky. The entrance from the tunnel into the crater is made through an intermediate space and as you emerge the sense of enclosure will recede as you enter the large spaces of the open sky (James Turrell, 1999, p.56).

When James Turrell crisscrossed the skies in an aircraft seeking a suitable site for his project, he described the eventual impact of sighting Roden Crater as a moment of time being suspended. Time suspended so that in “the depth dimension of his inner being” it was possible for him to ‘see’ in the mind’s eye the Roden Crater project complete. Turrell’s describes his breathtaking experience as a motivational force for him to create one of the biggest artworks in the world, taking over a quarter of a century to complete. “Life should not be measured by the the number of breaths you take but by those

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9 Fumarole: A hole in or near a volcano, from which vapour issues.
times which take your breath away” (Swinbourne 2003, p.1).

**Kant’s theory of the sublime related to Roden Crater**

The Painted Desert of Arizona, with its subtle earth tones that give the desert its name, provokes a “representation of limitlessness”, the Kantian theory of the mathematical sublime, where ‘infinity’ is experienced in the overwhelming sense of scale found in its vastness.

The beautiful in the nature of the form of the object consists of limitation whereas the sublime is to be found in an object even devoid of form, so far as it immediately involves, or else by its presence provokes a representation of limitlessness, yet with a super added thought of its totality (Kant cited in Meredith 1928, p. 279).

The plain of the Painted Desert, “even devoid of form” provokes a representation of limitlessness. However, it is when the limitlessness of this stillness is interrupted by the form of *Roden Crater* that its scale can be related to the *Temple of Hera* and the Greek art of ordering space in nature. Kant’s theory of the dynamic sublime when related to Turrell’s description of the aerial perspective as spectacle it suggests an experience occurs where in the flash of an instant the eye meets earth’s crater eye, an imaginary moment dynamically sublime, “nature as might”. The idea of seeing into “earth’s crater eye” awakens in the imagination “volcanoes in all their violence of destruction” (Kant, cited in Meredith 1928, p. 110). The terror of this state of imagined fear, the dynamic sublime, conjures up notions where all resistance to the might of an active volcano would be futile. For Turrell, the experience of the sublime could have come from the feeling of being safe in his aircraft, mixed with the heightened awareness of the awesome possibilities of a volcano’s “nature as might”. Such is the power of *Roden Crater*, that even knowing it has been extinct since the Pleistocene period,
would make no difference to the breathtaking perfection of the sight. The poet
Goethe describes the dynamic sublime as an experience where, “we desire to
surrender our whole being, that it may be filled with the perfect bliss of one

**Heidegger’s theory of Gelassenheit applied to Roden Crater**

Although the eighteenth century Romantic perception of the Kantian sublime
continues to inform artists in their expression of the ineffable, the concept of
Kant’s “nature as catalyst” is limiting. However, a further dimension for
artists of the twenty-first century lies in Heidegger’s philosophy of
*Gelassenheit*, letting something be seen as something. Whether it is the
experience of letting the radiant light from the Linear Accelerator be ‘seen’
as awesome technology or letting *Roden Crater* be seen as a volcano, the notion
of *Gelassenheit* becomes a sublime opening for the mysteriousness of light.
Seeking to ‘unconceal’ the mysterious is not a modern phenomenon, but since
time immemorial there has been an ‘absolute need’ for humankind
regardless of the era to create sites for celestial events. On the site of
Stonehenge in Southern England in 3000 B.C. an observatory was created
with megaliths to commemorate the summer solstice, the longest day of the
year and the beginning of the new year. Contemporary astronomers, such as
Gerald Hawkins and Fred Hoyle advance the hypothesis that Stonehenge
acted as a true computer, programmed to calculate lunar and solar eclipses.
Certainly, “all the alignments necessary to determine the eclipse cycle are
indicated by nineteen megaliths placed in a horseshoe arrangement”
(Brunier & Luminet 2000, p.35).
At Stonehenge, the stabilising position of the first rays of light at the summer solstice every year is marked by a megalithic alignment, which gives credence to the view that the site was designed as an astronomical observatory (Brunier & Luminet 2000, p.35). Stonehenge is an example of *Gelassenheit* where its technology could have become exclusive knowledge for the elite, alienating the community from their land. Instead Stonehenge became a space where celestial light events were allowed to ‘be’ shared without restriction with everyone in the community. Stonehenge, with its openness to mystery, became new *erde* given back to the people, a place where the community could distance themselves from worldly things.

Sensitive to the spirit of American Indian tribe of Kiva Hopi living in the surrounding Painted Desert, Turrell engaged in minimal engineering to reshape the exterior crater bowl of *Roden Crater*.\textsuperscript{10} This judgment can be considered as consistent with the ideals of *Gelassenheit* where the landform is allowed to be. Although the removal of 1,350,000 cubic yards of rock does not appear to be minimal, it represents only a fraction of the overall size of the crater. This minimal reshaping makes the bowl’s edge a consistent height to form a more regular ellipse. From an aerial perspective the regular ellipse

\textsuperscript{10}Reference: Dia art Foundation Video, Roden Crater screened on SBS 2002.
creates the illusion of “earth’s crater eye, reshaped into earth’s human eye to seek the light” (Fredericksen 2002, p.91).

The site remains a volcano whilst the interior is reshaped into a natural astronomical observatory acting like a telescope to view objects such as quasars and Seyfert galaxies that pass overhead (Brown 1985). This is where the philosophy of Gelassenheit continues to allow ‘something to be seen as something’ an ‘unconcealed space’ in the welt that through sheer human effort, becomes an open space rather than allowing it to remain concealed. The open ‘eye’, as seen from within the temple erde, is a contemporary secular version of an ancient temple observatory, dedicated to the light from the sun, the moon and stars in the heavens. Just as the Temple of Hera 1 and Stonehenge became places where people assembled at fixed times in order to celebrate and honour celestial events, so too in this age of technology Roden Crater fulfills the ‘need’ for a place with a unique kind of stillness that leaves the viewer with an understanding of how to live. Turrell explains that in
Roden Crater, the light in the “sky and the things that inhabit it are brought down to the space you are in” (Turrell, cited in Fredericksen 2002, p.92). Turrell’s Roden Crater, has seven major spaces: Lunar Space, first and second Fumarole Spaces, Upper Fumarole Space, the Tunnel and Upper Tunnel Spaces and the Crater Bowl (Brown 1985). These chambers and passages within the erde are a secular sanctuary, a modern version of the temples of the ancient world, ... dedicated to the heavens and their light” (Fredericksen 2002, p. 2). Turrell, describes “climbing up the circular malapai rim of the fumarole” and the peace one knows from the top “looking over the plain and the expansion of space are themselves pieces which work with the space of the sky”. It is an engagement with this space, where peace can be experienced, reflects the philosophy of Gelassenheit, described by mystics as the peace one finds by taking one’s distance from worldly things, to know calmness, detachment, and releasement (Heidegger, cited in Inwood 1999, p.117).

27. Left plate: View of Painted Desert from the rim of Roden Crater.


Roden Crater, when viewed in the framework of Heidegger’s philosophy of Gelassenheit, lets the artwork be seen as a place to take one’s distance from
worldly things. Such an artwork could become Heidegger’s ‘remedy for the alienation of a technological world’ that cannot let things be. Technology allows everything, even indigenous tribes and their ancient culture, to become nothing more than disposable objects. It is in this way that the nature of the indigenous welt becomes much smaller and in many cases is engulfed, a welt fast disappearing. Technology is often used to uproot people from their native habitat however Heidegger argues that space should be cultivated for ‘detachment’ whereby technology does not take over humankind. Turrell thus becomes both artist and ‘preserver’ making Roden Crater an artwork of temple earth a space of calmness, detachment and releasement whilst preserving what has already been left to us.

In keeping with the philosophy of Gelassenheit, Roden Crater is an attempt to keep open what is already open, allowing for what Heidegger describes as a welt to welt thus preserving that freedom of the everyday not to be found in a technological welt. The freedom of Gelassenheit is the light of the Painted Desert embodied in the deep time of the culture of the American Indian tribes. That freedom is on the threshold of existence, a fine borderline between being and not being. Encapsulated in the light artwork of Turrell’s Roden Crater is the opportunity to keep a world open for generations to come to see anew nature from within nature in the spirit that sees.
Gelassenheit, letting something be seen as something, applied to Turrell’s Roden Crater, reveals a close connection with both the Greek dual mode of seeing and Heidegger’s philosophy of circumspection.

All preparing, putting-to-rights, repairing, improving, rounding-out, are accomplished in the following way: we take apart in its ‘in-order-to’ that which is circumspectively ready-to-hand and we concern ourselves with it in accordance with what becomes visible through this process. That which has been circumspectively taken apart with regard to its ‘in-order-to’ and taken apart as such-that which is explicitly understood - has the structure of something as something (Heidegger cited in Mulhall 1996, p. 85).

Three fusions of layering, sight, insight and circumspection translate into the experience of the everyday, experience so familiar that it is woven into the core of Dasein. This is the transparency of circumspection, layered meanings
that Turrell has gained from living and working everyday in the shadow of Roden Crater for thirty years, ‘preparing, putting-to-rights, repairing, improving, rounding out’ Roden Crater to become an artwork. Speaking about how he perceives and receives visual information, Turrell explains the desire to recreate in his artwork the experience of detachment by “looking inward to greet the light”. Turrell’s words echo Heidegger’s notion of the clearing, the lighting of being, seins-Lichtung become embedded in the experience of his artwork; Roden Crater.

**Heidegger’s erde in contemporary artwork.**

I’m using this physical material we call light, which is literally a physical material. It behaves as if it were a wave phenomenon, but actually it’s physical, its a partial. I use this physical material, light, to affect the medium of perception (Turrell, cited in Gayford 2000, p.29).

Turrell’s choice of Roden Crater as the site for his light artwork makes visible the mysterious, ever changing, physical light that has become so much a part of the everyday that it is overshadowed by technology. Many call the period we live in the age of technology but humankind have always lived in some form of a technological age driven by a need to obtain knowledge for life’s necessities and many of its pleasures. However, contemporary technology that helped bring about a modern society with its efficient power driven machines, the growth of factories and mass production of goods, has removed society from the erde. This is the erde to which Heidegger refers in *Origin of the Work of Art* when he speaks of the temple erde as the mystery of what was already there, deep in time that permeates the artwork. ‘The temple reveals the rock on which it rests, the storm that buffets it and the stone of which it is made’ (Heidegger 1971). Although technology has helped humankind to gain control over nature and build a civilized way of life, it has created numerous
serious problems. These problems have arisen because technologies were put to use without considering the possible side effects to the erde. Environmental pollution and the depletion of our natural resources are perhaps the most harmful side effects of all, creating a communal universal need to conserve the erde in a similar way to the Greek community who preserved the erde in the stone of their temples.

Turrell explains, “Roden Crater was chosen because it met the requirements for the required artwork but also because a volcano is a powerful entity” (Turrell, cited in Adcock 1984, p.81). The Painted Desert setting reflects a layering of natural formations of the location with organic ruins, a sense of light, space and geological time created by over four hundred volcano peaks and hardened lava flows. These physical reminders of the cycles of nature’s geological turbulence have challenged Turrell to engage with these same great mysteries of erde and its patterns of natural ordering and the people who inhabited the erde. The light that took 100 years to reach the Temple of Hera 1 at Paestum is from that same light source, that same universe, those same constellations that deeply inspired the spirit of the American Indian Kiva-Hopi tribe living in the Painted Desert of Arizona. Light cleared the erde for the Indian Kiva-Hopi tribe enabling them to ‘see’ each aspect of the craters in the Painted Desert essential to the narrative of their everyday lives. Then, with the light of their language, the tribe clarified with a name from their language each crater, each star and each planet seen from the craters. From deep in time, light and language became embedded in their everyday, weaving the temple erde culture of the Kiva-Hopi tribe until it was an invisible part of them, fusing in such a way that the erde itself becomes heilig.
Whilst the temple erde of Roden Crater is historically heilig to the Kiva-Hopi tribe, the form of Roden Crater is a powerful entity to all humankind evocative of a dichotomy of images; the fertility of lava and barrenness of ash, creation and destruction of life, spiritual ascent and decent, tension and ease, stillness and sound. Ancient mythology links the long periods of stillness of the volcano’s power to the evil of shackled dragons in a cave before their fiery escape. This looming sense of threat from erde is primordial on both a universal and personal level, integral in the conflict of welt and erde that creates what Turrell describes in his first sighting of Roden Crater as a sense of “powerful entity”. It is this ‘Absolute’ metaphor of light that James Turrell enters when he engages in drawing the visual quality of the sky down into Roden Crater to reflect his personal truth of “going inside to greet the light”.

Footage in a documentary film taken in Arizona in 1995, shows James Turrell with Gene Sequakaptawa, chief of the Eagles tribe inside Roden Crater lying on the erde next to each other and “looking up at the sky using the crater’s orifice as a frame presenting a controlled view of the sky” (Busuttil 2000). This meeting of two men from two different cultures when viewing light from within Roden Crater became one in spirit, both utterly absorbed in the process of pneuma.

as a “humanisation of light” Light is brought still closer to the physical world when it is identified with the breath or pneuma, that luminous warmth that holds the body together. Perhaps it is this “humanisation of light that has the effect of ennobling the soul (Bohme 1993, p.17).

Perhaps history will record Roden Crater to be as iconic to the twenty-first century as the Temple of Hera 1 is of ancient Greece.
The Temple erde.

Heidegger quotes Rilke’s memorable letter about the temple erde within the body which defies comparison.

However vast the “outer space” may be with all its sidereal distances it hardly bears comparison with the dimensions, with the depth dimensions of our inner being which does not even need the spaciousness of the universe to be itself unfathomable (Rilke, cited in Heidegger 1971).

Our everyday consciousness of erde is but only the “tip of the pyramid whose base is deep within the body and widens out beneath us” (Rilke, cited in Heidegger 1971). Rilke contends that the deeper we “descend into it” the greater the merger with the things that are given to us in our earthly and worldly existence. Writing in his introduction to Turrell’s Roden Crater, Frederickson draws a similar connection between the erde beneath and the erde within, through quoting the Italian writer, Dante

Into that hidden passage my guide and I entered, to find again the world of light, and, without thinking of a moments rest, we climbed up, he first and I behind him, far enough to see, through a round opening a few of those fair things the heavens bear. Then we came forth, to see again the stars (cited in Fredericksen, 2002, p.90).

Dante’s poem, The Divine Comedy (Commedia) describes the poets epic journey through the three worlds of the afterlife: Inferno (Hell), the Purgatorio (Purgatory) and the Paradiso (Paradise). The significance of the link between Dante’s poem and Roden Crater is in the concept of purification in another welt. The link is expressed between Dante’s Divine Comedy and Turrell’s Roden Crater in the way erde is sculptured by the purifying

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Dante called the work simply Commedia (Comedy) because it ended happily. Later generations added the word Divine. Nearly two centuries later this allegorical poem was commissioned by Loenzo di Pierfrancesco de Medici to be illustrated by Sando Botticelli. At an exhibition March - June 2001 at the London Royal Academy of Arts, Sackler Wing. Botticelli’s 92 pencil drawing of the Divine Comedy, Inferno, Purgatorio and Paradise, were brought together for the very first time. Originally Botticelli’s work was divided between the Staatliche Museen in West and East Berlin with Paradise in the Vatican Library.
elements of fire, water and air that ultimately transforms not only the volcano interior but becomes a reflective opportunity to transform the viewer. *The Divine Comedy* is depicted by Botticelli as a cone shape that is remarkably similar to the shape of Roden Crater. Departing from the despair of those suffering in *Inferno*, Dante climbs up the mountain of *Purgatorio* to light terraces, seeking purification for misdeeds on *erde*. Finally, Dante in an atmosphere of peace and hope, rises up effortlessly through the heavens of the Moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn and the fixed stars to the throne of God in Empyrean. Botticelli’s illustrations of Dante’s awe as he attains enlightenment are simple abstract compositions based on the circle.

The analogy of Dante’s poem to *Roden Crater*, resonates with Turrell who explains that “light is a powerful substance. We have a primal connection to it. But for something so powerful, situations for its felt presence are fragile” (Turrell 1987). The situations to which Turrell refers are the few environmental sanctuaries left in the *welt* for detachment where a primal connection is to be made between the light of *Dasein* in the body and the celestial light in the heavens. The interior of *Roden Crater* provides an opportunity for reflection where the fragility of light in the *erde* of the body can spring to life with spiritual energy transformed by the spectacle of star studded light in the heavens. It is not surprising, with such pervasive iconography, that from the first sighting of *Roden Crater*, James Turrell makes the choice that the shape of the volcano should remain as a volcano in the spirit of *Gelassenheit*. In his choice of *Gelassenheit*, allowing something to be seen as something, Turrell acknowledges the need for *erde* to dominate. “Rather than impose a plan upon the landscape, I decided to work in phase with the surroundings of the volcano” (Turrell 1999).
Allowing *welt to welt* from within Roden Crater.

Many of the cultural restrictions in modern society have been dismantled over the years, allowing for greater personal freedom but also causing an erosion of formal values and traditions in religion, family and institutions throughout the world. A materialistic culture of consumerism has emerged which tends to reject the invisible and yet Heidegger states ‘being in the world is invisible’. A materialistic culture in no way provides a foundation for coping with the grief of a world community seeing others torn away from the ‘world’ such as the tragic events of terrorism.

When *Dasein* reaches its wholeness in death, it simultaneously loses the being of the there. The transition to no-longer-being-there lifts *Dasein* right out of the possibility of experiencing this transition and of understanding it as something experienced. This kind of thing is denied to *Dasein* in relation to itself. The death of others, then, is all the more penetrating (Heidegger 1996, p.231).

Heidegger interprets the dying of others as the end of their *Dasein* but the beginning of their objective presence in the *welt*; their invisible trace dissolves into the *Dasein* of others that still remain in the world as a reminder that one day they too will reach their own most ‘potentiality of being’. There-re-orientation of being in a world of political tensions and terrorism has generated a bewildering search for personal truth, and unprecedented need for spaces for reflection. The culmination of one man’s vision for *Roden Crater* could not have been realised at a more sensitive time in the history of the American people, coming at a time when there is a questioning and a heightened awareness of what it means to be, *Dasein* and to belong to a world power. Never has there been a greater need of a secular sanctuary or a reflective opportunity to re-evaluate western concepts, values and hopes for the future of humanity. *Roden Crater* has the potential to provide that
reflective opportunity regardless of nationality for a journey of spiritual awareness.

For Roden Crater to work as a great artwork, it must embody the transparency of ‘truth happening’ where erde rises up through the artwork and the invisible becomes visible in such a way that it is received by the welt community. The invisible power of the artwork relies on the ‘openness’ of the viewer’s Dasein in receiving the experience and the equally invisible effect on the community having a need for the artwork to be preserved.

Just as a work cannot be without being created but is essentially in need of creators, so what is created cannot itself come into being without those that preserve it. However if a work does not find preservers, does not at once find them such as respond to the truth happening in the work, this does not mean that the work may also be a work without preservers. Being a work, it always remains tied to preservers even and particularly when it is still only waiting for preservers and only pleads and waits for them to enter into its truth (Heidegger 1971, p. 66).

The value of Roden Crater both as a contemporary artwork and a sacred site to the Kiva-Hopi people needs the support of ‘preservers’ within the community. Once that level of understanding is established, welt welts, then Roden Crater has what constitutes the measure of a great artwork. This means that the artwork truly represents the welt and erde in the happening of truth and the unity in the artwork is opened for future generations to make manifest ‘what is great and what is small what is holy and what is unholy’ (Heidegger 1971).

The inner welt of Roden Crater.
Since 1972, Turrell’s personal welt has been shaping the light with architectural austerity within Roden Crater, temple erde as an observatory for viewing summer and winter solstice. To intensify the experience of Roden
Crater, Turrell uses an absence of light and horizontal positioning for the viewer. Within the tunnels the low light creates a perception of intensity in the imagination so that when the real experience of light occurs, it appears to be the other side of reality.


The keyhole design of the tunnel from where the viewer emerges into the clearing of chamber in Roden Crater, bears remarkable similarities to the design of the field that defines and controls the intensity of radiant light coming from different directions within the Linear Accelerator. Here the electrons hit the circular, mylar surface where they converge and penetrate the etched keyhole that defines the light particles that are refracted by the mirror surface behind where their energy is reformed into a precise beam of
After being between the shallow space of the labyrinth of dimly lit tunnels, the positioning of the viewer in the clearing of Roden Crater would experience a sensation of transparency; fusion with reality beneath the intensity of the light from the dome space overhead. In Roden Crater there are four lower chambers aligned with the axis of the northern most sunrise and southern most moon set with the chamber above these is open to the sky. Turrell explains that “some of the events in space might occur daily, some semiannually, equidistant from the solstices and others will be infrequent” (Turrell, cited in Failing 1984, p. 78). In this nature observatory the light from the sun, the moon and the stars is controlled to penetrate a two hundred foot shaft within the crater.

The keyhole design of the dimmed tunnels within Roden Crater creates sensory deprivation in the viewer so that as they emerge into the light from the dome space overhead, visual sensations obtrude on their perceptual awareness. These sensations intensify as the light hits the floor of the crater and scatters the light rays. The viewer within Roden Crater lies in a similar vulnerable horizontal position to the warrior experiencing radiant light with head below the feet, on an angled plinth, near the centre of the dome of the crater where they can engage in light’s changing shapes in the universe above. Throughout history, artists have made use of this strategy of controlling light through deprivation that can trigger the experience of the sublime in the viewer. Other examples of this strategy can be seen in Mark Rothko’s painting Violet, Black, Orange, Yellow, on White and Red 1949 and the column architecture of the Greek Temple of Hera 1.
In ancient Greece light from the solstice, knowledge of geometry and the austerity of architecture combined to ultimate effect creating a temple that controlled light, illuminating the statue of the Greek goddess. So powerful was the effect on the community that the temple was ultimately considered to have a sacred reality of its own. In this way, the fusion of light, temple, goddess and community became interconnected in a spirit of reflection. The intensity of this refractive experience was achieved through the formal device of frontality and shallow space compelling the eye upward to create a spatial illusion that inspires awe. Simple geometric columns controlled light, entering the temple sanctuary that illuminated the statue of the goddess.

32. Casper David Friedrich, *Monk by the Sea 1809/1810*, Oil on canvas (110 x 171.5 cm) National Gallery Berlin.

In a similar manner, but with the aid of modern computer science and technology, the natural shallow space and frontality of Turrell's *Roden Crater* compels the viewer's eyes upward through the celestial dome of the crater to the light of the heavens. This illusion, created by the formal device of frontality and shallow space, is also used by artist Casper David Friedrich in *Monk by the Sea 1810* and Mark Rothko's painting *Violet, Black, Orange,*
Yellow, on White and Red 1949. This strategy compels the eye upward and similarly creates a spatiality that inspires awe. For the viewer of Monk by the Sea 1810 there is the sensation of no longer being earthbound having broken through the controlling barriers of “conscious and the subconscious, the sensuous and the spiritual, of having reached the farther shore” (Waldman 1978, p. 69).

Within the crater, Turrell has created a space where light is controlled by the walls of the crater, having the direct effect of intensifying the refraction of light into the body of the viewer. This intensification enables layers of information about the environment to fuse with the viewer’s subjective...
response. Turrell establishes this through a total simplicity of forms where the walls of the crater no longer seem to exist, just the all encompassing, framed light of the stars in the heavens or clouds in the sky, the “far side of reality”. The viewer’s experience of light within Roden Crater is positive, open yet protective and experienced in the same inner erde clearing spirit of the Kiva-Hopi American Indians.


The simplicity of Roden Crater’s form is most powerfully seen either from below the fumarole or from an aerial perspective as in an image of a hole within the circle of its base. The small circle within a larger circle of space is the sacred image known to American Indian Kiva Hopi tribe as significant for the path of transendere. The crater continues to hold powerful symbolism for the indigenous community whose belief is that the crater is “the gateway of the world where the soul has to cross in order to be released from the cycle. It stands specifically for the passage from spatial to non spatial from temporal to non temporal existence” (Cirlot 1988). Living in the community and working
on Roden Crater, Turrell gained an insight into the site’s depth of meaning for the Kiva-Hopi tribe. In his notes on the ontology of Art he wrote, “all art is experience, yet all experience is not art. The artist chooses from experience that which he defines as art, possibly because it has not been experienced enough or because it needs to be experienced more” (Failing 1984, p.76).

The heritage of sight and the camera obscura in Roden Crater.

From the base of the volcano one walks up the ravine to a semi circular esplanade that cups the fumarole, or vent hole on the flank of the cinder cone. From this natural platform some 250 feet above the surrounding plain one’s sense of space sequences: the impression of celestial vaulting shifts, the crater looms upwards, the landscape expands into vistas, and the colours that give the desert its name spread outwards to the horizon (Adcock 1984, p. 78).

Turrell, like Turner in his late work, has created one of the few artworks that allows not only seeing the light but also the absorption of the light. The absorption of light in the ascent of Roden Crater, as it rises over black and red basalt from the Painted Desert, gives way to the sight so dominant that it does not mean just seeing with physical eyes, but rather to see sehen with circumspection which involves seeing what is invisible as well as the visible form. Adcock suggests that the experience of Roden Crater is also from the “natural platform,” of knowing that comes from circumspect vision about what has past, whilst looking ahead, providing an encounter both constant and stable for the viewer. Circumspection has the effect of bringing into play the original preference for the union of sight with insight. Because of its immense size, Roden Crater like the Temple of Hera cannot be seen in its entirety but appears as a combination of volumes in space. This experience of partially seeing the horizon of the Painted Desert, the looming crater cone or the interior celestial dome shaped vault, creates the heightened awareness
associated with the experience of the Kantian mathematical sublime.

As if inside a camera obscura, Turrell works with the sense of enclosure and opening to the perceptual phenomenon of celestial vaulting.\textsuperscript{12} “Perhaps I could relate my work to the sensibility of the camera obscura or Plato’s Cave where you are in the cave with your back to reality looking at a reflection of reality on the cave wall” (Turrell, cited in Gayford 2000, p.28). The viewer enters the domed area known as Sun and Moon Space: a circular, concrete structure with a diameter of 12.8 metres proceeding upward along a 251.4 metre tunnel 3.6 metres in diameter and rising uniformly throughout its length to the Portal Space. From here, the path leads downward to the crater eye. From the “dark chamber”, the domed roof provides viewers with the opportunity to step back in time to the seventeenth century and ‘see’ afresh a camera obscura image of lunar and solar cycles through a series of portals. Here in the crater eye, every 18.61 years, this space will virtually become a camera obscura with a “detailed reverse image of the moon appearing on the crater walls” (Rose 2001, p. 181). Through 260.2 metres of the East Alpha Tunnel, the viewer emerges into one of Turrell’s Skyspaces, designed to capture light through a small circular aperture. The crater eye in the centre of the volcano houses four limestone plinths that create the impression of a curved horizontal line.

Every 18.61 years, when the moon is at its southern most declination, its full image will be projected down the long tunnel linking the fumarole and the main bowl of Roden Crater according to the principles of a camera obscura (Adcock 1984, p. 83).

\textsuperscript{12} “celestial vaulting is that phenomenon experienced by low flying pilots” (Rose 2001, p. 181).
Heidegger’s choice of the *Temple of Hera* at Paestum as a great artwork and a measure for the ancient Greek community, unconceals a need for them to experience light in their temple *erde*. Similarly, research into the contemporary artwork *Roden Crater* indicates it is indeed a measure of the twenty-first century *welt* and a ‘need’ to access a clearing within a clearing that continues to provides an extraordinary opportunity for those who have not experienced *transcendere* or “those who need to experience it more”.

A light artwork that has the potential to be the great artwork of the twenty-first century, Turrell’s *Roden Crater* gives expression to light as *erde and welt* in a happening of truth that relates to the concept of what is Heidegger’s measure in art. Not only has Turrell created an artwork that is utilitarian, symbolic and reflective of light but he has also assumed the responsibility as preserver of a natural artwork steeped in the being and time of the Kiva-Hopi Indian tribe. As temple *erde*, *Roden Crater* provides a reflective space to first give to things their look and to men their outlook on themselves. The light experience provided by *Roden Crater*, whether from the inside or outside, solar or lunar eclipses, creates athe subjective encounter that is almost predictable in advance. In this artwork the phenomenon of light is brought into foreground salience to become evocative of the new for the viewer. Herein lies *Roden Crater*’s magic of ever changing light spaces, that provide magnificent astronomical spectacles of light occurring everyday, yearly, every 18.61 and every 24,000 years. For those on a path of spiritual awareness, whether it be at a specific time described by Heidegger of ‘birth, death, disaster, blessing, victory, disgrace, endurance or decline’, or indeed somewhere in between, an experience with light clears and illuminates being, allowing for the *heilig* to ‘rise within itself and in all things *phusis*’. 
Roden Crater tells a story of light, which is the story of people, regardless of culture, an artwork with the potential to stabilise the community in the recognition of its significance as an earth site that continues to reveal the timeless and be a source of wonder. Perhaps, even after millennia have passed Turrell’s contribution to the welt of the twenty-first century will be marked as the temple mountain light experience, expressive of temple erde that lights the temple body. Roden Crater is bridging different welt’s of history with the breath of something phusis, most effectively communicated by being silent. Only time will record if Turrell’s light experience as a near tangible substance can fulfill the third part of Heidegger’s ideal. A great artwork ‘is one where an entire culture bears witness to the numinous salience of welt which happens in the work’ (Heidegger 1971).

For those who might unearth Roden Crater after millennia have past and Turrell has been forgotten, his crater will remain as more or less faithful guide to the sky, a place to see anew the light of the stars (Fredericksen 2002, p. 92).
Section 6  

**My own Art Practice**

The earliest primary source of my research for *Light Intensity as Surface* began with an overseas trip to forty eight galleries throughout England, France and Germany to study artists’ use of light in great artworks. These included Vermeer’s *The Art of Painting* Casper David Friedrich’s *Monk by the Sea*, Turner’s *Norham Castle Sunrise*, Rothko’s *Black and Maroon*, Bonnard’s *Dining Room in the Country 1913* and Van Gogh’s *Peasant Shoes*.

**Light in Turner’s ‘World’**

35. J.M.W. Turner *Norham Castle Sunrise* c. 1845 Oil on canvas 91 x 122 Tate Gallery London. The Tate Gallery at Millbank,
London holds the Turner Private Collection in the Prints and Drawing Rooms above the Clore Gallery. It was a rare privilege to examine this collection of journals and sketchbooks because the fragile nature of the collection means they are not normally available for public viewing. The experience gave me a unique insight into the *welt* of Turner through his preparatory sketches and journal entries for major paintings. I limited my exploration to journals written after 1820 because of the raw intensity and immediacy of his interpretation of light in these paintings, particularly *Norham Castle Sunrise 1845*.

Turner’s Journals, small enough to fit into his greatcoat pocket, went everywhere with him as he travelled on horseback through England, Wales and Scotland. The initial impact of holding the journals in my hands and turning the frail pages, was an awareness not only of the intimacy of the watercolour scribbles but the masterly understatement complete in their simplicity.

Turner’s father, who acted as his studio assistant, had a habit of not grinding the pigments finely enough, thus leaving grains of pure pigment to catch in the fibre of the paper which may have helped preserve the colour of his son’s paintings. Turner’s experimental use of materials led to discolouration and fading of many works, however, the tiny granules of pure pigment that dot the page of his faded journals show the viewer the original colour. After many days of intense scrutiny, I carefully held Turner’s Journal in my left hand while drawing in pencil with my right hand, twenty eight watercolour entries into my own sketch book. Identification of the colour granules was achieved through visual comparison with an Old Holland Watercolour chart.
and recording the initials of the colour on my copy. The most used colours were emerald green with veridian, chrome yellow, mars yellow, madders and a cochineal carmine colour, lead white, cobalt blue, venetian red, yellow ochre, green cobalt blue and a mauve made from a combination of cobalt blue and venetian red. Later, the pencil initials of the colours Turner chose were erased from my small copy and replaced with the equivalent watercolour pigment. The completed copy was compared the next day to Turner’s faded originals.

**Research of works relating to Norham Castle Sunrise c. 1845. No 1981.**

37. Study 2. *Norham Castle Sunrise*. Subtraction process begins with the elimination of the figures and the boat.

38. Study 3. Further subtraction occurs.

Turner’s now faded brushstrokes in his journals, watercolours and sketches provided me not only with an understanding of his techniques but also a window into the creative process that will continue to remain invaluable to me in my own art practice. Research in the Drawing Room made it possible to appreciate how Turner developed concepts on a small scale draft, experimenting with composition, colour relationships and the translucency of a wide range of papers before transferring this ‘knowing’ to the finished artwork. Turner’s use of a variety of textured paper with degrees of absorbency, some with prepared washes, served as a mid tone in experiments with vigourous brushstrokes to capture a shimmer of light or an atmospheric effect.

**Temple Body in my art practice.**

Returning from my research of light in artworks in Europe I became aware of the intensity of light in my own country as if for the first time. However, this
natural light was not to be the light I investigated in my art practice for this thesis *Light as Surface and Intensity*. Rather, the light I chose was the interpretive findings from a personal encounter with invisible light from the Linear Accelerator used in treatment of women with breast cancer. “What is perceptible to the senses is the reflection of what is intelligible to the mind” (Plato, cited in Cirlot, 1993). My work, *Mystery Code* is directly influenced by the intensity of the electron beam of light energy controlled by the collimator on either side of the Linear Accelerator, only millimeters from the face of the patient. There is the feeling of being encapsulated in a camera obscura and being one with the light. Marks on the lead glass, marks which are nothing in themselves, become transformed by light and imagination; sometimes into an ancient language, sometimes into the creases on the map in *The Art of Painting* by Vermeer. These reflections of scattered light from controlling mirrors onto the surface of collimators sparked recollections of great artworks continuing to intrigue ‘everyday for thirty-five days’ of radiotherapy.

In my painting *Mystery Code* the physicality of the everyday radiotherapy ritual is conveyed through simplicity and symmetry of composition with a strong, low horizontality. The vertical line versus the horizontal evokes the notion of mortality as can be seen in Friedrich’s painting *Monk by the Sea*.

“In modern painting the horizon comes into its own, displacing the grandiose visions of mountains and awesome sublime with pragmatic horizontality” (Bond, 2001).
The horizon has an even more compelling concept for Cancer patients because of the disease and its association with temporality. Suddenly, horizon is no longer some far distant objective but rather takes on a special temporal significance as the ‘..horizon of all our horizons, the horizon within which all perspectives available to us are contained the outermost limit of what, to us, is unintelligible (Heidegger, cited in Young 2002, p.39).

Heidegger uses the term everydayness which also has temporal connotations and suggests human existence as a sequence of days in the progress of time. Repetitive experiences and practices create an opportunity for thoughtful experience where in the depth of the mind a huge reservoir of unexpressed creativity can flow. A true direct experience at a fundamental level leads to a heightened appreciation and confirmation of what it means to be, bringing
with it a peace of mind that is not an escape from confronting situations but a way of dealing with them more effectively. In my encounter with light the materiality of inconspicuous markings on the lead mylar glass of a Linear Accelerator captured my imagination with their astonishing mystery. These deeper levels of our being not only solve underlying problems in our inner sphere but help us to gain access to the focused presence of the moment. The poet Rilke likens this to the notion of knowing the darkened “other side of the moon”: that side averted from us which can lead to the light shining through the ruby. “Understanding that, understanding the other side of being not as an emptiness but rather a plenitude of all the, unknowable ‘facets’ of beings allows us to face death without anxiety” (Rilke, cited in Young, 2001, p. 146).

My aim was to project the ‘inconspicuous’ into the foreground through my artwork, my personal encounter with radiant light became the foundation on which to base a knowledge of light physics. The Oncologist Dr. Verity Ahearn introduced me to Gary Arthur, the head physicist at Westmead Hospital who recognized the importance for me of understanding invisible radiant light in order to create an informed image of the light. For two years we met regularly to discuss the complexity of light technology then in December 2002 I received a phone call that was to clarify all my research. I was invited by Mr Ole Hagen, the Service Manager at Varian who manufacture Linear Accelerators to view the dismantling process with physicists over three days to make way for the latest model in light technology. This was not because the Linear Accelerator at Westmead Oncology Department was in any way obsolete but because a Linear Accelerator is such an absolute need in a community that it can never be allowed to become obsolete.

Entering the world of high security at Westmead Oncology Department
conveyed the same impression of disquiet as entering the concealed world of the Tate Gallery to view the Turner journals, sketches and watercolours. Carrying the same equipment that I used in London sketchpads, sharpened pencils, sharpener, rubber paint box, water container and paintbrushes I opened and closed doors, walked along silent corridors where more doors opened and swung closed, footsteps echoing until finally I arrived at a door with the sign, *Danger High Voltage Radioactive*. Here Mark Radziszewski the physicist from Varian was waiting for me. Beyond these doors, the half light of the room accentuated the absence of life in the looming silence of the Linear Accelerator. Gone were the gowned high priest and priestesses at my original experience, gone too the murmur of unfamiliar technical language and the collective hum of the precision computers with my name printed in red.

‘The gods had fled from the temple’

**Unconcealing the Linear Accelerator.**

The dismantling of a Linear Accelerator is far removed from any routine activity and the atmosphere surrounding the process anything but familiar, reliable or ordinary. Indeed, being present was a rare, momentous opportunity to experience the happening of truth in medical technology. The physicist asked me what I specifically would like to see in the Linear Accelerator and my reply was, “the colour of radiant light and the heart and the soul of its technology”.

The dismantling began in an atmosphere of post mortem reverence with the removal of the sleek, white, surface cladding of the Linear Accelerator that historically dates the technology as twentieth century. Nothing could have prepared me for the breathtaking awe of seeing such perfection and exquisite
human technik beneath the surface. The overwhelming appreciation for the complexity of technology unconcealed gave way to marvelling at the thought that this light technology works and the concept described by Heidegger as physis, was conceived by a human being in such a way that the idea grew out of its own accord. This added dimension of seeing how light is controlled bore similarities to viewing Turner’s artwork in the Tate Gallery and then seeing his journals for the artwork in the Drawing Room. This level was where Turner the human being was unconcealed in such a way that what he thought and then thought through could be seen clearly expressed as erde in his artwork. When viewed in this circumspect way all conflict between erde and welt of the Linear Accelerator dissolves in the harmony of Gelassenheit.

Heidegger’s philosophy of Gelassenheit when applied to the unconcealed light technology of the Linear Accelerator reveals that it is not another natural resource stockpile to be exploited but one that fulfills an absolute need for healing in the welt. In this way the Linear Accelerator is both technology and the remedy for technology because it gives back or restores the erde of authenticity to thousands of women each year,
The major modules of the Linear Accelerator are the gantry and the stand. The stand with its complex technological design is anchored securely to the floor while the gantry rotates around a horizontal axis on bearings attached to the stand. The dismantling process of the Linear Accelerator proceeded from the stand with its klystron, wave guide, circulator and the cooling water system to the gantry with major components that had been a source of personal speculation for so long. I had imagined the components inside the gantry to be very much like the framework of a camera obscura so the meticulous dismantling process became tense with expectation.

I was presented with the klystron which is used to power high energy Linear Accelerators with its microwave cavities that accelerate the electrons through the waveguide which conveys the power to the cylindrical shaped gantry. Here there are a larger series of linear microwave cavities made of copper that continue to be energized by microwave power supplied by the
klystron. Surprisingly, the cathode or electron gun that controls this radiant energy is at the bottom of the klystron and is remarkably small, no more than three centimetres in diameter. For the next nine hours, time and space merged in deep affinity as a hitherto unknown realm for understanding light was not only being-able-to-be-seen for the first time but in all probability, being able-to-be-seen for the last time.

After eight hours of meticulous dismantling the sublime moment arrived when the physicist arrived at the “heart” of the Linear Accelerator passing to me the tiny electron gun. This electron gun is the source from where the electrons are fired into the structure where the bending magnet deflect the electrons and focuses the light beam on target. The treatment head then emerged, as I had imagined in the giant form of camera lens with collimators, mylar mirrors and flattening filters that shape the intense beam of light and monitor its power in an operation similar to the shutter inside a camera.

At last the thyratron was unearthed, the “soul” of light technology, that releases the stored energy from the powerful capacitors. The impressive glass globe of the thyratron held the key to the question of colour of radiant light at its origin. After some health and safety deliberation the physicist decided to switch on the thyratron for one minute in order to have the answer to that question. The time was mesmerizing and the gaze unblinking as the thyratron was switched into the ON position. At first it glowed in the most delicate shade of violet grey, softly unfolding into a waft of cadmium yellow extra deep! Then, OFF. But the colour was etched forever in my memory.

Throughout the unearthing process of the Linear Accelerator, medical
technicians silently came to pay their respects to what they called the Grand Lady. Some shook their heads in wonder at trying to calculate how many lives her light had saved. Others recognized the “friendly nature” of the Grand Lady who had been a constant companion in their everyday lives for sixteen years. All who saw the Linear Accelerator uncealed, marvelled at what it means to be human, to be able to think, to care and to wonder what if? All agreed that it was appropriate that the “heart and soul” of this Grand Lady namely the Thyatron and the Electron Gun be given to me for my PhD exhibition’ *Light as Surface and Intensity* so that the objective presence of the Grand Lady will live on as artwork.

**My artworks that represent the chapters this thesis**

In my art practice there are three paintings representative of the three chapters of this thesis, Temple Body, Temple Mountain and Temple Earth. The painting evocative of Temple Body is the *Clearing Centre*, *Closing the Circle* is representative of Temple Mountain and Temple Earth is represented by *The Waiting Room*. These paintings are an intuitive response to aspects of radiant light informed by personal experience, tuition in light physics by Gary Arthur at Westmead Hospital and finally the uncealed design of the Linear Accelerator. This circumspect knowing makes it possible to communicate invisible light as *erde*, bringing it into the open where the paintings themselves become its shelter. Although throughout the sheltering process of painting there is an understanding of how invisible radiant light works, the question of why light heals continues to remain a mystery. This is what Heidegger means when he says *welt* and *erde* are in conflict. Light is never mastered.
42. Anne Edmonds *The Clearing Centre* 2002. Oil on Canvas (1.5 m x 1.78 m).

**Temple Body: Clearing Centre.**

The painting *Clearing Centre*, is my personal truth in the *welt* of radiotherapy and represents the silent reflection, refraction and absorption of invisible radiant light by the warrior. This painting is a circular cone shaped beam of light as seen-but-not-seen from a horizontal positioning gaze into the treatment head of the Linear Accelerator. I imagine the canvas to be the protective glass shield above the horizontal body of the warrior with the radiant light coming from behind the canvas. Travelling along the filament cathodes the light penetrates the body of the warrior with their distinctive bald head being reflected back in the mylar glass shield. Of course the painting is not being viewed on the ceiling but positioned on the wall so the viewer’s perception of *Clearing Centre* is somewhat ambiguous having the
effect of being drawn into the centre that is simultaneously a body and a void. The reason for this effect is the lens shaped, stereoscopic visual system of the observer being drawn into the concave composition of Clearing Centre. Thus it takes a second for the visual system to adjust to the perceptual edge which creates the effect of being drawn into the void whilst experiencing at the peripheral fringe, the sensation of light.

Although the experience of researching Turner was not a conscious consideration at the time of painting Clearing Centre, personal truth is subtle and not always obvious. It was only as the painting progressed, that the significance of research in the Tate Gallery crystallized. There is a mysterious connection with Turner's circular composition of Light and Colour as if seeing his welt through the mind’s eye in an astonishingly rich internal panorama. The connection between Clearing Centre and Light and Colour is more than a struggle between colour and form, the circular composition or the palette rather, it is trying to capture a subject just out of grasp, the elusive, invisible concept of light. Turner considers light as the “Absolute” metaphor whereas in my artwork I consider light as a metaphor for personal truth, sein-Lichtung to convey the sublime. To evoke the sublime experience from the vulnerable horizontal position of a warrior the artwork Clearing Centre is interpreted through napes yellow red, venetian red, red gold lake, indian yellow, yellow ochre light, napes yellow, blue grey and a mauve from mixing venetian red with cobalt blue.
Temple Mountain: *Journey into the Centre*

*Journey into the Centre*, the central painting in a group of seven, recreates a sense of heightened awareness placing the viewer in a position at the base of the mountain intent on the journey upwards towards the circle, unaware of the three column paintings sheltering light on either side. It is only when the viewer steps back and views from a distance, that the journey fades and the three paintings on either side emerge as effortless shafts of light from the centre while the columns can be viewed as the wall space between the paintings.

*Journey into the Centre* consists of one large painting oil on canvas, 1510 mm x 2000 mm, with three elongated paintings, 2000 mm 533 mm, positioned on either side. Four brands of oil paint were used to achieve a subtle tonal difference in the same colour. The brand names were Rembrandt, La Franc, Old Holland and Windsor and Newton in alizarin crimson, cobalt blue, paynes grey, cerulean blue, napes yellow, davy grey and burnt sienna. Paint consistency is mixed thinly with Old Holland medium (voor olieverf snel drogend) a quick drying medium which allows for a layer of surface painting almost every day.

**Link to the Mountain.**

At the beginning of this thesis, I quote Heidegger’s description of the open space, the lighting centre in being that encircles all that is, the clearing that produces the kind of beings we become. The trauma of Breast Cancer is a sublime journey with time to the horizon of being that allows entry to this lighting centre in the process of understanding what is meaningful in being. Warriors speak of their body sheltering them as if they are climbing up a
personal mountain but at the time they have only a heightened awareness of their own weakness, their stumbling feet, and so they are temporarily unaware of their own upward progress, the view or the grandeur about them. *Journey into the Centre* was my first expression of radiant light and even though there will always be reservations about the convincing nature of any depiction, there can be no doubt regarding the concept of *sein-Lichtung* as a sustained motivational force.

*Journey into the Centre* is informed by Heidegger’s notion of a great artwork in the *Temple of Hera* i at Paestum where *erde* is ‘unconcealed’. Although the flutings on the shaft of the Doric columns of the temple create the impression of being strong, energetic and resilient, the architect allows the flutings to shelter the true pliancy of the wood as their *erde* origin. This is what Heidegger means by ‘the work lets the earth be an earth’. The wooden columns manifest their true firmness by controlling the light so that when the elusive beam does penetrate precisely through the space, it remains, nature that can never be mastered. This is the influence of the *Temple of Hera* i on my artwork, the columns controlling the light as it pierces the space between to evoke the mysterious quality of *erde*.

To be an artist, seeing and giving form to invisible light on canvas is an encounter with reality not very different to the spiritual search for the motivated belief of faith or the work of scientists or indeed the inner visualisation of the person who is blind. However, it does require a constant questioning, “what am I really seeing here”? “How can I convey the sublime”? This challenge of seeing beyond the rational world to an imaginative world of invisible light is the way the scientist works with
invisible quarks or the physicist works with electrons. Scientific belief in the existence of the unseen reality of matter, quarks, is not based on proof but rather facts that have been interpreted. In principle, electrons or particles of light are not seen directly although they can be detected on photographic plates. An encounter with high beam energy bouncing off collimators, encapsulates the elusiveness of light leaving an insatiable desire to know more. Knowledge of interpreted facts concerning radiant light and. When these facts are combined with a motivated belief in personal truth they provide the basis to recognize when the elusive form of light is captured convincingly on the canvas.

As an artist, painting the invisible is in a similar realm to blind vision, trusting in a heightened visual seeing, like Helen McLoughlin, (see Appendix 1) who although blind, perceives her world through consciously thinking and then seeing rather than the sighted way of first seeing and then thinking. Just as concentration and practice enable her to give form to the invisible so it is in my work that concentrated thought about the visual energy of radiant light gives way to a mental representation of its form.

In my art practice I put Heidegger’s philosophy of Gelassenheit, into practice by allowing the canvas to show as canvas even when the painting is complete. The cedar stretcher that supports the canvas is intentionally 5.5 cm in width to project the painting from the wall, casting a shadow that gives the paintings presence and a sense that they are floating. I no longer use the technique of white underpainting on canvas to prevent mistakes because the added layer of white paint creates a barrier between the colour pigment and the natural surface of the canvas. Therefore, in a subjective way the first day
painting on the new canvas is crucial, requiring concentration as the initial pigment has a dye like quality that instantly becomes part of the weave of the canvas, thus making it difficult to remove any mistakes. The multiple layers that follow, using only Old Holland medium, gives a matt finish to the work that appears somewhat fragile allowing the viewer to enter the work without being distracted by a barrier of a gloss finish.

**Temple Earth: The Waiting Room**

Kant argued that space and time were equally important in the way we organize our time. Heidegger disagrees, arguing that space is almost an insignificant category; time is the mystery. Time and human existenz are inextricably linked. Our being is a process of becoming and this key insight leads Heidegger to argue that the progression of humanity is an abstraction because what comes first is a personal belief system. Existence for Heidegger is nothing but this stretching where we are constantly projecting ourselves into the future always expecting things, always planning things, always hoping for things. Heidegger argues that practical action shows we are pulled ahead of ourselves into purposes that we are trying to achieve, actually extended ahead of ourselves in the way we really live.

What we desire to do, what we anticipate what we want things to turn out to be, changes with the diagnosis of Breast Cancer from being dependent on a world of consumerism dominated by mass media, to consumerism being placed on the fringe of a lifestyle. Western culture’s commercial notion of what it means to be feminine dictates an emphasis on the importance of breasts and the pressure to have the perfect body which distracts from the key position of women in a culture. An example of this positioning in the life
of one warrior is how she spoke of the short time she had left to live but how happy she was to see her first grandchild and how her intention was to spend every moment left with her baby.

It is appropriate that this thesis finish with a description of my painting of the Waiting Room where this thesis began. I have come full circle to return to the memory of a space not ordinary, reliable or familiar but rather a room with warriors waiting, both young and old, in a hushed stillness with a reverence usually found in a temple. Each warrior’s life is an artwork in various stages of revealing and confronting their temporality.

43. Anne Edmonds, Waiting Room 2002, Oil on Canvas (1.5 m x 1.78 m).

The aim of Waiting Room was to capture the invisible light of inner calm,
strength and wisdom that comes with the process of transcending fear of the limits of life where the illuminated moment is a sublime experience. The sheer joy of women after treatment seeing the world as if for the first time is quite different to the absorption of women with the world of consumerism. Heidegger refers to this difference as authenticity. Authenticity is where the ordinary everyday experiences of being in the world has been abruptly interrupted by the threat to life itself. Life changes dramatically but when this journey takes the warrior beyond the graphic image of Breast Cancer to the realization of what it means to be renewed in existenz, the light within is re-ignited with the glow of authenticity.

To achieve the aim of conveying the sublime in Waiting Room a crucial factor would be to incorporate a strategy of absence where the subject is not so much a view but an obstruction to the view. For each warrior I encountered, I allocated a square space on the canvas, considering the space as a journey from silence to understanding. It soon became apparent that the concept of moving from silence to understanding only applies to certain pieces of knowledge and the major source of knowledge is the emotional process of painting itself. To create the impression of stability and strength, each side of the canvas frame was considered the waiting room. Each square alludes to the narrative of the warriors so that when joined together the painting evolved into a network of squares each with a mantra of individual light.

The significance of the four lines that enclose each square space is consistent with the four seasons of the warriors’ life, a deceptively simple concept that when repeated develops into a complex composition. When the first central square in the network was finished, its composition silently connected to the
squares adjacent to its four sides so that it was not one unique square but five squares in synergy with each other. If any one square was altered in even the slightest way, all five were affected and had to be repainted in order to capture the harmony of Gelassenheit again. With four more squares joining the composition they took their colour and character from the completed squares on either side. Throughout the long process of painting the Waiting Room, the connecting dialogue from canvas to artist remained ephemeral, confusing, intuitive, confounding and like light itself, always just out of grasp.

The complexity and confusion in the composition of the Waiting Room created the need to study an artist who had resolved similar key themes of tone, light and colour. My choice was Pierre Bonnard’s Nude in the Bath 1936, an imprint of light as surface and intensity where the complexity of myriad reflections of light were simplified to create a deep sense of time and space. The intimate welt of Nude in the Bath is a small tiled bathroom with a low horizontal white porcelain bath in the foreground, with light from three sides scattered across the surface of the blue and gold tiles to reflect, refract and be absorbed by the form of Marthe. The horizontal form of Marthe in the tomblike bath, imparts a vulnerability and the sense that her body is sheltering the light.

Bonnard treats the composition of Nude in the Bath as light; erde as nature within the welt no longer in conflict but in a chime of stillness where the body of Marthe is allowed to be Gelassenheit, an expression of light. Bonnard’s horizontal slash of white that depicts the porcelain rim of the bath in Nude in the Bath provided the resolution to the complexity of the Waiting Room.
For warriors with breast cancer, the entombment of the waiting room is a space where the transformative process of authenticity takes place without being seen, just as a chrysalis hangs onto anything while phenomenal changes are taking place. The reality of this entombment, this in between time, is a process from the darkness and the unknown that cannot be forced or hurried. I hope to evoke in my painting *Waiting Room* that moment in time when the warrior let go their emptiness, let go their anxiety and fear and embraces their authenticity as they stand for a sublime moment in the sunlight to marvel at the power of life.

Once I superimposed filmy white paint over the peripheral border of gold squares on the canvas, they became almost invisible but lit by a trace of colour that acknowledges their presence. This ephemeral floating space in the background supports the central network of golden squares projecting their authenticity forward towards the viewer as recognition of those warriors in *existenz* and the two and a half thousand warriors who die in Australia each year from breast cancer.

*Waiting Room* explores the limits of emotions and the personal poetry of radiant light beyond the restrictive Kantian theory of the Sublime based on fear or the confines of morality. The personal poetry of *heilig* comes from the invisible nature of radiant light itself that remains a mysterious source of wonder. This painting is my closest interpretation of Heidegger’s opening up of *welt* to convey what it means to be human, to be different with an identity that gives purpose and meaning to life. ‘Genuinely poetic projection is the opening up of that into which the human being, as historical is already cast (Heidegger 1971, p. 71).

Introduction to Interview on Blind Vision.
In Art, there are many ways to convey visible sight. However, where there is insight there is no need for visible sight. In the painting, The Return of the Prodigal Son by Rembrandt, the father is ‘looking’ at his returned son. At first glance we notice that the father is blind but when we ‘look’ closer, the empty eyes are no longer empty but full of care and compassion. By contrast, it is the downcast eyes of the son that look away, as if he has been blinded by the light in his father’s eyes (Bal 1991, p. 354).

Most of the time our everyday lives are lived in swirling mists with just a dash of heroism. If on that occasion we break through our limits, we know a moment of insight. Very few have experienced this limit, this cathartic moment, this precious moment when we are transported and we know not why. Insight is what we see in our ‘inner world’ that gives us a feeling of complete understanding so that the moment seems to hold the definition of our lives. You have walked this ‘royal road’ to insight and I wonder if you could share a little of your experience with me.
Q1. Condensation is invisible but we are aware it is happening because we see the trace of it in the dry clothes on the line. Have you ever had the sensation that some things can be seen better by not ‘seeing’ them? Is this a trace of not seeing? Can you share with me another example?

A. Yes. The sensation I have had that I can ‘see’ better by ‘not seeing’ is tender, compassion and deep, loving understanding which can be expressed vocally and by touch. Another experience of ‘seeing’ in an invisible world is a mother caressing a sobbing child or crooning a lullaby which lulls the distress and breaks into a peaceful slumber. A trace of ‘not seeing’ comes when I listen to someone reading a special book, a psalm or song which gives a greater depth of meaning than if I had read the words myself. This is because the reader lends to the reading their own intonation, their own personality, their own understanding of the reading and this enriches the words and makes it doubly effective so that it remains in the inner recesses of my being. Many of these readings are read on tape so that even though I can no longer read a book or watch TV I can sit back and be enriched by the kindness, love and thoughtfulness of others. In this way the sense of hearing and the sense of touch replace the little loss of sight.

Q2. The loss of sight creates detachment from things you love. These things we love form our personal identity. Has it been a difficult journey to the acceptance of this loss? Would you say insight comes from this acceptance?

A. Although loss of sight creates detachment, there is a corresponding deepening of inward vision. The remembrance of former joys is intensified by a stirring in a deep, inner, sacred place where tangible light is replaced by an
inner glow, an awareness of divine presence similar to a window into another world. One former joy and fulfilment I had was visiting people in hospitals and homes whether they were ill or just longing for company. Again, being an extrovert and loving the company of people, I miss not taking part in games and other enjoyable experiences. But this loss is replaced by an inner awareness, a wealth stored within, so that nothing has been lost. The memory is like a computer that stores vividly all the wonderful events that have made me who I am so as I age these memories grow richer, stronger, more vibrant and more wonderful.

Q3. Whenever illness strikes, there is a sense of our ‘wholeness’ being threatened. Can you remember the defining moment when you became aware of this sense of clear sightedness, that different way of ‘seeing’?

A. Yes, I can remember the defining moment when heart and mind together seemed illuminated by an inward light replacing the former power of gifted sight. That moment came when I was fully aware of the loss of sight and I said with my whole heart ‘yes’ in the acceptance of what I felt was also a gift. As the outward sight grows weaker, the inward sight becomes stronger, more luminous and more enlightening.

Q4. Do you still recall objects or images in your mind’s eye as coloured, in terms of light and shade or are the images black and white?

A. My memories of objects and images remain as vivid and beautiful as in former days. Dorothea MacKellar wrote “The beauty has steeped my soul with
colour that will not pass away”. Who could forget the colours of the rainbow, or ‘saffron sunset’ clouds or the ‘larkspur mountains’ of the Hunter Valley that I lived among for so many years. Indeed in my mind’s eye, I still live among these mountains. Who could forget the colour of red roses, gold, white, cream, and the double cream and red. How could you ever forget the glorious faces of those little coloured pansies. How could you ever forget the colour of the birds especially the azure blue of the kingfisher that nested on the banks of the Hunter River, the king parrot, the canaries and budgerigars. These images are in my inner being “steeped in colour that will not pass away”.

Q5. When we meet people in our daily lives, we read their faces to inform and guide our communication. Can sensations of energy and vibrations from people fill this information void?

A. Yes, I feel that our inner awareness has a heightened sensitivity to the recognition of attitudes and expressiveness of the other.

Q6. How do your other senses support and inform as you search for information in your everyday life?

A. When one of our senses weakens, the other senses come to the assistance of the weakened one, thus hearing, touching, tasting, smelling and above all memory supersedes the limitations caused by weakening sight.

Q7. Normal peripheral vision is blurred. Is any form you 'see' in your peripheral vision blurred?
Q8. Do you still try to ‘look’ at the whole of the pictorial field with any peripheral vision or do you fill in the gaps with your mind’s eye?

A. My memories of childhood days along the banks of the Hunter River and among the hills have implanted memories in my mind’s eye, scenes and values of freedom and love. These memories fill any gap in the pictorial field. They are so deeply impressed in my inner self, recorded there in colours, with light, and love that will never fade. I have two special sunsets one at Newcastle and one at Myall Lakes. The glow, the colour, the softness of the Newcastle sunset was one where the whole sky really was a scene of glory, peace and serenity that has remained with me. Again, the memory of the Myall Lakes sunset was altogether different with its special pearly glow reflected on the water. When I hear someone speak about a lovely sunset I don’t mind not ‘seeing’ it because I have mine within me.

Q9. Do you have moments of apprehension or anxiety? If so what strategies do you use to cope?

A. Yes. I have moments of apprehension in unknown areas especially on uneven paths and descending stairs. I hesitate to accept a guiding hand, a warning voice, the security of a walking stick and I avoid all places of unfriendliness.
Q10. My thesis is about the invisibility of radiant light. We know it exists because of the traces such as a burn. Your world is also invisible. Is there anything you feel is relevant to the subject that I have not asked?

A. A final question could be has your invisibility changed your acceptance and activities of daily living? Yes, I have learned to value dependence on the gracious kindness of many people and to value the limitless gift of timeless help and untold support of so many. The greatest gift replacing limitations is the living awareness of the deep, inner, sacred presence assuring my ‘inner vision’ opens the heart to everlasting beauty. In reality we all at certain times have to ‘let go’ the faculties that have been with us all our life because the time comes when faculties grow weaker and we are asked by our inner self to let it go and it is not easy. When I was asked to ‘let go’ of my sight, it took me a little while to say that big ‘yes’. Having said that ‘yes’, I find it much easier when someone says,

“Helen you can’t do that”.

Now, I can let that go. If they say,

“I will wash that up for you”.

I can let that go. I know that with every ‘letting go’ of the smaller things it becomes easier for me, when the time comes, to ‘let go’ gracefully, wholeheartedly and with an open ‘yes’ to the gift of life.
Interview with James Turrell by Art 21.
(http://www.pbs.org/art21/artists/turrell/clip1.html)

Art 21: Where are we right now?

Turrell: Well right now we’re on the top of Roden Crater, which is on the western edge of the Painted Desert. And we’re looking at the San Francisco peaks volcanic field. There are over four hundred craters: this is one of them. And this is the eastern most crater, perhaps tied with South Sheba. So this is a new crater in this field but it’s about 380,000 years old.

Art 21: How did you find this spot?

Turrell: I flew over the western states looking for likely spots and opportunities. This was my first choice and there were two others. One other I still have the mining lease on. And this has been mined a little bit, and was also a motorcycle hill climb. So it had its uses at the time.

Art 21: Could you describe your first sighting of Roden Crater, how you knew this would be the one you wanted to use?

Turrell: I was coming over the field from the west, actually about this time of day, about four-thirty in the afternoon, in November. And the sun was just
about ready to set a little bit earlier in the winter. And I saw the craters in this field. There were two that I sort of looked at: one was S.P. Mountain, that flat one over there, and Antelope Hill, another one on the Babbitt Range. And I saw this one. This is really beautiful when the sun hits it in the afternoon because you really get the red and the black, that separation of the two craters from the west side. And it really stood out. The nice thing about it was that it was off by itself, so it didn’t have other volcanoes that would be in the horizon when you were inside it. So I landed out there and walked up to it and stayed overnight here, just went all around it. Then I went in to the county seat, which is Flagstaff, the next day to see how it was owned. And actually it was privately held so I thought “Oh, should be able to get this.” That's another story. (Laughs).

**Art 21:** A long story I imagine.

**Turrell:** Anyway, that was how I found it. I spent seven months flying the western states, sleeping under the wing of the plane, and every third night staying in a holiday inn, to clean up. And every site that I saw that was interesting, generated new work or new ideas. So it was really a rich time for me.

**Art 21:** What started you on a quest for this place?

**Turrell:** Well, my interest is working with light and space. And here you have light and space, there’s no doubt of that. It's always something to work with light in the outdoors. That’s something that I wanted to do, wanted to shape space, to use the light that was here naturally. Also I wanted to use the very fine qualities of light. First of all the moonlight. Also, there’s a space where you can see your shadow from the light of Venus alone - things like
this. And I also wanted to gather starlight that was from the outside light that’s not only from outside the planetary system which would be from the sun or reflected off the moon or a planet, but also to emanate light from the galactic planes where you’ve got this older light that’s away from the light even in our galaxy. So that is light that would be at least three and a half billion years old. So you are gathering light that’s older than our solar system. And it’s possible to gather that light, it takes a good bit of stars to do that, and a good look into older skies, away from the Milky Way. You can gather that light and physically have that in place so that it’s physically present to feel this old light. Now that’s a blended light, of course, but it's also red shifted, so it’s a different tone of light than we're normally used to. But that's something that you can do here in a place like this, where you have good, dark skies. So to have this sort of old blended light and to have this sort of new eight and a half minute old light from the sun—it’s like having that Beaujolais and then having a finer older mature blend (of wine) as well. I wanted to look at light that way because to feel it physically is almost the way we taste things, so this was the quality I wanted. And this is where you can work with light like that.

Art 21: Why do you want to work with light?

Turrell: Certainly when people describe near death experiences they use a vocabulary of light. And also when we have dreams, a lucid dream that’s in color, that really is I think quite astonishing. So, in thinking of light, if we can think about what it can do and what we want it to do for other things, such as to light paintings. We use light so that we can read. We don’t really pay much attention to the light itself. And so turning to that way of thinking and letting light and sound speak for itself you figure out these different relationships and rules. It has a lot to do with the sensory ‘synesthesia’ as well,
in that the feeling of light in so many ways - you probably have seen or handled a lemon and then suddenly felt the taste of it in your mouth. I mean it suddenly floods your mouth. The perception through vision actually creates the sensation in taste. The same thing can happen in sound and sound can change the perception of colour. We think of colour as a thing that we're receiving. And if you go into one of the sky spaces, you can see that it’s possible to change the colour of the sky. Now I obviously don’t change the colour of the sky but I changed the ‘context’ of vision. This is very similar to simultaneous contrast, where you see a yellow dot on a blue field, versus the yellow dot on a red field. Same yellow colour dot will be seen as two different colours. The same frequencies come into your eyes through a different context of vision, and are perceived differently. We actually create this colour. Colour is this response to what we are perceiving. So there isn’t something out there that we perceive, we are actually creating this vision, and that we are responsible for it is something we’re rather unaware of. So I actually like to do that, and I look at my art as being somewhere between the limits of perception of the creature that we are, that is - what we can actually perceive and not perceive, like the limits of hearing and seeing - and that of learned perception, or we could call prejudice perception. That’s a situation where we learned to perceive a certain way, but we’re unaware of the fact that we learned it. So this can actually work against you sometimes. Working between those limits and kind of pointing them out is something I enjoy because it’s not just the fact that you are bringing the cosmos down into the space where you live, but that your perception helps create that as well. So that you really are the co-creator of what you’re seeing.
Art 21: Can works of art impart a sense of spirituality?

Turrell: People talk about spiritual in art and I think that's been the territory of artists all along. You know, if you go into the great cathedrals made by architects and through the light of artisans, you have created a sense of awe that often is greater than what people feel when they read, or any sort of rhetoric by the priesthood. This is something that can be very powerful in a visual sense. And so the artists have always been involved in this; this is not something new. I think that sometimes it's easier for people to approach that portion of the spiritual through the visual than through organized religion and perhaps that's true today. But I also want to say that the senses and the gratification through the senses while it can direct you towards the spiritual is also something that will hold you from it fully. That's the limits of art, and so I don't think that art is terribly spiritual but it's something that can be along that way, a gesture towards that.
Conclusion

Light as Surface and Intensity initially developed through my reflection on light and its association with the philosophy of Kant's notion of the sublime. Kant’s philosophy of the sublime although an influential view in art, limits the sublime experience to fear, morality and taste. It was my journey with time to the horizon of being that prompted the recognition of another turn in the sublime using Heidegger’s philosophy which modifies the view of fear to access the overwhelming poetry of the Gelassenheit, where harmony between welt and erde in great artworks unifies cultures in their lighting centre seins Lichtung. This was not so much because Kant had over emphasised the power of fear but because he had underestimated the power of light.

In this thesis I considered three alternative connections as a catalyst for the poetic sublime experience. The overwhelming human design of the Linear Accelerator which recreates and controls the nature of radiant light; the depth and intensity of the emotions of women who access its light; and the poetic sublime in the invisible nature of light that can be seen recreated by artists in great artworks.
The poetic sublime: the Linear Accelerator that recreates radiant light.

This thesis, while providing an interpretation of the radiant light technology of the Linear Accelerator, acknowledges a beginning with opportunities for new vistas to be explored by artists in the future. The overwhelming poetic sublime evoked by the light technology of the Linear Accelerator is drawn together from three perspectives: the intimate experience as one who accessed its power; the process of creating and exhibiting a series of drawings and paintings; and seeing the rare process of dismantling a Linear Accelerator.

I compare the aloneness of my experience with radiant light from the Linear Accelerator, where no movement is possible, to being in Plato’s Cave. Plato’s prisoner’ gaze is directed ahead at the reflected shadows on the cave wall. My gaze was directed from the horizontal position to the reflections of radiant light on the collimators above. Similarly, the prisoners could not see the direct light source but could see the light in their mind’s eye. At the completion of my encounter with radiant light I emerged to see light in the real world as if for the first time.

The experience of viewing the dismantling process of a Linear Accelerator is to know what it means to wonder at the beginning and happening of truth in medical technology. Time and space are interrupted in an atmosphere of potency that demands silence to marvel at the unconcealed technology and know the potentiality of being human, to care, to think and wonder “what if”? To draw so near to this light technology is to be awe struck by the complexity of detail across layers of surface where each piece exists and co-exists, created
and refined by a century of human thought. After nine hours of meticulous dismantling the physicist arrived at the Thyratron which releases the stored energy from the capacitors. It was then that the colour of radiant light was revealed to glow in a delicate shade of violet grey softly unfolding into a waft of cadmium yellow extra deep, to be forever etched in my memory, to re-emerge in an exhibition of paintings.

The Linear Accelerator can be the catalyst for the phenomenon of fear as one of the aspects of the sublime experience. Fear can be concerned with what women are afraid of, the fearing itself or sometimes the reason for being afraid but whatever the fear, the experience involves a journey of discovery. Whoever is confronting the question of fear is on a journey they will need to travel alone through a complex, dense and difficult unknown. Attempting to grasp and express the ineffable, seeking answers to the mystery of time and the meaning of being, can be a profoundly rewarding experience. Whenever an intriguing aspect of fear is conquered, that fear in itself becomes liberating: an end and a beginning.

The depth and intensity of the limits of emotions

Living in fear and overcoming the fear of recurrence is a journey all women travel who have been diagnosed with breast cancer. When those at the depth and intensity of the limits of emotions recognize that what there is to be afraid for, is their clearing, the lighting centre seins Lichtung within their being, they also recognize that what they are protecting is what individualises them for their weld. For many of these women an aspect in the process of fear will always remain with them because fear is multi layered in its complexity. For the novice the fear can be a constant ebb and flow in
their everyday, whereas the paradox for the mariner is that, although time has passed since their initial fear, instead of the fear diminishing, it increases in its intensity. Heidegger acknowledges this aspect of fear in *Being and Time* where even though the fear is of something approaching that may eventually pass, that fear is real, with its focus on something harmful that seems to be constantly coming nearer but ‘veiled in its fearsomeness’ by the possibility of passing by. ‘....[T]his does not lessen the fear or extinguish the fearing but indeed enhances the fear’ (Heidegger 1953, p. 132). However, it would appear that the greater the intensity of fear, the more it serves to illuminate the dimension of the clearing beyond the limits; the poetic sublime.

**The poetic sublime: beyond the limits of emotions**

Although this thesis acknowledges the eighteenth century concern of Burke with the aspect of fear in the sublime and Kant’s position of feelings and the relationship of feelings to mortality, the focus of this thesis is on the dimension that lies beyond the limits of fear: the turn in the sublime where Heidegger’s philosophy modifies a limiting view to access the poetry of *Gelassenheit*. Harmony between *welt and erde* in being, unifies cultures in their clearing, their lighting centre *seins Lichtung*. This clearing is the primordial medium that connects one being to another, expressive of the centre of all beings; it is a silent mysterious dimension essential to grasping an understanding of the dimension of the sublime. This clearing, this silent listening space unveiled throughout history by artists in great artworks is the space where the breath of the unsaid is the same dimension of *existenz* where the sublime, *heilig* experience can be triggered by the greatness of an artwork or the everyday simplicity of experiencing the light of a new day.
At the end of my journey with the Linear Accelerator that recreates the physical material radiant light, the mystery of why it works remains a mystery. Only those who have experienced the depth and intensity of this journey will know that the nature of being taken apart and reformed by radiant light, is a process of indefinability. What can be defined from the aftermath, is the indelible trace of intuitive understanding that can only be compared to poetry; as poetry, the elusive inner erde nature of being at the limits of existenz, while continuing to be authentically in the welt. For the warrior, understanding what it is to be in the welt can be an unlimited opportunity to create something with imagination, something memorable, something new that did not exist before, and give it permanent form.

**The poetic sublime: sheltering in great artworks.**

‘An understanding of what it is to be in the world changes each time a culture gets a new artwork’ (Heidegger, cited in Dreyfus p. 297). The contribution of this thesis to the philosophy of art is in showing how Heidegger’s concepts in Origin of the Work of Art can be used to interpret the poetry of the sublime in both historical and contemporary artworks. Heidegger’s poetics of harmony and releasement Gelassenheit, allows the theory of the sublime to be much more: a concept where the sensory phenomenon of light itself in artworks can be seen as light. It is the poetry of Gelassenheit that adds a dimension to the sublime that makes it possible to continue to explore the artist’s attunement to the new, as an experience beyond language or even the need for definition. The new in the form of technology, and an understanding of the erde of human beings can coexist, maintaining the full breadth of clearing in the lighting centre of being. Heidegger explains that if
we let technical devices enter our daily life, and at the same time leave them outside,... as things that are not absolute but remain dependent upon something higher. I would call this comportment towards technology which expresses “yes” and at the same time “no” by an old word, releasment towards things (Heidegger, cited in Dreyfus 1993).

The notion of releasment which refuses to be dominated by technology refers to Heidegger’s philosophy of Gelassenheit which calls for human beings to design and use technological objects that do not exploit natural resources but give back or restore the resource. The theory of Gelassenheit allows artists to use technology but remain free to flourish, keeping what is open in the world open. When an understanding of Heidegger’s philosophy of Gelassenheit is applied as a key concept in art, new ground can be given to a contemporary welt community to read the poetic sublime sheltering in artworks.

Heidegger’s philosophy of Gelassenheit applied to reading great artworks shows how the need for the stability of light in the lives of a community continues to span the bridge of history to reconnect with the preservers and viewers of the artwork in another generation. It is in this capacity to regenerate that great artworks become the remedy for technology because they give back erde to the community. In this way a great artwork is not finished when its structure is complete but continues to be still in process as each generation brings with them a knowledge of their welt to add another layer of meaning to the artwork.

Reading the great artworks by Van Gogh, Turner, Vermeer and Turrell using Heidegger’s argument that the nature of createdness is the intimate relationship of conflict that exists between erde and welt. The ensuing harmony provides an opening for the personal truth of the artist sheltering
in the artwork to become our endowment. Vermeer's knowledge of light technology in *The Art of Painting* although used, is not depleted but free to be nothing but itself, *Gelassenheit* continuing to be still in process. Turner’s painting *Light and Colour* engages the viewer in a fleeting glimpse of the transparency of personal truth where the artist at the limit of a lifetime of seeing, conveys an acceptance of not-being-able to see, that blindness of insight that seems to hold the meaning of life. The spirit of *Gelassenheit* is again evoked in Turrell’s *Roden Crater*, a contemporary artwork, that not only regenerates *erde* but expands the way of seeing of the viewer prepared to go beyond traditional art to experience light itself on the threshold of perception.

Of particular influence was the period during which Vermeer painted *The Art of Painting* 1666-8, at the pinnacle of scientific and technological advances when the Dutch physicist Christian Huygens proposed the wave theory to explain the behaviour of light. Scientific knowledge of light led to the invention of the camera obscura. Vermeer reflected this technology of his *welt*, the golden age of light in the Netherlands and knowledge of the camera obscura by sheltering the invisible in his artwork. The flare effects of light; the rendering of scattered light; the blurred edges; the atmospheric effects and a different kind of close perspective all point to an intimate knowledge of the materiality of light.

Although there has been speculation in art historian circles about whether Vermeer made use of a camera obscura as a compositional aid in his art practice, my analysis affirms Heidegger's claim that artists are attuned to the scientific discoveries of their *welt*. The connection between the camera
obscura and the Linear Accelerator is that both forms of light technology shape the light beam as an energy source to radiate the object and both have external screens. The camera obscura and the Linear Accelerator make use of mirrors and lenses in an attempt to control the scattering of light. The connection between Gelassenheit in light technology and great artworks gives credence to Heidegger’s acknowledgement of the fact that we depend on advances in technological equipment because they challenge human beings to even greater heights.

In 1666 Newton described the splitting up of white light into its component colours when it passed through a prism. This paradigmatic shift in scientific knowledge was still of interest and widely discussed by the community in England in 1843. History shows that whenever there has been a prominent debate about the scientific theory of light, controversy enters the domain of art where it is challenged by another way of seeing that is beyond the exclusive realm of science. The controversy of Goethe’s Theory on light, famous for its anti Newtonian position, was explored by Turner in his painting Light and Colour, where he analysed the theory’s shortcomings. Turner unconcealed the restrictive deficiencies in Goethe’s Theory, “...nothing about shadow or shade and shadow pictorially or optically” (Turner cited in Gage 1993, p. 204). In this way Turner not only revalued the artist’s way of seeing but reaffirmed his own life’s work with light. In Light and Colour the conflict between erde and welt at the limits of optical perception dissolves into the harmony of Gelassenheit to unconceal the transparency of personal truth: the hallmark of a great artwork.
The poetic sublime and the future of light technology

I imagine with Turner a lot of people came and wondered what his painting was about. Part of it is making the Emperor’s new clothes visible. But my work will become primitive art, very quickly. We treat light very primitively right now. That’s all going to change (Turrell, cited in Gayford 2000, p. 29).

Throughout the themes of this thesis there has been an emphasis on the new in understanding the poetry of light therefore it seem appropriate to finally draw together theory, strategies and my research within a contemporary example of the new that epitomises the dimension of the sublime. Heidegger’s citation of the Temple of Hera 1 as a measure of what constitutes a great artwork in the Greek welt became the foundation for an analysis of James Turrell’s Roden Crater as a measure of an artwork with the potential to be a great artwork in a contemporary welt. Turrell’s Roden Crater emerges from analysis as the measure of contemporary artwork that reflects the light technology of our welt in the way he works between the limits of what light he can see and what light he cannot see in much the same way as the physicist with the Linear Accelerator.

I’m using this physical material called light which is literally a physical material. It behaves as if it were a wave phenomenon, but actually it is physical, it’s a particle. I use this physical material light to affect the medium of perception (Turrell, cited in Gayford 2000, p. 28).

Seins Lichtung and personal truth.

This thesis has been a personal journey of discovery identifying with Heidegger’s argument that the lighting centre seins Lichtung of being is the space where the artist conceives the artwork: the same source from which the physicist’s ideas for the new spring forth in science or technology. This appears to be the same source in the viewer, where a new layer of
understanding springs from the artwork whatever its mode of being and the same source where light technology of the Linear Accelerator unconceals authenticity in the unfathomable depths of the warriors. The affective power of the sublime experience, although fleeting, appears to create a sustained stability that becomes a shared part of the community.

The significance of my research into the traditional notion of truth in art was the finding that its relevance for contemporary art lay in the personal truth of the artist in their welt. This finding agrees with Heidegger’s concept of what constitutes the measure for a great artwork, citing the ancient Greek Temple of Hera 1 as an example. My analysis of this site highlights a renewed need for each successive generation in the welt, regardless of time, to express personal truth as an artist and community to create a measure of their place in the welt. “The temple in its standing there first gives to things their look and to men their outlook on themselves” (Heidegger 1971, p. 43). This timeless concept will always prompt the need to seek to create the new in artwork that will be a measure of our welt transformed by science and light technology. With Heidegger providing the vocabulary of Gelassenheit, the way is open to an expansion of the sublime in art, where the poetry of the new in artwork, can give a voice to the ineffable and the timeless.

The history of light’s energy as one of the most baffling yet most challenging concepts is sheltered in many great artworks that have enriched fundamental ideas about the nature of erde. The twenty-first century is no exception and will need to accommodate yet another paradigmatic shift in knowledge of light because of a matter of great importance; the knowledge to successfully stop light. This new knowledge of protons of light that can be
trapped to a point close to zero allows light to behave as a single super atom to be a resource for technology that will offer unimagined benefits to medical science and computer technology. However, as science is not the sole domain of truth, the full potential of light technology will only begin to emerge with a new way of seeing that coincides with the self transparency of artists.
GLOSSARY

Aletheia: (Greek) truth

das Geschehnis der Wahrheit: the happening of truth

Dasein: existence, standing presence

eidenai: knowledge

Erde: earth

Ereignis: thinking experience

Gelassenheit: letting things be

Gemeinschaft: community

Heilig: holy sublime sacred

Kunstwerk: artwork

Mimesis: (Greek) nature

Natur: nature

Pneuma: breath

Poiesis: bringing forth naturalness of art-revealing

sehen: sight

sein Lichtung: clearing, lighting of being

Techne: craft of art

Ursprung: origin

Urstreit: primal conflict

Welt: world


Bond, T. 2001, The Horizontal Division. Lecture given at University of Sydney.


*Heidegger's Ontological Hermeneutics:*


*Images of Temple of Hera I, Paestum, Italy:*


*Olympic Games 1896 - Present:*  

*PBS - Art:21 - James Turrell interview and clip 1:*  

*PBS - Art:21 - James Turrell interview and clip 2:*  


Steadman, P. 2001, Vermeer and the Camera Obscura http://www.bbc.co.uk/history/


