Theatre of Light – Living Images in Shadows and Light

Exploring effects of 3D lighting on 2D images

This exegesis is submitted in partial fulfillment of the requirements for the degree of the Master of Arts by Research.

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DECLARATION BY THE CANDIDATE

I, Michael Richard Spiteri, declare that:

a) except where due acknowledgement has been made, the work is of the author alone;

b) this work has not been submitted previously, in whole or in part, to qualify for any other academic award;

c) the content of the exegesis is the result of work that has been carried out since the official commencement date of the approved research program;

d) any editorial work, paid or unpaid, carried out by a third party is acknowledged;

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1.0 SUMMARY OF RESEARCH

How the artist deals with death, loss and the spiritual has been a major theme of art throughout history. New media tools provide renewed opportunity to explore these themes while testing the tools against a familiar subject.

This research attempts to deal with these themes by examining and reinterpreting them through myths while evaluating the tools of creative media. In so doing, this has the potential to uncover any revealing insights that are relevant to the times.

The project uses myth to explore the potential of the interaction between 2D digital images and 3D virtual environments. Elements of particular significance in the 3D virtual environment – such as Lighting and Point of View – are examined from the perspective of an artist who has practised only in 2D. Twelve final works have been generated for this project and presented as large-scale digital prints, along with a short video piece.
2.0 INTRODUCTION

This project deals with themes of death, loss and the spiritual by examining and reinterpreting universal themes of mythology. It does so by evaluating the tools of creative media, and the apparent idiomatic possibilities of the tools with regard to developing new meaning.

In particular, the research explores 3D lighting techniques of 2D images by applying theatrical protocols within a virtual, computer-generated environment, and using myth as context and driving principle. The idea of theatre ‘flats’ has been applied as a device within the virtual realm to provide a conceptual housing and rationale for virtual lighting techniques, virtual camera techniques, digital rendering and digital printing.

Creating the images

Though the means of expression changes across time, how we deal with themes related to death, loss and the spiritual is an ongoing task. The implied promises of new media are both intriguing and seductive; it has the potential to reinterpret themes and challenge the accepted aesthetic, just as new tools have done for artists and researchers from the very beginning. When technology dominates the scene – as it does now – the urge to use it when making art is an urge to express the culture of which it is a part.

This research proposes to use aspects of new technology in a manner that is not generally seen. My objective is to make images that stretch the limits of digital media
by using a conventional driver (myth) in order to make comparisons of the apparent
capabilities of old and new media. It is not my intention to challenge the artistry of the
masters! Instead, I imagine what might have been if the masters had been given
access to the powerful and almost magical tools that I can carry in my small
computer. Digital media has the capacity to produce results that have never been seen
before; this research looks at such results to establish their value in light of the current
zeitgeist.

3D images can be somewhat clichéd and the aesthetic is frequently bound up in the
design of computer games or Hollywood animations. But the tools that make them are
extremely powerful and capable of responding beyond their apparent limits. The artist
is no longer restricted to using either 2D or 3D media but can mix and match at will,
blend and integrate and allow one dimension to act upon and with the other as never
before.

**Defining what the image is today**

New tools challenge us to consider the nature of the image itself. What we create
using new technology should perhaps (or inevitably will) reflect the sense of who we
are at this moment in history, what our culture is like, how our species develops, and
it should reflect a general understanding of ourselves in spiritual, psychological and
physiological terms. In particular, and most pertinently for the artist, our newly
developed tools and newly acquired skills lure us with the promise to illuminate our
way ahead. Reinterpreting universal themes of death, loss and spirituality in
mythology provides the opportunity of addressing the symbols and narratives
appropriate to our own mythology today. In this sense, then, the image today is pretty
much what it has always been – a manifestation of the times and the minds.
3.0 PURPOSE OF THE RESEARCH

The purpose of this research is to test a small toolbox of new tools to see what they can do with themes of death, loss and spirituality, and to examine how they may provide new strategies of practice that will lead to interesting and satisfying images based upon myth. By exploring the potential of the 2D image within a 3D environment, I hope to discover if there are unrecognised benefits of 3D virtual lighting techniques that would make them particularly interesting in the practice of 2D artists. It is also my purpose to produce a prototype folio of works that will show the results of such an investigation and provide evidence of the authenticity of the medium.

The project investigates and explores the potential of 2D images when taken into 3D environments. Elements integral to 3D – such as Lighting and Point of View – are examined from the perspective of an artist who has previously practised only in 2D. 3D image-making and animation is familiar to us through Hollywood films and video games. Its aesthetic seems well entrenched. However, even upon the briefest examination, it is clear that the potential for the use of this digital tool is barely tested to date; most users seem content to use it in the most conventional way. Amongst its numerous alluring characteristics is the capacity to render photo-realistically, and to allow for lighting variation in a range wide enough to accommodate both natural and artificial environments.

This project has concentrated on 3D lighting techniques of 2D images using theatrical protocols, with myth as context. By applying 3D lighting techniques to otherwise flat
(not three-dimensional) objects and by testing the variety of lighting available, this project explores the possibility of developing new protocols in order to reproduce in the virtual world the drama of stage design in the actual world. Potentially, the works challenge current aesthetic sensibilities.

It seems that 3D image-making and animation has created a new kind of communication that is well entrenched in modern life and undoubtedly very entertaining. It has universal appeal but comes at a considerable cost in production terms. The commercial pressures of such costs have been one of the key factors in establishing the aesthetic of the medium. “Arguably, this has already reached its zenith in PIXAR’s *Monsters Inc.* (2001), and the novelty of the technique may have passed.” (Wells 2002: 2)

The apparently immutable and commonplace aesthetics of virtual 3D, and the very nature of digital image-making, broadly leave the digital artist struggling against accusations of inauthenticity. It is a problem that has been around since Walter Benjamin’s blast against photography (Benjamin 2008). But a work of art is a form of human communication rooted in human experience, and human experience now includes communicating in ways not familiar to the old masters. To argue that digital art is not quite valid because it can be endlessly reproduced is to make a closed case that misses the point and preferences uniqueness-as-art regardless of the value of the concept or the production and, indeed, regardless of the value of the object itself – reproducible or not.

We all share an attachment to art because we see it as a portrayal of aspects of the
human condition and, as such, we attach an emotional connection to the work as a shared experience. How a fine artist produces this work has generally never come into question; people have understood that tools are a necessary part of the production and the way in which artists utilise those tools has been generally accepted as a part of the craft. The digital artist uses the computer, which, in part, is the fundamental problem of authenticity because we all use the computer in the daily business of life. Therefore, the equivalent to the mysteries of the craft skills that are native to the painter in oils are within reach of anyone sitting down to their screen, inevitably engendering the ‘I can do that’ reflex as we load the next plagiarised masterpiece into YouTube. It is part of the purpose of this research to look at the concept of authenticity identified by Benjamin and reconsider it in light of the times.

The Inherent Metaphor: Using myth as a driver of the research

“We fail to see any connection between ancient myths and our attitudes to the ‘heroes’ or dramatic events of today. Yet the connections are there. And the symbols that represent them have not lost their relevance for mankind.” (Henderson 1954: 97)

Myths are, ultimately, metaphors, and ones that are directly linked with our heritage, culture and memory. They have evolved and developed over time into recognisable images and symbols, to which we respond both consciously and subconsciously. “The life of a mythology derives from the vitality of its symbols as metaphors.” (Campbell 2002: 45) These symbols and metaphors that are building blocks of myths may, “wear different masks as they impact with different cultures, but do not change in essential
meaning. (Tigue 1994: 25) They contain common themes and messages that connect us globally and historically; they are our ‘cultural memory’ and traditionally we understand myths as part of speech and narrative. As Barthes points out:

“It is therefore by no means confined to oral speech. It can consist of modes of writing or of representations; not only written discourse, but also photography, cinema, reporting, sport, shows, publicity, all these can serve as a support to mythical speech. Pictures to be sure, are more imperative than writing; they impose meaning at one stroke, without analysing or diluting it. (Barthes 2000: 110)

Light as metaphor for understanding

“If a light bulb turns out and the superintendent of the building comes in and sees that it isn’t working, he does not say: ‘What a pity! That is the bulb of all bulbs.’ He takes it out, throws it away, and puts in another bulb. What is important? Is it the illumination, or is it the bulb? What is important and of what are these bulbs the vehicles? They are the vehicles of light, or for our purposes, of consciousness.” (Campbell 2001: 21)

Campbell explains the metaphor for light:

“The goal of religions in the East is to get you to shift your focus from the phenomenal to the transcendent. So that you identify yourself not with the bulb, the head, the body, but with the consciousness, and when you have identified yourself
with the consciousness, you have identified yourself with solar existence, what Kant called the monumental world, and you were never born and you will never die.” (Campbell 2003: 14)

This idea that light was an essence that could penetrate through substance was, in the Age of Faith (the Middle Ages), a fundamental belief. Light had the capacity not only to connect souls, but it could also pass through solid matter.

“Just as the notions of space and time that prevailed in the medieval mind were different from the Greek ones, light in early Christian thinking ceased to belong to the external world alone. According to these religious beliefs, light did not travel from a source through space and time. It was instead an ectoplastic manifestation of the Spirit; a bridge between this world and the other. Light originated from within the soul and its rays were the vehicle a soul could use to get from one space to another, as well as from one kind of time to another. The artist depicted light as a spiritual essence: either as a luminous halo or as inner radiance.” (Shlain 2007: 45)

This idea of light was also expressed by Campbell:

“An artist can take a brush and put black on white and bring forth all of the inflections of the natural world. By using light and dark, he depicts the forms, which in their very essence are composed of light and dark. This is a wonderful thing. The
outer form of light and dark is a manifestation of what is within.” (Campbell 2003: 85-86)

“The question is whether or not there can ever be a recovery of the mythological, mystical realization of the miracle of life of which human beings are a manifestation.” (Campbell 2003: xviii)

Fundamental to Campbell’s beliefs was the holding that all spirituality is a search for the same basic, unknown force from which everything came, within which everything currently exists, and into which everything will return. This elemental force is ultimately ‘unknowable’ because it exists before words and knowledge. Although this basic driving force cannot be expressed in words, spiritual rituals and stories refer to the force through the use of metaphors – stories, deities, and other objects of spirituality. For example, the Genesis myth in the Bible ought not to be taken as a literal description of actual events, but rather its poetic, metaphorical meaning should be examined for clues concerning the fundamental truths of the world and our existence.

In his series of books, *The Masks of God*, Campbell (Campbell 2003) tried to summarise the main spiritual threads common throughout the world. Tied in with his explanation of the spiritual threads was his idea that many of the belief systems of the world, which expressed these universal truths, had a common geographic ancestry. And by examining new metaphors through the reinterpretation of myth today, the artist has the potential to find new meaning and perhaps bring us in closer touch with
Campbell’s ‘unknowable’ force.

“But that new mythology is already implicit among us, native to the mind, waiting… to be awakened by a new metaphoric symbolization. Artists share the calling, according to their disciplines and crafts, to cast the new images of mythology. That is, they provide the contemporary metaphors that allow us to realize the transcendent, infinite, and abundant nature of being as it is.” (Campbell 2001: 6)

The tools of the 3D virtual environment seem perfectly suited to supporting the expression of concepts that depend for their metaphoric resonance upon light. It is for this reason that I have chosen myth as the driver and context of experiments that I have undertaken in image-making using such tools.
3.1 SUMMARY OF THE ISSUES INHERENT IN THE PURPOSE OF THIS RESEARCH:

- Can the new media toolbox produce images that communicate the many and varied aspects of myth in a manner appropriate to the tools and to the times?

- Can they produce images of myth in spite of the aesthetic commonly attributed to and expected of them?
3.2 Annotated Bibliography: Practical and Theoretical Influences

Theorists

The Haunted Gallery: painting, photography, film c. 1900 (Nead 2008)

Art and technology were brought together in acts of performance that continued to provide subjects for visual media well into the twentieth century. The major illusions of the Victorian theatre often exploited audience expectation with confounding feats of illusion and animation. Spiritualism was a well-recognised force at all levels of culture and society by the end of the nineteenth century. There was a belief that we could connect with the dead, and the technology of the day was utilised to create all the necessary visions and effects to satisfy this longing.

“The central tenet of spiritualism, to put the living in touch with the dead, along with its reliance on visual manifestations of spirit activity, made the movement a key participant in the cultural expression of animation and visibility that generated much pictorial, literary and theatrical production in this period was based on the assumption that we could get in touch with the dead, relying on visual manifestations of activity from the spirit world.” (Nead 2008: 82)

Haunted portraits and statues came to life in theatrical productions, and the ghosts of
loved ones spoke through mediums during séances.

In some ways, the Spiritualist movement was at the forefront of a culture that recognised its innovations in industry and technology, and examined the potential of that progress in relation to issues of death, loss and the spiritual. By the end of the nineteenth century, the spiritualists and the magicians parted ways; magicians were keen to use modern technology to improve their illusions and enhance the status and authority of the modern magician. “As in painting so also in magic. To produce a magical effect… is a work of high art.” (Nead 2008: 9) Magic, art and technological ingenuity were all coming together in the early twentieth century, and the theatre marked the frame for all the illusions and effects of the spectacle. This trend formed the basis of modern light art beginning in the 1920s, generated by electricity and electronics, which is still expanding into the early twenty-first century.

**On the Art of the Theatre (Craig 2008)**

The first principle sources of modern light appeared in the order of electric stage lighting, introduced in the early 1880s, colour organs (electromechanical devices built to represent sound or to accompany music in a visual medium by any number of means) and cinematic projections. Prior to the birth of modern light, theatrical performances had already used electric light as a form of expression. Adolphe Appia and Edward Gordon Craig were pioneers in this field. Appia created a new ‘rhythmic space’ with stage lighting, and Craig revealed the pure movement of things ‘in silence’ with this medium, and had already thought of creating new art light and movement. (Craig 2008)
“I have always thought that technical knowledge or experience was indispensable for a deeper comprehension of art works and have been in favor of putting the stress equally on the processes of creation and on the open-ended art work. The danger of becoming too much involved – and even swallowed-up – by technical considerations seems to me a sign of immaturity in an artist.” (Nechvatal 2004)

From Technological to Virtual Art (Popper 2007)

The invention and artistic applications of cinema can be seen as another source or influence on modern light art. “A close link between the visual arts and the technical and aesthetic achievements of cinema was established” (Popper 2007: 14) and led to combined research and developments in the art of light. Early noteworthy experiments included Leopold Survage’s ‘Rythmes colores’ in 1912. In the early 1950s Norman McLaren started experimenting with graphic art and sound and later with 3D movies. In any case, cinema can be held chiefly responsible for the use of screens (or blank walls) as ‘support’ for lighted images in a considerable number of works in the art of light to this day. (Popper 2007: 14-15)

The next crucial trend in the establishment of modern light in the 1920s is due to the research conducted by the Bauhaus masters, in particular Laszlo Moholy-Nagy. His vast political and artistic projects were based on the model of constructivism, a movement that wanted to integrate all artistic practices with everyday existence.
Moholy-Nagy’s research was conducted with the new media of his time: photography and film. These technical procedures were embedded in his experimentation with light, and these new endeavours constitute a link with current art forms that utilise the new technologies of holography and interactive digital installations – both of which are still largely dependent on the light element. “In fact, what strikes the observer in this complex mobile work is the movement of light and shade projected on the walls and ceiling, and also the varying reflections on the metal elements of the construction itself. The power of the work, in effect depends more upon the reflection than on the original material.” (Popper 2007: 16)

Figure 1: Laszlo Moholy-Nagy, Light-Space Modulator 1923-1930

It was around 1950 that plastic art of light reappeared, generating interest from widely differing artists. The works of such as Gyula Kosice and Roger Desserprit are
exemplars. Notably, works such as Nicolas Schoffer’s three-dimensional constructions with light effects, and Nino Calos’ with light projections of fluid forms on screens, were amongst the most effective. Research into light art preceding the advent of laser, video, and computer art centred around luminokinetic experiments, neon art and environmental art. This led to the development of experiments such as ‘the lumidyne system’ by Frank J. Malina, and the lumino-dynamic structures of Nicolas Schoffer. Gyula Kosice and his ‘luminous structures’ introduced neon light as a principal material for sculpture, and included other artists – like Stephen Antonakos and Joseph Kosuth – in this context, with his conceptual pieces written in neon.

Light effects are now present in most forms of multimedia, virtual, technological and video art. Live performances and communication works that use video and combinations of video-related research all depend upon light effects as a major component.

“Without the pre-eminence of light, the visual and spectacular element par excellence, video art would not have progressed from its early anti-television attitude to a new outlook of considerable social significance, nor would it have developed with a certain continuity and coherence from experimental film techniques and aesthetics to new visual research. As regards the passage from the optics to the digital, one can posit that with the coming of the computer, new automatic processes for the generation and the socialization of the image will emerge. The digital image, in fact, is no longer like the
optical image in photography, cinema and television... but instead a synthesis.” (Popper 2007: 22)

This synthesis Popper refers to is the combination of mathematical calculation involved with the language of computer programming, and the necessity of ‘visual apprehension’ still required of the spectator. New theatrical aspects of light have been exploited in creative media art, along with the new impetus for investigating light in present day technology; underlying all of this is the question of “whether artists aim at more comprehensive meaning involved in the art of light than a purely formal exploration of its effects.” (Popper 2007: 27)

The future (technical and aesthetic) exploration of light by artists holds immense potential, and the advances to creative media technology provide an impetus to exploit this potential. Light holds vast aesthetic possibilities with regard to environmental qualities and cosmological and spiritual connotations. This frees artists to create for a new and different audience, follow their own creative urge, or invite participation – so that, inevitably, the spectator is involved in the reinvention of art.

“The only true task for an artist is therefore to make humans conscious of the physical forces that surround them. This consciousness can only be achieved by liberating these forces through an aesthetic experience. This experience must be an active one, involving a combination of human senses.” (Popper 2007: 32)

New technology has evolved to improve and enhance the quality of our lives and to
meet our needs in a growing world. Many innovations in technology have been applied to other areas of human development, including fine arts. As with previous technological advances, there are skeptics who struggle with accepting the challenge of adapting to new processes and change. New products and services, whether they are intended for use in business, public service or by the individual consumer, have to either be an improvement or satisfy some previously unmet need. New media and digital expression is a break from traditional paradigms; it is highly innovative.

The Language of New Media (Manovich 2001)

Technology can create entirely new possibilities for artists to communicate. Technology has always been seen as a reflection not only of the way we live but also of the way we express ourselves in the way we live and work. The challenge is in redefining the boundaries of art to in order to consider whether digital art constitutes a branch of contemporary art. Lev Manovich increasingly portrays today’s contemporary artist as a kind of journalist. He maintains that, “what matters is the initial idea, a strategy, a procedure, rather than the details of how the findings or documentation are presented.” (Manovich 2001)

Manovich provides this analogy as a clear contrast to the traditional role of an artist as artisan or craftsman. “In short, a typical contemporary artist who was educated in the last two decades is no longer making paintings, or photographs, or video – instead, s/he is making ‘projects’. This term appropriately emphasizes that artistic practice has become about organizing agents and forces around a particular idea, goal, or procedure. It is no longer about a single person crafting unique objects in a particular
media.” (Manovich 2001) His arguments raise the question of whether digital art has become fundamentally concept based, the process of its creation being irrelevant or secondary.

Manovich also observes that new media artists need to generate not only brilliant images or sounds but, more importantly, solid discourse, in order to have a significant impact. “That is, they need to situate their works in relation to ideas that are not only about the techniques of making these works. If brilliant computer images are not supported by equally brilliant cultural ideas, their life span is very limited.” (Manovich 2001: 155)

Perhaps both contemporary art and digital art play very different roles and both are culturally important for different reasons; they are also both limited in a complementary way. One is deeply rooted in its past and the other has no history; this presents the opportunity to embrace the possibilities of both fields and create a unique art form.

The problem, as Manovich suggests, is no longer how to generate convincing images but how to blend them together. Whereas we once saw audiences as passive absorbers of mediated messages and later as selective interpreters of media, we now see them as active participants in meaning information. Manovich has coined the term ‘ontological montage’ to mean the coexistence of ontologically incompatible elements within the same time and space.

“Although digital compositing is usually used to create a seamless virtual space, this does not have to be its only goal.
Individual layers can retain their separate identities rather than being merged into a single space, different worlds can clash semantically rather than form a single universe.” (Manovich 2001: 155)

3D technology is already available and it not just about movies, internet or games. It’s about getting closer to total immersion for any communication experience. And since creating 3D images from 2D is a matter, in part, of data processing, it’s only a matter of time before the technology can be packaged in such a way as to become even more readily accessible. Yet, to date, the potential for the use of this digital tool is barely tested. We are fixed within the fictional space and metaphors of classical cinema, constantly asked as a viewer to identify directly through the perspective of the character, in a hyper-realistic world. The world of the theatre also maintains its own sense of reality: the viewer is clearly separated from the stage, limited in their view by their physical relationship to that stage. In a virtual space, new media allows us the opportunity to explore the visual protocols as ‘ontological montage’ by applying 3D imaging techniques to otherwise flat (not three-dimensional) objects and testing the variation of lighting techniques available. The technique used in this project mimics, in the virtual world, the actual world of stage design in order to produce a virtual diorama, with no spatial and temporal limitations.

Digital medium – art or craft?

The Craftsman (Sennet 2008)
“You can teach a man to draw a straight line; to strike a curved line, and to carve it... with admirable speed and precision; and you will find his work perfect of its kind: but if you ask him to think about any of these forms, to consider if he cannot find any better in his own head, he stops; his execution becomes hesitating; he thinks, and ten to one he thinks wrong; ten to one he makes a mistake in the first touch he gives to his work as a thinking being. But you have made a man of him for all that, he was only a machine before, an animated tool.” (John Ruskin, quoted in Sennet 2008: 161)

The very word ‘craftsmanship’ suggests an archaic time, characterised by skilled, manual labour. But this term also has the capacity to be applied to artists who are using new media tools today. If we are to accept Bolter and Grusin’s (2000) theory of remediation then we should logically accept that new media reappropriates the traditional techniques of older media, and, by so doing, creates new media craftsmen.

**The Work of Art in the Age of Its Technological Reproducibility; and Other Writings on Media (Benjamin 2008)**

Walter Benjamin’s 1936 essay, “The Work of Art in the Age of Mechanical Reproduction”, provides an all-embracing theoretical basis for a concept of art that is changed by the media. The essay argues that art can overcome the limited quality of the manually produced original by technical means, thus reaching a new audience and mobilising that audience socially.
“The uniqueness of the work of art is identical to its embeddedness in the context of tradition. Of course, this tradition itself is thoroughly alive and extremely changeable. An ancient statue of Venus, for instance, existed in a traditional context for the Greeks (who made it an object of worship) that was different from the context in which it existed for medieval clerics (who viewed it as a sinister idol). But what was equally evident to both was its uniqueness, that is its aura.” (Benjamin 2008: 14)

Walter Benjamin’s ‘auratic’ theory uses the term ‘aura’ as an aesthetic metaphor in order to support his thesis of artistic decline in the age of mechanical reproduction. The lament for the loss of aura is equivalent to the lament for the loss of the mythical romantic value of authenticity in relation to the individual creation, an attitude strongly rooted in bourgeois-intellectual tradition. Benjamin’s argument that the mechanical reproduction of a work is responsible for the decline of the aura is a shaky one at best. Aura is a category of perception, and can therefore only arise during the process of reception. It is not inherent to the originality or authenticity or uniqueness of the work’s creation; it is not necessarily bound to the material or the object, but is observer-dependent.

Central to the idea of any great artwork is its visual representation. But authenticity, too, is regarded as highly pertinent. In many ways, digital images are far superior in representing line and form, and are capable of ultra-real, high definition results that
would far exceed the expectations of earlier generations of artists. It is, in many ways, curious that digital exactitude should be the cause of accusations of inauthenticity and that the results lack certain essential features of genuine art. Critics complain, for example, that the computer lacks emotional subtlety – an observation not heard about Michelangelo’s mallet and chisel. This attitude prevents people from engaging seriously with the products of computer art, and threatens to devalue the artistry of the human being behind the computer and to undermine their status as an artist. (Boden 2007)

Certainly, the advent of new media heralded new possibilities for art and artistic expression, and began the process of attempting to create images worthy of the technology we use and the culture we live in. Bolter and Grusin’s theory of remediation (Bolter and Grusin 2000) also provides some insight into why computer-generated art might be thought to lack authenticity. New media art has done what new media does well; it has re-used, borrowed and re-purposed images to the point of overkill. But the dilemma associated with the machine has been constant well before industrial society: “is it a friendly tool or an enemy replacing work of the human hand? In the economic history of skilled manual labour, machinery that began as friend has often ended up as an enemy.” (Sennet 2008: 81)

To a degree, artists have been skeptical of using new media because of the criticism. But, increasingly, artists ask how they may engage with the new processes and how the new processes might redefine their artistic expression. Like any other period in history, the answer is dependent on the artist and his/her commitment to developing habits, techniques and craftsmanship that will allow for exploration of the benefits of
the new tools. The new media artist, just like the old media artist, must prepare to fail, accept his/her own flaws and limitations, and learn from accidents – both beneficial and catastrophic. In Ruskin’s view, “the craftsman serves as an emblem for all people in the very need of the opportunity for ‘hesitation… mistakes’; the craftsman must transcend working by the ‘lamp’ of the machine, become in his or her doubts more than an animated tool.” (Ruskin, quoted in Sennet 2008: 161)

Approaches to using new media technology in the creative process will obviously vary with each individual artist, as will their results. Each artist always strives for perfection – not mechanical perfection, but one that reflects the artist’s imagination and vision. Each artist strives to leave their mark, and the ‘maker’s mark’ can be seen not through the signature but through the individual expression and view of the world. “A machine, like any model, ought to propose rather than command, and humankind should certainly walk away from command to imitate perfection. Against the claim of perfection we can assert our own individuality, which gives distinctive character to the work we do.” (Sennet 2008: 105)

“Despite the fact that the notion of digitality to promote, describe or identify a still emerging aesthetic seems already jaded… there is nevertheless something specific about digital art. This specificity is in part a result of the mode of producing, consuming and participating with those machines that are the condition of possibility for digital art practice.” (Munster 2007)
One fundamental concern raised by digital imaging technologies is how new modes of electronic mediation affect the definition of fine art, the identity of which has already had a century’s critical interrogation as well as competition from the entertainment and commercial sectors. There is, however, as Anna Munster points out, something quite ‘specific’ about digital art; this is a reference to the tools that are used in the process of creating art in a digital medium.

**Abstracting Craft: The Practiced Digital Hand (McCullough 1996)**

McCullough makes a particularly compelling argument for the validity of embodied knowledge. “Academics,” McCullough states at the outset, “despite a growing faction interested in ‘body criticism’, generally ignore the hands in their epistemologies of mind.” (McCullough 1996: 5) McCullough notes that, within the limited experiential frame of computer production, there are major obstacles to the acquisition of what he refers to under the rubric of craft. His argument reflects an ongoing concern expressed by traditionally trained artists as they watch a new generation adept only at scanning, appropriation, and the use of software (their fear revolves around computer design students never learning to draw). His suggestion is to reconceptualise electronic tools so that they are used not “so much for automating tasks as for abstracting craft”. (McCullough 1996: 81) Paradoxically, what McCullough bemoans is the process of abstraction that introduces the distance between hand and material, mind and process. By emphasising the hand as an instrument essential to epistemological development, cognitive processes, and artistic articulation, he proposes a synthetic resolution of traditional craft and new technology – rather than pitting them in an apparently inevitable, unproductive opposition.
While Manovich proposes the need for new media to create brilliant images supported by equally brilliant cultural ideas, we may also perceive a need to return to the early principles of fine art that include an appreciation of craftsmanship. The two are not incompatible; indeed, brilliant cultural ideas and great craftsmanship with which to express them may be said to be the hallmark of great art. Digital tools preclude neither of these essentials.

Campbell on mythology

The Inner Reaches of Outer Space: Metaphor as Myth and as Religion (Campbell 2002)
The Hero With a Thousand Faces. (Campbell 1993)
Myths of Light, Eastern Metaphors for the Eternal (Campbell 2003)
Pathways to Bliss: Mythology and Personal Transformation (Campbell 2004)
Thou Art That (Campbell 2001)

In understanding and appreciating the framework of ‘the myth’, the aim is to reveal its meaning and relevance within the scope of re-interpretation using new media. New technology seems to militate against the psychological exploration associated with myth, in that it is so firmly based in the mathematical and physical sciences, while myth is rooted in the arts and the ‘softer’ science of psychology. This dichotomy is intriguing because, potentially, it provides for a thorough test of the capabilities of the tools, while also identifying the limitations in the communication of mythical ideas and images.
A personal interest in myth and interpretation of myth fuels the research and supports the belief that myth, reinterpreted using modern communication tools, may yet provide insights in a society struggling with change and changing social, psychological and artistic parameters. Myth can provide a wide range of different kinds of insights into basic human questions, like: what is it to be human; and how do we fit into the scheme of things? “The old gods are dead or dying and people everywhere are searching, asking, what is the new mythology to be, the mythology of this unified earth as of one harmonious being? I believe the new mythology must embrace the findings of science.” (Campbell 2002: 82)

The Transformation of Consciousness in Myth: Integrating the Thought of Jung and Campbell (Tigue 1994)

One common meaning of myth associated with its cognitive aspects is that of myth as a deception, distortion or falsehood. The origins of this meaning are apparent in the ancient word ‘mythos’, which devolves from ‘logos’. This became firmly established during the Middle Ages when the word myth became associated with a pagan lie, which resulted in the wide range of meaning behind myth today. “The term ‘myth’ is commonly interpreted as meaning something that is false or not real. Everyone has heard say: ‘That’s just a myth,’ meaning it is not true. This can be viewed as a misuse of the term, as myths never claim to be about actual persons, places or events, although they can contain allusions to actual persons, places or historical events. Myths do in fact often reveal truths without being ‘true’ stories.” (Tigue 1994: 13)

Myths are ancient narratives that attempt to answer the enduring and fundamental
human questions, and have been passed down predominantly through language and images. Despite cultural and temporal differences, they are, “common to all cultures and peoples and although attempt to be quite different they are dressed in different style clothes, but what lies under their garments is the same.” (Campbell 2004: 461-462) Culturally, they help unite people to their group and confirm the validity of their way of life. Campbell suggests that one of the main functions of myth is sociological: “the enforcement of a moral order: the shaping of individuals to the requirements of their geographically and historically conditioned social group.” (Campbell 2004: 4-5)

“The content of myths, like that of symbols, is meant to be transcended in that it points to something beyond itself.” (Tigue 1994: 135) Through the language of symbols and metaphors, myths ‘communicate’ using words and images to release their power. Cultural anthropologists have shown that the same symbolic patterns can be found in the rituals or myths of small tribal societies still existing, unchanged for centuries, on the outskirts of civilisation. (Jung 1997 Archetypes) The numerous environments in which cultures arise create a need for new images, to which words are then attached. The content of myths are not ultimately relevant for understanding mythology as a whole but only for individual interpretations of myths and their significance. “The symbols and metaphors that are building blocks of myths may wear different masks as they impact with different cultures, but do not change the essential meaning.” (Tigue 1994: 25)

Man and his Symbols (Jung 1978)
The Archetypes and the Collective Unconscious (Jung 1997)
Jung on Active Imagination (Jung 1997)
When we read myths and see their related images, do we make the connection or do we fail to see any connection or relevance for us today? The answer is not clear-cut yet the connections are there. And the symbols that represent them have not lost their relevance. (Jung 1997 Archetypes)

Jung saw the universalised symbols and images that appear in myth, religion and art as highly polished versions of the archetypes lurking in the dark waters of the collective unconscious. Jung called these elaborations ‘eternal images’ that are meant to attract, to convince, to fascinate and to overpower. These images are created out of the primal stuff of revelation and reflect the unique experience of divinity. That is why they always give man a premonition of the divine, while at the same time safeguarding him from an immediate experience of it. Thanks to the centuries-long labours of the human spirit, these images have become embedded in a comprehensive thought system that ascribes order to the world. At the same time, these images are represented in mighty, far-spread and venerable institutions like the Church. (Jung 1997 Archetypes: 8)

What Jung is suggesting is that this imagery arises in response to the unrelenting demand of the unconscious to find an outlet for its energies – the archetypes. Reality is masked in the language of symbols. Myths attempt to unmask these symbols by translating to consciousness the images from the archetypes of the unconscious. New words or word pictures – symbols – are invented to make sense of these universal expressions of energy, which filter through individual and communal
consciousnesses. “Myths infuse the world with transcendent images to which people could not readily relate without the language of symbols.” (Tigue 1994: 33)

“It is the patterns and the psychic processes behind these patterns of psychic activity that are universal and collective in their nature. Hence, a psychological understanding of myths enables people to become aware of the ceaseless process behind the forms.” (Tigue 1994: 26)

The images and symbols of myths are not necessarily everlasting. Their presentations can change, depending on the advances of consciousness that have occurred by new discoveries in science, change in social attitudes, and personal growth experiences. On the other hand, some mythic images do survive, but take on the characteristics of the culture in which they now participate. The dragon slayer now battles with a corrupt corporation, or a journey across the sea is now a voyage through outer space. (Jung 1997 *Archeatypes*: 15)

While recognising Jung’s archetypal symbols and universals, mythologist Joseph Campbell sees myth as the story of the individual who realises his true nature through heroic struggle. To Campbell, mythology is ultimately and always the vehicle through which the individual finds a sense of identity and place in the world. Like Jung and Frazer, Campbell sought to present the master theory through which all myths could be understood. In his view, there was a single ‘monomyth’ organising all such narratives, outlining some of the archetypal patterns Campbell recognised.

In Campbell’s view, heroes were important because they conveyed universal truths
about one’s self-discovery and self-transcendence, one’s role in society, and the relationship between them all.

**Artists**

“Duchamp developed concepts which were beyond the confines of any movement and created a philosophical domain of his own which questioned every assumption ever made about art. He felt that the machine had formed modern consciousness.”

(Lovejoy 2004: 45)

Artists that have inspired my work, and who were, in their own time, working and experimenting with new media, include Marcel Duchamp (28 July 1887 – 2 October 1968) who challenged conventional thought about artistic processes and art marketing. Duchamp experimented with many ways to portray motion, by actually making objects change in space through time. Duchamp also cast doubts on the validity of the portrait by questioning the accuracy of a single representation of a person who lived for many years. Conceptually, Duchamp pre-empted digital technology; Duchamp defined mixed media, repeatedly crossing over the traditional boundaries of sculpture, painting and graphics.

*The Bride Stripped Bare By Her Bachelors*, also known as *The Large Glass* (1915-1923), represented a new approach to both the thinking process and materials used. The basis of Duchamp’s aesthetic ideas and attitudes continue to serve as an influence on art today.
Figure 2: Marcel Duchamp, The Bride Stripped Bare By Her Bachelors
Wassily Kandinsky (16 December 1866 – 13 December 1944) was credited with painting the first modern abstract works, as part of a new visual language that was non-representational. He saw the artist’s drive to create as a fundamental spiritual activity, and abstract art as a reflection of an inner spiritual world. Kandinsky believed that the motivation for visual arts is not to duplicate the object precisely, even in its representational form.

Kandinsky’s fascination was mixing colour symbolism and psychology to provide intense imagery. He believed that art is capable of reaching a level of spirituality; and that colour could be used as something autonomous from a visual description of an object. Kandinsky also expressed the communion between artist and viewer as being simultaneously available to the various sense faculties as well as to the intellect known as synesthesia, in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway. These themes of colour, spirituality and synesthesia are all themes that have been explored in my project.

Figure 3: Wassily Kandinsky, Composition VII, 1913
New Media Artists

New media artists who made significant impact on my research include Ray Caesar, an artist who works with 3D tools to create still images based on figures from another world. His images are based on his personal mythology, and draw from his experiences as a medical artist.

In describing his work philosophy, Caesar once commented: “I am reflecting… it is a ‘dream’ or an ‘emotional feeling’, a reality or an illusion?… I am trying to reflect an emotional subconscious reality, a mood or feeling that I can’t put into words, so I make a three-dimensional model and image instead. I use this tool (3D) because I love the endless possibilities not just of what it can do but what this tool can become.” (Szrotek & Banasiak 2007) I have been particularly impressed by his lighting techniques.

Figure 4: Ray Caesar, Metatron 2008

Jon McCormack, who also uses 3D tools, is concerned with evolution systems that show how we relate and view nature, creation and evolution. McCormack exploits the
full potential of new media and 3D environments to create artificial life. His work is asking us to consider ‘life-as-it-could-be’ and “What would it be like if it were made from computer algorithms rather than flesh and blood?” (Tofts 2005: 81) This piece, titled ‘Turbulence’, introduces us to the possibilities of new worlds made visible by computers. McCormack’s work holds particular interest because of the philosophy behind it and his interest in evolution, as a process, a metaphor and a philosophical foundation. His interest lies in the way we relate and view nature and artifice, design and synthesis, creation and evolution.

![Image](image-url)

**Figure 5: Jon McCormack, Turbulence 1995**

Murray McKeich’s images “deal with extreme states of being, where flesh, metal and circuitry combine into vaguely familiar, yet totally alien assemblages.” (Tofts 2005: 28) McKeich’s images served as an important part of my visual research by providing new ways of visualising 3D images made by 2D media. McKeich experiments with automated processes, macros that randomly pull source files into large multi-layer compositions. Groups and hierarchies of layers and sources provided a mix of control
and randomness. What I find intriguing about McKeich’s images is his abuse of technology, which provides insight into new ways of using new media technology to create art.

Figure 6: Murray McKeich, Generative Gothic 2007

The artists considered here all have one common thread – they are exploring and pushing the boundaries of their medium. They have identified with the challenges and the possibilities of expression of a new medium; and, in most cases, this has enhanced the way in which they have expressed themselves.

One of the reasons that new media art has not received mainstream acceptance is because it relies on the computer as its mode of presentation. James Faure-Walker
suggests that the digital lacks the crafted character of ‘handmade painting’. “The surface is cold and anonymous, without the grain, the physical resistance, the visual noise we expect from painting.” (Faure-Walker 2006)

The consistent updates and changes in new media software and hardware have defined the capabilities of the new media aesthetic and what is possible in artistic expression. The printer has also evolved with new media capabilities, so that today we have the potential to faithfully interpret the capabilities of a new media artist. The new media artist has, at his or her disposal, the abundant possibilities of expression that are afforded by the technology of digital printing. We may now see works leave the confines of the cold and impersonal (but magically backlit) box and spring onto the wall, where the artist’s vision is more used to being represented.

For the artist, this means that the creation of work no longer stops at the computer but has the potential to explore new boundaries, ones that best express and capture the vision.
4.0 STATEMENT OF THE PROBLEMS

In exploring themes of death, loss and spirituality, an artist must be prepared to confront and reveal his/her own mind, and commit to a journey of considerable challenge. Death, loss and the spiritual are universal themes, commonly found in comparative mythology. Myths provide guidance in difficult times and give encouragement as we struggle to survive life’s ordeals. In my own journey, it has been useful to study mythic stories for hope. Myths also link us with our past and our ancestors. We can identify with these tales of death, loss and crisis; heroes face their problems and offer insights into how we may cope with our own problems. According to Campbell, this is the fourth function of mythology:

“To carry the individual through the various stages and crises of life, that is, to help persons grasp the unfolding of life with integrity. This wholeness means that individuals will experience significant events, from birth through midlife to death, as in accord with, first, themselves, and secondly, with their culture, as well as, thirdly, the universe, and lastly, with that mysterium tremendum beyond themselves and all things.”

(Campbell 2001: 5)

In studying myth, we can identify with general themes; even now, our human experiences and emotions are still the same. But how does an artist using new media tools reinterpret those themes? Are we capable of expressing feeling and emotion with these tools, beyond the photo-realistic images embedded in today’s cinematic culture? It was Kandinsky who suggested: “the observer of today, however, is seldom
capable of feeling such emotions. He seeks in a work of art a mere imitation of nature… or a presentment of nature according to a certain convention.” (Kandinsky 2006)

Early attempts at the visual expression of feelings connected with loss and spirituality were difficult. As an artist, I struggled with creating imagery that connected with deep emotional themes. As an individual, I struggled to come to terms with my own grief and spiritual feelings. Part of the research has been to attempt to establish whether the nature of the digital tools themselves would, in some way, facilitate such expression.

These tools are precise and produce mathematically perfect shapes and forms; therefore, I no longer need to be concerned with craft issues associated with drawing. But I have had to ask whether precision and technical perfection are what I seek and whether Ruskin’s instructions about transcending the ‘light’ of the machine can be followed.

The first contact an artist makes with digital tools is through the computer mouse, and although mouse varieties exist, the tool is still inherently limiting. Research into this area provided scope for using alternatives like the graphics tablet. Working with Adobe Illustrator allowed me the capacity to draw digitally using a vector system instead of a raster one. However, some adjustments had to be made in order to negotiate between my drawing style and the limitations of the computer and software.

Early attempts, though not perfect, had an energy of their own and appeared to reveal something of a profound nature, something that had a spiritual connection with the
way I was feeling. My initial response to death and loss seemed most readily accommodated by vector images. At that stage I did not feel the need for the photoreal.

**Process of identifying symbols**

The rendering of one’s personal symbols into visual imagery can be very subjective. In trying to connect with our unconscious, we delve into a repository of personal experiences made up of suppressed or forgotten memories and traumas. I had to determine which symbols to choose from that repository in order to communicate issues of death, loss and the spiritual. I was initially concerned that the viewer may not connect with the symbols I chose in the same way that I did.

Jung may have recognised this dilemma, and offers mythology as a solution:

“It is therefore to be expected that the poet (artist) will turn to mythological figures in order to give suitable expression to his experience. Nothing would be more mistaken than to suppose that he is working with second-hand material. On the contrary, the primordial experience is the source of his creativeness, but is so dark and amorphous that it requires the related mythological imagery to give it form. In itself it is wordless and imageless, for it is a vision seen ‘as in a glass, darkly’. It is nothing but a tremendous intuition striving for expression.”

(Jung 2003: 113)

In looking at myths and mythology and its associated symbols, I was able to give reinterpret themes associated with death, loss and the spiritual.
It is, perhaps, a natural response for an artist to associate their feelings with visual metaphors that resonate in their unconscious. My initial thoughts of death appeared to me through dreams and the process of ‘active imagination’. I have interpreted these visual metaphors as being associated with decay and the new life that results from decay. Imaginative activity goes on all the time and is expressed in play, dreams and fantasy. Jung suggests that part of beginning the process of imagining,

“… is to choose an image from a dream, vision or fantasy and concentrate on it. It might be a visual image, an inner voice, even a psychosomatic symptom. You can also choose a picture or other object and concentrate on it until it comes alive. In German there is a word ‘betrachten’ that means making something pregnant by giving it your attention.” (Jung 1997: 6-7)

This process of ‘betrachten’ – making something pregnant and giving it meaning – was evident in the course of creating and expanding on the symbol of decay in the first stages of my project. The tools in Illustrator, including programmable tools like Brushes, allowed me to hone all aspects of my drawing, making it possible to draw and represent as a traditional artist. Any artist now has the flexibility to extend the range of their technique; their ability to automatically apply scripted actions to a number of designs is limited only by their imagination.

Lev Manovich points out that ‘the logic of selection’ suggests that computer software ‘naturalises’ the model of authorship with an emphasis on selection and sequencing...
rather than original design. “The result is a new form of control, soft but powerful. Although software does not directly prevent its users from creating from scratch, its design on every level makes it ‘natural’ to follow a different logic, that of selection.” (Manovich 2001: 129)

The ‘logic’ of which Manovich writes may be likened to a partnership where the dual collaborators each contribute to the output. This collaboration requires a level of engagement and commitment that is new in the process of creating art; the artist must aim to develop a thorough mastery of these tools.

“But that new mythology is already implicit among us, native to the mind, waiting… to be awakened by a new metaphoric symbolization. Artists share the calling, according to their disciplines and crafts, to cast the new images of mythology. That is, they provide the contemporary metaphors that allow us to realize the transcendent, infinite, and abundant nature of being as it is. Their metaphors are the essential elements of the symbols that make manifest the radiance of the world just as it is. Rather than arguing that it should be one way or the other. They reveal it as it is.” (Campbell 2002: 6)

The digital image

The computer is capable of transforming an image, and rendering it with a highly photorealistic representation. In doing so, however, these images present a lack of depth that denies the imagination. These impossible, yet perfect, images are detached
from film text, reduced to spectacle, communicating merely the artifice of the technology that produced them. Manovich writes, “given enough time and money, one can create what will be the ultimate digital cinema: ninety minutes of 129,600 frames completely painted by hand from scratch, but indistinguishable from live photography.” (Manovich 2001: 305) Ultimately, digital cinema aims to produce the look and feel of live action cinema but without live photography.

The digital image is imprinted with the intelligence of the technology itself. But new media has the ability to record and edit images into spatial and temporal montage, which allows a digital image to overcome its indexical nature, presenting the viewer with scenes that never existed in reality. Cinema does rely on the viewer’s willing suspension of disbelief; computers are now used to carefully engineer illusion.

In contrast to nineteenth century ‘combination prints’, which emulated academic painting, digital compositions simulate the established language of cinema and television. Regardless of the particular combination of live elements and computer-generated elements that create the scene, the camera can pan, zoom, and dolly through it. “The interaction of parts of the virtual world over time along with the ability to look at it from different viewpoints becomes the guarantee of its authenticity.” (Golberg 2000)

**Output devices**

“The early technology restricted the output and print results. Early machines used pen-and-ink plotters to produce basic hard copy. In 1970s, the dot matrix printer, much like a
typewriter, is used to reproduce varied fonts and arbitrary graphics. The first animations were created by plotting all still frames of the movie sequentially on a stack of paper, with the motion transferring to 16-mm film and projected. During 1970s and 1980s, dot matrix printers produced most of the visual output while microfilm plotters produced most of the early animation.” (Dietrich 159-169)

One of the most significant changes in publishing came about with the rise of the computer.

“Perhaps the supreme quality of the print is one that is lost on us, since it has so casual and obvious an existence. It is simply that it is a pictorial statement that can be repeated precisely and indefinitely, at least as long as the printing surface lasts.” (McLuhan 2007: 172)

“The computer holds out the promise of a technologically engendered state of universal understanding and unity, a state of absorption in the logos that could knit mankind into one family and create a perpetuity of collective harmony and peace. This is the real use of the computer, not to expedite marketing or solve technical problems but to speed the process of discovery and orchestrate terrestrial, and eventually galactic, environments and energies. Psychic communal integration, made possible at last by the electronic media,
could create the universality of consciousness foreseen by Dante when he predicted that men would continue as no more than broken fragments until they were unified into an inclusive consciousness. In a Christian sense, this is merely a new interpretation of the mystical body of Christ; and Christ, after all, is the ultimate extension of man.” (McLuhan 1969)

4.1 SUMMARY OF THE PROBLEMS INHERENT IN THE RESEARCH

• Choosing an appropriate symbology.
• Identifying which tools will best accommodate the communication of myth.
• Identifying whether the tools are best used together or alone.
• Identifying how best the finished work may be presented and displayed to the public.
5.0 DESIGN OF THE WORK

This research commenced in March 2006 and was supported by my existing interest in generating new and interesting imagery in new media. Throughout the process I have tried to use methods that would lead to a legitimate and creative outcome. Through an extended process of investigation, questioning, reflecting, analysing and then comparing, I was able to develop the essential issues and formulate appropriate questions to pursue. The research method has proved to be something of a hybrid of practice-led activity and comparative protocols.

My method of research activity was broadly as follows:

I regularly engaged in reflecting upon the nature of the results of the image-making and on the process of image-making itself. Such pauses for reflection and analysis might then promote a period of comparison with internal icons or might generate the urge for further action.

A physical engagement with the tools and virtual materials often revealed the unexpected; therefore, through the process of manipulating materials and testing the tools, a greater understanding of the possibilities for the image developed. Because I am so intimately connected with my work, it was also important for me to review my perceptions in order to ensure that the various media were actually facilitating new ways of interpreting and seeing, and that I wasn’t falling into predictable, banal or mundane habits of expression.
I also found that the physical act of running unites my mind, thoughts and imagination. Thoughts and ideas that have arisen while running have become sources of investigation. I realised throughout this process that this method was close to Carl Jung’s practice of ‘active imagination’, whereby one’s own emotions are translated into images or narrative. This process can serve as a bridge between the conscious and the unconscious self, and includes working with dreams and the creative self via imagination or fantasy.

Exploring the meanings of my own visual language through my art and the research has ensured new ways of making sense of themes and symbols. Reading certain texts like Bachelard (1994) and the poetry of Michelangelo were some examples of how I could provide new meaning and interpretation.

Problems I have encountered through my research method have included the inclination to engage with too many ideas when reading and during the process of enquiry. I have had to fight a tendency to generate too many different ideas branching from the central one; I learnt to employ a strict discipline in the selection of a theme. The action of making art, engaging with the process of creative expression – accepting the uncertainty and constant variation – was the most effective way of discovery.

The design of the research was as follows:

**Research design – broad components:**

- Compared new media artists to help in the examination of research with
reference to the artists and new media techniques. See #1 below.

- Engaged with developing a toolbox with which I felt comfortable and that would communicate the concepts as they were emerging. See #2 below.
- Assembled key theorists already known to me and commenced further literature search. See #3 below.
- Analysed and reviewed results as they appeared. See # 4 below.
- Commenced production. See #5 below.
- Troubleshooting. See # 6 below.
- Final evaluation, assembly and delivery. See # 7 below

1. **Review similar work**
   - Identifying artists of both traditional and new media that have provided new modes for experimentation and that have dealt with themes similar to those in my research.
   - Identified artists that have reinterpreted themes of myth and spirituality.
   - Identified artists that have experimented and used light as a means of expression in their art.

2. **Testing of tools**
   - Experimented with conversion and hybrid digital media in 2D spaces.
   - Explored the interactivity between artist and media for the creation of new techniques and outcomes that can potentially identify new forms of expression.
   - Tested images against proposed outcomes. Tested tools used for the creation of new forms of expression against proposed outcomes.
• Identified output options appropriate to 2D artworks, including printing techniques and features associated with emerging printing techniques, with particular regard to those techniques that seemed to promise emulation of backlit qualities usually associated with screen presentation.

3. **Literature search**

• Identified key writers on new media.
• Identified key writers on myth and spirituality.
• Examined the similarities and differences of new media artists to help in the examination of research with reference to the artist and new media techniques.
• Explored and examined the individual process and theories in relation to the topic.
• Chose artists relevant because of their unique backgrounds: two of the artists are traditional artists that have also used new media to extend their visual expression.

4. **Iteration and reiteration**

• Regularly evaluated outcomes in relation to proposed objectives as already defined in the research questions.
• Reconsidered research questions and their ongoing currency in light of my developing understanding of my general field of endeavour.

5. **Commencement of production**

• Finalised appropriate media to be used for the project.
• Determined own interpretation and response to themes outlined in research.
• Regularly reviewed visual interpretations of metaphors and symbols in light of the works as they emerged – in particular, the use of narrative, symbolic and metaphoric expressions and other poetic modes of expression.

6. Production troubleshooting

• Reflected on personal creative process from experimental works and the testing of ideas right through to the finished project.
• Examined the results of images using different media before deciding on final outcomes.
• Evaluated new techniques developed as a result of experimentation in new media.
• Re-examined themes of myth and spirituality in relation to final outcomes and their success.
• Amended images and re-recorded sounds to accommodate likely venue acoustics.
• Investigated editorial requirements.

7. Commencement of final evaluation and amendment of the work

• Assessment of work commenced July 2008 and was completed in January 2009. Written material was completed in March 2009.
6.0 RESULTS

I have chosen to use the tools of new media to explore and investigate the image both in 2D and 3D virtual environments in order to provide examples of the re-interpretation of mythic imagery. I have explored new visual strategies and methods in new media and how they may best represent metaphysical themes like spirituality. I have analysed and reinterpreted symbols and metaphors in both 2D and 3D media with interesting and meaningful results. I have also explored printing techniques that have emerged since the commencement of this project for the presentation of these works.

Presentation of the results

I have produced 12 final digital works using both 2D and 3D digital tools; these works were further developed to produce 12 large-scale prints. There is also a four-minute multimedia animation with sound, produced in 3D media. Specifically these works are the following:

- Digital artworks produced in 2D graphics software, Adobe Illustrator
- Digital artworks produced using the 2D raster imaging editing and manipulation program, Adobe Photoshop
- Four digital artworks built in, surfaced, lit and rendered from the 3D computer graphics program, Autodesk Maya
- One, four-minute multimedia animation using Autodesk Maya with sound recorded into and manipulated in Soundtrack and all composited in Adobe After Effects
- 12 digital artworks presented for final output in print at size A1 using new
printing techniques. See acknowledgements.

**Illustrator images**

The four initial digital works produced in Illustrator deal with psychological themes of myth and spirituality. The ‘flat’, two-dimensional nature of this program meant that in order to exploit this medium I had to take advantage of its limitations and its own aesthetic. Through the choice of symbolism, this particular digital tool was exploited to its full potential. In particular, manipulating the program’s ability to create new brushes and patterns proved to be very powerful and effective in interpretive terms.

**Photoshop images**

The four initial digital works produced in Photoshop are a composite of backgrounds painted directly in Photoshop and visual elements created separately in Illustrator, as described above. The Illustrator images were copied directly into the Photoshop file as vector images. These images were left in their original vector format to enhance their print quality; printing technology reproduces vector images far more clearly and accurately than the raster images native to Photoshop. I decided to paint backgrounds in Photoshop after much experimentation with different backgrounds from plain colour to photographs rich in texture. My decision to experiment with traditional painterly methods in Photoshop is in keeping with the theme of light, the spiritual and the ‘Chiaroscuro’ (Italian for light-dark) – a contrast between light and dark. In reality, a simple composite in the background could have been manipulated with much less effort and from a viewer’s perspective the difference may have been negligible. However, I have found that the choices I made when creating the works had a profound impact on my pleasure in using digital tools. The 3D application in
my new media toolbox provides for photorealistic results but my engagement with the process comes from utilising and exploiting all the tools in as many ways as possible.

Photoshop allowed me to explore the themes of light within a two-dimensional medium, and the results were very different to those made using Illustrator. Although the images were initially flat and graphical, using Photoshop (largely as a result of its light emulation protocols) gave them a totally different perspective, with all the elements forming a deeper and clearer narrative. I found that the use of such lighting emulations gave the resulting images significantly more impact in portraying the theme of spirituality.

**Autodesk Maya 3D images**

Although the images produced in Photoshop improved the results, there was no doubt that the only way to exploit their full potential was to take them into a 3D environment. This proved to be the most difficult hurdle of all. Having created the images in Photoshop, my aim was to develop the lighting techniques within Maya in order to establish whether these techniques had the potential to intensify the literal and metaphorical illumination. Further, I wanted to see if there were any benefits to being able to express change across time (the healing process?) by animating the lights.

The final images particularly focused on experimentation with lighting techniques and, in the adjustment of various options, this led to results that would have been impossible with the use of only one medium. I feel as though I have extended the boundaries of a medium a little – and in ways that reflect the culture we live in.
Aesthetically, I sense that the images do convey an aura befitting the themes through the visual realisation of symbols and metaphors that I have developed in the project.

**Printing images**

The question remained whether the viewer would engage with the images in the same way that I do – whether they would understand the metaphors and the symbols used and whether the images were sufficiently engaging. Originally, I intended to provide just an animated sequence with sound but it became clear that the images deserved the distinction that attaches to the still image. In particular, I wanted to provide the viewer with the choice to still the mind and concentrate – thereby choosing their own level of engagement – rather than rely upon the temporally mandated engagement of a four-minute animated work.

The final prints, however, are an integral part of new media technology because they use the latest in print technique. Colours and definition usually reserved for high-resolution screens can now be produced on appropriate substrates (Kodak Professional Endura Metallic Paper) that will bring out all the detail and colour that the naked eye is able to perceive.

What I have discovered when using the tools of new media to reinterpret mythical themes is that the images I have created also have highly cinematic qualities. Using these tools has given me more than one voice and as an artist it has provided me with multiple views on the interpretation of myth. The printing of my images has given them a screen-like luminance that is spiritually uplifting and verifies Kant’s argument that art can raise the spirit through the beautiful and the sublime.
The techniques I have developed throughout this project through the use of a combination of media have all been a response to light and its importance, particularly related to myth concepts. Strong chiaroscuro – the contrast between light and dark – became a popular effect in Mannerism and in Baroque art during the sixteenth century, and again in the twentieth century in Film Noir. The divine light continued to illuminate; dark subjects were dramatically lit by a shaft of light from a single constricted and often unseen source, a compositional device developed by artists such as Caravaggio (1573-1610) for whom it was a crucial development.

“With Caravaggio light isolates; it creates neither space nor atmosphere. Darkness in his pictures is something negative; darkness is where light is not, and it is for this reason that light strikes upon his figures and objects as upon solid, impenetrable forms, and does not dissolve them, as happens in the work of Titian, Tintoretto and Rembrandt. (Wittkower 1999)

The tools of new media have the capacity to develop these techniques of chiaroscuro and, through chiaroscuro, to communicate myth to a considerable degree.

If we look at Caravaggio comparatively today, it is difficult to understand the extent of our assumption of the availability of light. With light constantly at our fingertips, our view of some of life’s most spectacular sights – stars, planets, and even galaxies – is hampered. For Caravaggio the reverse was true: it was a world in darkness with man looking for light wherever it might be found. While Caravaggio was adding light
in the darkness, I found myself with the capacity to take it away and soak up excesses of it, using negative features in Maya’s lighting panels which allowed me to recreate dramatic effects.

![Figure 7: Caravaggio, Judith Beheading Holofernes](image)

Caravaggio’s techniques prefigured techniques both of photography and of the virtual studio. He is said to have turned his studio into a giant camera obscura, making a hole in the roof to bring in dramatic light, and using candles and lanterns for spotlights and fills. To recreate such scenes today in a photography studio would be very demanding and require a variety of resources including the studio itself, lighting, props and a crew. We can see an example in the work of American photographer Gregory Crewdson (1962–), best known for elaborately staged, surreal scenes of American homes and neighbourhoods. Crewdson is renowned for the great lengths he pursues in pre-production, production and post-production, all involving large sets and crews.
Figure 8: Gregory Crewdson, Untitled, Winter 2005

My digital toolbox allows me the autonomy to work alone, a mode that traditional artists have both suffered and enjoyed, and which I find essential. These tools allow me to pursue the practice of making images alone, undisturbed, while still having multiple facilities at my disposal. Using a 3D program such as Maya in conjunction with other media I am thus able to make all aspects of the image, from its subject matter through all the, sometimes magical, results.

The creative and editorial power of the new digital toolbox I have used has made a significant contribution to my ability to communicate the visual aesthetic I needed. Utilising and balancing light and shadow has created mysterious, sinister, revelatory and spiritual expressions of the evil or sinister and, occasionally, joyous metaphors of the darkness and shadows that give way to illumination. Myth provides perfect scope for these two extremes: the struggle of good and evil; the divine gods and heroes in battle with monsters and the unknown.
Caravaggio used chiaroscuro not merely as visual effect, but also to reinterpret the themes of Christian mythology, “with an extraordinary ability to re-imagine the scriptures and to relate them to his own times.” (Langdon 1999: 6) Light was used as a metaphor for spiritual awakening, when darkness also becomes a metaphor for spiritual sleep and the absoluteness of death. If Caravaggio were to look into my virtual studio, would he not be amazed by my lighting tools?

The new tools have also given my practice a sense of immediacy, allowing alteration and change in response to varying sensibilities in order to direct the outcome of my images. These final images have been surprising, translating into results I didn’t fully expect. They are images which, while not perfect communications, are reasonably exemplary works, and positive indicators that the computer can produce something unique and meaningful in art.
7.0 CONCLUSION

The greatest challenge of this project was the redefining of the boundaries of art and rethinking of its definitions whilst exploring death, loss and the spiritual as major themes. My research attempted to examine and reinterpret myths while evaluating the tools of creative media. In so doing, it had the potential to uncover potentially revealing insights that are relevant to the themes and times.

In exploring and pushing the boundaries of the tools I found that the medium is genuine in its ‘newness’ and provides the artist with the ability to create art from a combination of media that comprise the new media toolbox.

During the course of this project I was influenced by and referenced the divergent theories of many writers of psychological and mythic theory, artists from the traditional forms and artists using new mediums - all of these underpinned and influenced my resultant work.

As with previous technological advances, there are the skeptics and the cynics who struggle to accept the challenge of adapting to new processes and to change. This is no different in the art world but through the practice of creating art with a new medium I became aware of the ultimate power of this new media to transform.

I found the opportunity to create art that interprets mythology in such a way that all the things that influenced me during the period of this project converged. In understanding these disparate elements I created a new ‘practice’. I was able to
produce art that was controlled, reflective of modern technique but above all meaningful to me.

Ultimately the research shows that creating art using the tools of new media produces results of an intrinsic beauty and that are characteristic of the media. Essential to the benefits available in the use of a given toolbox is the issue of selection. In this research I have taken a broad intuition that these programs may be made to operate with each successfully and by experimentation and review, established that a carefully chosen subsets of tools within each application can add value to the subsets of the parent group of applications. It seems to me that the abundance of tools available within each application would allow for a unique signature for any serious practitioner and that gives the lie to the accusation of in-authenticity.

In the development of art and technology we have seen major changes in the way we view and experience art. We have also seen that when art has embraced technology it has provided the impetus for wider forms of expression. We are now at a stage where the tools of new media have provided us with a combination toolbox capable of producing images which are greater than the sum of the parts.
8.0 BIBLIOGRAPHY

Books


**Essays**


**Website documents**


**Images**


9.0 GLOSSARY

Digital
Works produced by computer that form digital representations including images, animation and sounds

New Media
Digital, computerized, or networked information and communication technologies including computer software and printing

New Technology
Computer, Internet, and printing

New Tools
Computer, printer, and software

My Toolbox
Tools that I have used and experimented with within Adobe Illustrator, Adobe Photoshop and Autodesk Maya 3D software

Raster
In computer graphics, a raster graphics image or bitmap, is a data structure representing a generally rectangular grid of pixels, or points of colour. Bitmap is technically characterized by the width and height of the image in pixels and by the number of bits per pixel (a colour depth, which determines the number of colours it can represent. Raster graphics are resolution dependent. They cannot scale to an arbitrary resolution without loss of apparent quality.

Vector
Is the use of geometrical primitives such as points, lines, curves, and shapes or polygons, which are all based on mathematical equations, to represent images in computer graphics.

Vector graphics formats are complementary to raster graphics, which is the representation of images as an array of pixels, as it is typically used for the representation of photographic images. There are instances when working with vector tools and formats is best practice, and instances when working with raster tools and formats is best practice. There are times when both formats come together. An understanding of the advantages and limitations of each technology and the relationship between them is most likely to result in efficient and effective use of tools.

Virtual
That which is not real but may display the full qualities of the real in a virtual space, it is a computer-generated simulation of reality

Virtual Worlds
A computer-based simulated environment usually depicted as two-dimensional, or three-dimensional graphical representations