Painting with Light

A practice-led exploration of contemporary painting and the illuminated frame

DANIEL CROWE

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Abstract

The rationale of Painting with Light is the development of a self-illuminating frame that explores the space between painting and wall-based art. The aims of Painting with Light are to: analyse the self-illuminated frame as a useful device for the paintings as wall-based sculpture, question its function as a frame within the gallery through the rejection of gallery lighting and to examine the usage of thermochromic pigments within contemporary painting.

The following practice-led research offers a cumulative reading of contemporary theories and practices concerning the picture frame, painting, wall-based sculpture, light, the role of the spiritual in art and the gallery environment. *Installation/Painting* is the title given to the research exhibition that presented the artworks and associated manifesto. The research exhibition focused on gaining the spectators considerations of the relationship concerning the space between the paintings as wall-based sculpture due to the light radiating from the self-illuminating frames and the effect this had upon the audience in the gallery. It is an ambition of this research to re-address the spiritual in art and to question if the effect of light upon the spectator has spiritual connotations. Painting with Light uses both quantitative and qualitative methods of analysis to measure the change of experiential sensation within the audience when viewing the paintings. This information is collated from sources such as interviews and questionnaires taken from artists, gallerists and the audience. Within the production of *Installation/Painting,* studio practice investigated combinations of picture frames, surfaces, lighting, thermochromic pigments and acrylic paints in search of justification for the works of art to be viewed as a new technical and aesthetic development within contemporary painting.

The thesis' claim is that the combination of the new self-illuminating frame and use of thermochromic pigments create an original technical and aesthetic artwork for the spectator. Aside from the technical developments and investigation into light, the self-illuminating frame is shown to have a new and positive influence upon the audience experience. The illumination of the gallery space supports this view with the light emitted from the LEDs inserted into the picture frame.

The thesis' investigation into the space between painting and wall-based sculpture has provided the platform for immersive environments to become innovative technical and aesthetic developments within contemporary art. Evidence taken from the research exhibition in the form of questionnaires and interviews found that the combination of the self-illuminating frames and thermochromic pigments had a beneficial effect upon the individual in terms of gallery experience. It is within this experience that Painting with Light aspires to re-address the spiritual in art in relation to the role of light in philosophy. The production of the artworks for this practice-led research has justified placing Painting with Light as a new objective within contemporary art.

Key Words:
Installation/Painting, self-illuminating frame, wall-based sculpture, spiritual, artist, gallery, audience.

Introduction

This practice-led research proposes a self-illuminating frame for a new series of paintings, with an exhibition and manifesto proclaiming its position within contemporary painting. The thesis has four main chapters compiled from academic and practice led-research: picture frame, light, practice and exhibition. This research investigates the experimentation and evaluation of the development and use of a self-illuminating frame as a piece of wall-based sculpture, exploring the blurred space between the fields of painting and installation art. Collation of information from audience participation within the research exhibition was crucial in determining the validity and future aspiration of the research.

Installation/Painting is considered within the gallery context as an extended mode of presentation analysing the atmospheric space that exists between the works of art and the viewer. The works of art are presented as wall-based sculpture with the investigation focusing on the indistinct space that exists between painting and installation art. This arises from the atmospheric lighting formed within the gallery space due to the self-illuminating frame. The research, questions the validity of this indistinct space and its effect upon its audience. The artworks created for the exhibition, *Installation/Painting,* are a hybrid of practices taken from the discipline of fine art, these being wall-based sculpture and installation art. The practice-led research reconciles the issue of painting and installation art as a distinct form and is presented as a research experiment in its own right.

Practice-led research informed the development of the self-illuminating frame and the investigation into its purpose, functionality, value as a picture frame and its

relationship to light and the painted surface. This is in conjunction with the research exhibition, which considers the illumination of the gallery space and its potential effect upon the audience. The research sets out to explore and innovate the discipline and aesthetic of contemporary painting. This is fostered through beliefs constructed in the philosophies of theosophy and Buddhism, and a continuation in practice of Kandinsky and Malevich.

The initial field of enquiry arose when reflecting upon paintings viewed in galleries and the lack of observation paid to the picture frame. It is the frames invisibility in the distinct space between artwork, frame and viewer that the research aims to quantify; as Duro says, 'we see the artwork, but we do not see the frame' (Duro, 1996, p.1). This is regardless of size or the painting that the frame surrounds. Research suggests spectators do not see the frame due to human conditioning and observing representations of paintings without frames in books and articles (Lebensztejn, 1994, p.118). This is caused by an 'imbalance of inquiry that the artwork has received in comparison to its frame' (Duro, 1996, p.1), and as Tarasov says, it is due to the frame being 'located at the periphery of our gaze' (Tarasov, 2011, p.11).

Academic research into the physicality of the picture frame has centred on historical and conservational contexts from a selection of European and American authors and researchers. Late twentieth and early twenty-first century fascination with the frame has re-emerged with an emphasis on reframing paintings within their original frames. The National Portrait Gallery (London) has a dedicated research page on *The Art of the Picture Frame* (title of exhibition and collection guide) of 1986 (National Portrait

Gallery, 1998), comprising of articles by Lynn Roberts, a leading international commentator on frames and co-author of *Frameworks: Form, Function and Ornament in European Portrait Frames* (1994) with Paul Mitchell. Mitchell is a framemaker and prominent authority on frames who has compiled a comprehensive bibliography on the history of the picture frame (Mitchell).

In America, research on the frame and its history is limited in comparison to European texts. Influenced by European design, many texts and exhibitions on frames in America are curated by small, but well established frame companies, for example Gill and Logodich Gallery (Gill, 2000, p.82), and recently, the Getty Center exhibited *Louis Style: French Frames, 1610-1792* (2016). On the contrary, major European museums and galleries have shown many exhibitions of frames, for example, *In Perfect Harmony: Picture and Frame 1850-1920* (1995) at the Van Gogh Museum (Amsterdam) and *Frames in Focus: Sansovino Frames* (2015) at The National Gallery (London).

The relatively unknown, Robert Kulicke, was influential in developing the picture frame in America and inspirational in the evolution of the self-illuminating frame. Kulicke was the last person to design frames for modern painting and photography in the gallery context. Kulicke designed the welded polished metal frame (1960), the Plexiglas box frame (1964) for the Museum of Modern Art (New York), and the metal section frame (1964) for commercial sales (Gherman, 1990, pp.48-51). This is in contrast to the well-known American modernist artist John Marin who 'handcrafted his frames with simple carving' (Marter, 2011, p.258).

Representation of Russian frames is limited with Oleg Tarasov's book *Framing Russian Art: From Early Icons to Malevich* (Tarasov, 2011) one of a few existing texts. Oksana Lysenko has authored small publications on Russian picture frames and organised the exhibition *The Clothing of Pictures: Russian Frames from the 18th to the 20th Century* (2005) at the Russian Museum (St. Petersburg). This is one of only two exhibitions on Russian frames to date with *Precious Framing. The Painting and its Frame: Dialogues* at The State Tretyakov Gallery (Moscow) in 2014.

In addition to investigating the purpose and functionality of the picture frame and its relationship to light and the painted surface, the thesis explores the loss of the frame in 1920s non-objective painting and the large-scale works of 1960s abstract expressionism (Lebensztejn, 1994, pp.135-138). This is in conjunction with the frame as an extension of painting as shown in the works of Wassily Kandinsky, Howard Hodgkin and John Marin, who all painted directly onto the frame thus taking away the frame as a border.

Within the history of image making the picture frame at first did not exist as 'the cave painters of Lascaux painted their images upon unprepared surfaces which lacked boundaries' (Carter, 1990, p.72). Regardless of the so-called loss of the picture frame in the 1920s and 60s, the stretcher frame upon which the canvas was attached acted as a spatial reference for the spectator. Carter says 'without such boundaries, it is difficult to see how the particular elements of an image could ever be interpreted in spatial terms – the very term 'unbounded' implies precisely the absence of a spatial dimension' (Carter, 1990, p.73).

The area of this boundary is seen throughout history in many forms, such as bas-reliefs in archways. In the first instance, paintings and bas-reliefs only used horizontal lines that repeated perpendicularly to allow a ground to position the figures within the narratives presented. These can be seen in the depiction of the *Creation of Adam and Eve, their Temptation and Expulsion from the Idealised Landscape of Eden to Labour on Thorny Soil* (Moutier-Grandval Bible, France (Tours), c. 830 – c. 840) and the bas-relief of the *Panathenaic Procession of the Citizens of Athens to the Acropolis* (Parthenon, 440 BC.).

The picture frames edge first appeared in the Apostolic Age and became popular in the early Renaissance to 'mark the point where 'real space' ends and represented space begins' (Carter, 1990, p.73).

Real space has no end it is limitless. The edge of a picture frame suggests that the confined image must be viewed in a different manner as it represents something other than reality. Carter says that 'without a frame or edge it would be impossible for us to detect the object as being different, so the presence of an edge indicates that what is in view be looked at by a different set of rules' (Carter, 1990, p.149).

The above concept of the frame serves traditional landscape painting well as these 'become 'picturesque', that is they are regarded as having qualities of to-be-looked-at-ness' (Carter, 1990, p.150), but what of modern and contemporary art where the edge has disappeared and there is no depiction of a visual narrative, for instance, light art and non-objective art. In the act of seeing a traditional landscape painting, the spectator uses two ways of seeing, as it is 'neither a simple recognition of

[seeing] 'real things' nor an act of pure visuality where we see nothing but lines, shapes or colours (a pure visual image) but is the synthesis of both registers of looking' (Carter, 1990, p.150).

Non-objective, hard-edged works of art suggest 'there is an intensification of the significance of the edge in that the viewer is being told in a coded way that the quality of being-looked-at-ness is to be engaged with before anything else' (Carter, 1990, p.151), such as an acknowledgement of realistic aspects of real things within the edge of the frame.

Georg Simmel's essay 'The Picture Frame: An Aesthetic Study' (Simmel, 1994) is evaluated for its sociological anti-positivist argument of the frame and how society has developed synergies reflecting one another, leading to a metaphysical understanding of the frame.

Simmel's theory contrasts with Jean Baudrillard's philosophy of simulacra and simulation which has synergies with Malevich's notion that imitation is the creation of a 'dead image' (Malevich, 1969, p.25). Simulacra and simulation support the aims of this research in the promotion of the metaphysical frame and its potential effects upon the spectator. The research puts forward this argument in relation to the role of imitation within art and is in agreement with Malevich, in that artists who imitate nature are merely copying and not creating: 'In attempting to reproduce the living form, they reproduced its dead image in the picture' (Malevich, 1969, p.25), thus taking the idea of the dead image as a hyperreal entity. The practice-led research supports the idea that copying of nature, put forward by Malevich and Baudrillard, is

unconducive to enhancing the spectators visual aesthetic appreciation. For this reason, the works of art for this research experiment in between the space of wall-based art, installation and the spectator is viewed as an abstract form.

This practice-led research is central to the aspiration of re-establishing the picture frame as wall-based art and the indistinct space between installation and the spectator with ambitions of investigating the spiritual in contemporary art, as it endeavours to give the audience emancipation from today's societal and materialistic influences. The research analyses the works of theorist Donald Kuspit, whose critique of society supports the stance on how the spiritual in art can be used to enhance audience emancipation, and this argument is examined in the theories put forward by sociologists Jean Baudrillard and Georg Simmel with their texts on hyper-reality and mechanical existence respectively.

Development of the self-illuminating frame took confidence from texts on lumia: the art of colour projection that uses additive and subtractive colour systems, with the self-illuminating frame developing a relationship between various coloured LEDs and the painted surface. This relationship is investigated through a series of experiments, exploring combinations of acrylic paint and thermochromic pigment in order to establish a new visual aesthetic in contemporary painting. The significance in combining these materials extends existing knowledge of fine art painting in a historical context as research shows this ground is new in its development.

The research acknowledges the effect of light upon the painted surface, gallery space and spectator in terms of scientific information and how gallerists and artists

consider this. In bringing together existent texts on gallery lighting, the research highlights the positive impact these scientific and theoretical contexts have upon painting and the spectator experience. An evaluation of reports and articles on light science from conservationists, such as, Herbert Lank and chemist Christopher McGlinchey, who both wrote extensively on light and its effect within gallery and museum environments has been crucial in the development of the research.

The research proposes a new solution to the contentious issue of gallery lighting through the production of the self-illuminating frame. The self-illuminating frame has two aims: first, to reject gallery lighting and secondly, to use the combination of light, colour and space to explore audience experience. The investigation of light as a metaphysical and spiritual concept within the research exhibition is aspirational. This is the final context for the investigation: the re-evaluation of the spiritual within contemporary art and its possible relationship within the indistinct space between the wall-based art and the viewer.

Defining the wall-based artworks in relation to the spiritual in art becomes unnecessarily complex as the term spiritual can be classified in both transcendental and spiritualist notions, with connotations of the inner-spirit or a spirit of religion respectively. Kuspit argues that the difference in translation of the German word 'geist' into English is profound. The word in English, as Kuspit puts it, 'sounds sappy' (Kuspit, 2003), whereas, in German the word is related to someone who is reflective and a deep thinker (Kuspit, 2003).

Kuspit, maintains that Kandinsky, in *Concerning the Spiritual* (Kandinsky, 1912), is proposing the disappearance of the 'spiritual impulse' (Kuspit, 2003) in art due to the materialistic and ideological nature of society (Kuspit, 2003). This argument is countered by Wijers (1990) in his collation of debates taken from the Art meets Science and Spirituality conference, when it was concluded that society was travelling in the direction 'from a competitive to a compassionate society' (Wijers, 1990, p. 4). When Kandinsky stated, the "principal aim [was] to awaken [the] capacity for experiencing the spiritual in material and in abstract phenomena" (Kuspit, 2003), he connected this to the religious experience of visiting churches, thus allowing the person to reconnect with their inner-self by taking them away from the materialism of the modern world. For Kandinsky, abstract painting did the same as the interior of the church: it sent the person back to their inner-self by escaping the materialism of society helping to induce the sensation of the inner-self. Kandinsky described this sensation as a mood or spiritual experience, and stated that spiritual eyes are required to feel the outer necessity of a painting, therefore making a connection with the inner-self to begin the awaking. This research shows that the spiritual eyes of Kandinsky are comparable to Bell in stating what the audience see when viewing art.

The enquiry into the spiritual in art strengthens a key aspiration in this research, in exploring the relationship between the indistinct space between wall-based art, installation and the spectator. The results from the questionnaires and interviews of the participants of the research exhibition aided this aspect of the research by further questioning the hybrid space that exists between the works of art and the viewer.

The research sets out to support the work of Kandinsky and Malevich in light of misinterpreted theological arguments, which counter the notion of an inner spiritual sensation within the artist and viewer when making and viewing the wall-based artworks. Gruenwal puts forward the idea of 'respectable' (Gruenwal, 1974, p.128) art being 'concerned mostly with inner realities' (Gruenwal, 1974, p.128) in comparison to art as 'the presentation of the external world of appearances' (Gruenwal, 1974, p.128) which is 'an inferior kind of activity' (Gruenwal, 1974, p.128). This argument put forward by Gruenwal has parallels with Malevich and Kandinsky in upholding works of art which are creative and imaginative, expressing the inner-self, rather than poor imitations of reality through copying nature. For Gruenwal, 'form becomes the centre of the artistic activity' (Gruenwal, 1974, p.128) but, what sense of form? Gruenwal cites Ortega Y Gasset's, *The Dehumanization of Art* (Ortega Y Gasset, 1968), to describe how form has been deconstructed in modern art in comparison to form in classical art 'because it is an explicit act of dehumanization' (Gruenwal, 1974, p.129) exhibiting no human realities.

Herbert counters Gruenwal's argument stating art of the past was not 'merely imitative and lack[ing] symbolic and social meanings' (Herbert, 2002, p.vii). Herbert in his essay 'Industry in the Changing Landscape from Daubigny to Monet' (Herbert, 2002, pp.1-21) analyses the differences between Corot's *The Sevres Road* (Corot, c.1865) and Sisley's *Chemin de la Machine* (Sisley, 1873) and in doing so describes Sisley's compositional construction:

> …as a piece of abstract organisation, Sisley's painting, compared with Corot's, is a taut network of geometric forms. The road makes a truncated triangle whose abrupt termination emphasises its rather flat shape. The ground to the right is a five-sided polyhedron, and to the left the regularity of the trees is reinforced by the block-like patches of sunlight along the road. (Herbert, 2002, p.4)

In relation to the term decorative, Herbert, when analysing the use of decoration within Monet's paintings, suggests 'the defence of abstract art grew in part from theories of the decorative' (Herbert, 2002, p.79). In justifying abstraction in the wake of naturalism, French critics dismissed the decorative as pure abstraction with no relation to the human world. Yet this can be argued against in the work of Fernand Léger, who denied pure abstraction as a worthy practice in art. This is because Léger regarded the notion of contrast as 'the vital principle of modern life' (Herbert, 2002, p.129). Plastic art is the contrast of both the real and the imaginative life, "to make either pure abstraction or imitations of nature, is really too easy and avoids the problems as a whole." (Léger, 1923). The combination of both the real and imaginative life for Léger was the crux of modern life (Herbert, 2002, p.129).

Schapiro supports the argument put forward by Herbert and Léger, in that artists give humanity to art by utilising 'an unlimited range of themes and forms or elements of forms' (Schapiro, 1995, p.10). The humanity of art is realised in how artists use and compose images 'impressing a work with feeling and the qualities of thought' (Schapiro, 1995, p.10). The example Schapiro uses is Cezanne's apple, suggesting the uncertainty that shapes and colours can be detached when imaging the real world. In nineteenth century representational art, the term abstract was used to describe the 'simplified line, the decorative, or the flat' (Léger, 1923), whereas in contemporary terms abstraction is seen as geometrical and expressive forms. Schapiro says the term abstract 'has connotations of the logical and scientific' (Schapiro, 1995, p.11) which by definition are alien to representative art. The formalist approach defines pure forms

as the main visual elements in which emotion can be expressed through their wholeness, for example the circle and square.

As with Herbert and his discussion of Léger not dismissing the abstract in the old masters, Schapiro makes similar connections with the work of Mondrian and Degas. This is due to Degas's use of 'novel close-up views and the cropping of objects' (Schapiro, 1995, p.35) all which give a strange sense of pointed perspective. In the company of Degas, Schapiro also uses examples of Bonnard and Monet to suggest that Mondrian's paintings had similar affiliations in form to those old masters, but confirming Mondrian's art as new and not representations of the forenamed artists (Schapiro, 1995, pp.43-48).

Conversely, Machell proclaims, 'that beauty is really a state of mind' (Machell, 1892-1893, p.3) that is the outcome of a unity between objects and the mind. Machell questions the value of realist art and the artist who produces such work, insisting upon his notion of art 'as the expression of an ideal' (Machell, 1892-1893, p.5). Machell questions the validity of producing realist works of art due to the artist attempting to 'express the idea that he has conceived of some aspect of nature, having no faculty by which he can cognize or express the real nature of things in themselves, apart from his own conception of their appearance as conveyed to his mind by his senses' (Machell, 1892-1893, p.5).

This relates to Kandinsky's ideal that realist 'art does not help the forward movement' (Kandinsky, 1977, p.12) of the spiritual triangle, leading art, humanity and the artist to regress. This, I surmise, is the reasoning behind Kandinsky's faith in

the abstract style of painting over realism. Realism alone lacks imagination and creativity, generating stale thought, inducing an eventual backward motion of the spiritual triangle (Kandinsky, 1977, p.16). As the spiritual triangle slows, art and thought become materialistic through the consumption of bourgeois aesthetics and conventions.

Agnes Martin's practice values thought over emotion. Regardless of no interest in Eastern or Western belief systems, Martin 'nonetheless considered Taoism to be related to therapy in its goal of eliminating egotism – perceived as the source of all suffering' (Zegher, 2005, p.31). Léger supports Martin's objective of eradicating egotism and considers the ego of the individual to be one of the flaws of the Renaissance. Léger's ambition for the development of art was that of the collective as the moderns were 'still trapped in the solitude of the individual' (Herbert, 2002, p.148). Léger suggests Gothic art and cathedrals as prime examples for they were:

> …the result of intelligent and sensitive collaboration. They are the achievement of many people.
> (Herbert, 2002, p.148)

Zegher's research into Martin's texts reveal her practice as being concerned with:

> ...abstract emotion. It's about those subtle moments of happiness we all experience.
> (Zegher, 2005, p.32)

What greater experience is there than happiness? Is this the sensation that the artist and audience cannot put into words when viewing art? I would argue if it is happiness that we experience when viewing art, then it is a happiness that we are not yet fully able to understand. This idea has been investigated in Capturing Aesthetic Experiences with Installation Art: An Empirical Assessment of Emotion, Evaluations,

and Mobile Eye Tracking in Olafur Eliasson's "Baroque, Baroque!" (by Pelowski, et al. 2018) and Understanding Visitor Happiness in Museums (Reed, N. 2018).

Zegher, concludes with the sound of Kuspit and Kandinsky ringing in the ear by quoting Ellsworth Kelly, whose practice has similarities to Martin's:

> ...we were trying to get away from the 'I,' as in 'Look how well *I* do it.' Then, there is a stillness that we appreciate in each other's work, as in common destiny." It is a significantly different attitude from many contemporary artists for whom abstract art has been purged of the spiritual and the ideal and become purely formal and materialistic.
> (Zegher, 2005, p.37)

The stillness that Kelly talks of I consider being equivalent to silence. This stillness of the mind within the working practices of Kelly and Martin is found within the production and individual visual audience response to the works of art presented in the research exhibition. The evidence is shown in audience participation response questionnaires, where the audience experienced moments of silent self-reflection and contemplation within the indistinct space between the artworks and spectator.

Martin says that her art is 'to represent beauty, innocence and happiness… "Exhalation." Negative emotion, on the other hand, is not art' (Tuma, 2005, p.50).

Tuma quotes Christopher Bollas's definition of the aesthetic experience in his essay titled, 'The Spirit of the Object as the Hand of Fate' (Bollas, 1987):

> The aesthetic moment is a caesura in time when the subject feels held in symmetry and solitude by the spirit of the object. These are fundamentally wordless occasions, notable for the density of the subject's feeling and the fundamentally non-representational knowledge of being embraced by the aesthetic object, a suspended moment in time when self and object feel reciprocally enhancing and mutually informative.
> (Tuma, 2005, p.52)

It is the relationship the spectator has with the works of art that denotes the awareness of experience as if 'the sense of being reminded of something never cognitively apprehended but [is] existentially known' (Tuma, 2005, p.52). Bollas's viewer/object relationship has synergies within the indistinct space between the works of art and spectator explored within this research experiment. This indistinct space allows temporal reflection to take place between the works of art and the viewer.

The idea of memory being coerced from a time before we knew our senses is essentially what Bollas's interpretation of the object-audience relationship is based on: "It is pre-verbal, essentially pre-representational registration.'" (Tuma, 2005, p.53). I find it difficult to comprehend Bollas's concept of a speechless response to experiencing art and linking it back to the pre-ego memory. Tuma gives no evidence to prove Bollas's theory correct and research shows this would dismiss Bell's notion of significant form. If Bollas's idea of experience and memory in relation to the pre-ego when viewing art is enough to understand it, I support his theory in that it allows all audiences to appreciate the art they observe.

Research references artists' historical use of matter in terms of the spiritual, in particular Jean Dubuffet and his *Typographies/Texturologies* series (1957-60). Dubuffet produced art in reaction to man in the aftermath of the Second World War and it was through the use of *matiere* (materials) in this series in which Dubuffet escaped the culture he came to loathe and focused on developing an art from within.

Dubuffet stated his issues with occidental culture and thought alongside his dismissal of beauty within art in a speech titled 'Anticultural Positions' (Rowell, 1973, pp.17-

18). Dubuffet based his argument on the thought processes of primitive peoples with Dubuffet's art communicating his internal mental thought process. By dismissing Western culture and the ideal of beauty Dubuffet said:

> Art addresses the mind, not the eyes. That is how it has always been regarded by "primitive" societies; and they are correct. Art is a language, an instrument of cognition and communication.
> (Glimcher, 1987, p.7)

Dubuffet and Martin both place importance in the use and process of the mind when creating and viewing artworks. This has strong synergies with the ideals of this current research and in particular the space between the artworks and the spectator.

Antoni Tàpies' practice questions how matter is used as a transformative material between the spectator and art work, thus showing synergies with Dubuffet, Martin and this research due to the works on canvas being able to create audience awareness and contemplation:

> The canvas, therefore, is not a place for representation but for observation (or contemplation, as Tàpies would say) of events beyond the theatre's range, or within vision itself.
> (Spies, 1972, p.6)

Tàpies' interest in the theory of quantum physics and the work of Heisenberg aided his understanding of observation and contemplation of an object, thus allowing the artist and audience to go beyond the object itself and in doing so, allows both to become aware of their experience. The research supports this view as it extends the idea of visual contemplation in the audience, expanding the exploration of the indistinct space that exists between the artworks and spectators in an immersive environment.

Morphet cites Ramon Llull as having a major influence on Tàpies due to 'Llull's passionate quest for a unifying principle' (Morphet, 2003, p.6). Yet again, synergies with Malevich, Mondrian, Kandinsky and this research exist alongside the work of Tàpies in the search of unity for art, life and ultimately the cosmos. Tàpies' stimulation of the audience is similar in the aspiration of this research in 'develop[ing] the potential we all have within us but which is stifled by industrial society' (Morphet, 2003, p.7).

Steiner, sought the use of artistic practice to reinstate the 'capacity for spiritual activity' (McDermott, 1991, p.vii) as Steiner declares:

> Art is eternal yet its forms change. And if you realize that art always has a
> relation to the spirit you will understand that both in creating it and
> appreciating it art is something through which one enters the spiritual world.
> (Steiner, 2001, pp.171-172)

Howard says spiritual, artistic perception and activity develops 'spiritual individuality' (Howard, 1991, p.72), but this does not relate to anthroposophical belief in unity as it promotes individuality. With reference to painting, Steiner, uses the spirit of intuition as a guide for the soul (Steiner, 1991, p.145). Once man has united with the spirit, he is able to 'equip human beings with the capacity for imagination in painting' (Steiner, 1991, p.146).

The research has taken inspiration from Steiner and his belief of the spirit within humanity and its ability to connect with the cosmos through 'Western hermetic, Gnosis, Manichean, and Rosicrucian sources' (Young, 2012, p.44), whereas Blavatsky united all religions under the umbrella term theosophy but it, 'was often characterised as "esoteric Hinduism" or "esoteric Buddhism,"' (Young, 2012, p.45). Steiner uses

western esoteric and Christian convictions within anthroposophy, as he could not justify the belief systems used in theosophy.

The reader must note that the spiritual connotations suggested within this research are not concerned with branches of religious thought involving a God. One aspiration for this research is to place the works of art under the theosophical guise of esoteric Buddhism. The reasoning behind this is that Buddhism can be viewed as a reflective and contemplative philosophy due to it being non-theistic. The spiritual and conceptual direction of this practice-led research is influenced by the non-religious belief system held within Buddhism and the practice of meditation. This is because Buddhist practice suggests the experiential motivation of an individual is shown to have precedence over theoretical dimensions. The Dalai Lama associates science with Buddhism for 'Buddhism is a science of the mind' (Wijers, 1990, p.11). He places significant value in this idea as it offers a chance to link the material world with that of the mind. The Dalai Lama argues that 'externally, immense progress has been made, but internally very little has been achieved' (Wijers, 1990, p.11), going so far as to suggest we are in 'danger of losing our human status if we remain exclusively preoccupied with external affairs' (Wijers, 1990, p.11).

Fry argues that 'the mid-nineteenth century ruled out art as a noxious, or at best, a useless frivolity' (Fry, 1981, p.10), a notion that is upheld still today. This is due to the simple fact that 'as art has become purer the number of people to whom it appeals gets less' (Fry, 1981, p.10). The more reductionism progresses in the visual arts, the less the audience can use their experience to approach such subject matter. The question the audience concerns itself with becomes formalist aesthetics.

Since Fry wrote his articles, research casts doubt on his understanding of physiology and psychology, but his main argument for the imaginative life is one for further discussion in the debate over imitation within art and particularly painting. In 'An Essay on Aesthetics' (Fry, 1981), Fry argues against painting being the 'art of imitating solid objects upon a flat surface by means of pigment' (Fry, 1981, p.12). Fry centres his argument in the psychology of natural human instincts and our relationship to objects within actual life and the imaginative life (Fry, 1981, p.12). Fry, outlines actual life as our 'instinctive appropriate action' (Fry, 1981, p.13) to objects in the real world as these actions have human 'moral responsibility' (Fry, 1981, p.14) attached; whereas, in the imaginative life 'no such action is necessary' (Fry, 1981, p.12). This is because 'the whole consciousness may be focused upon the perceptive and the emotional aspects of the experience' (Fry, 1981, p.13). Fry says that in the imaginative life the sense of emotion is weaker as the emotion 'is presented more clearly to consciousness' (Fry, 1981, p.14). This, it could be said, allows the imaginative life through art to have a higher level of contemplation as the sense of emotion is less. This leaves the imaginative life to show 'the highest aspirations and the deepest aversions of which human nature is capable' (Fry, 1981, p.17)

The most important aspect of vision in the imaginative life for art is the aspect of emotion. Fry concludes, in actual life, emotion, is not as insightful as in the imaginative life because 'the need for responsive action hurries us along and prevents us from ever realising fully what the emotion is that we feel' (Fry, 1981, p.19).

Thereby reflecting and contemplating the objects formal elements and the sense of emotion experienced by seeing.

Research reveals a major criticism of Fry and how he applies his 'emotional elements of design' (Fry, 1981, p.23) and the associations of these elements 'with essential conditions of our physical existence' (Fry, 1981, p.24). Fry takes his inspiration from Dr Denman Ross and his *Theory of Pure Design* but, whereas Ross applies it to abstract forms, Fry applies it to figurative works of art, concluding the emotions are weak if applied to simple arrangement of painterly forms. This research has taken Fry's concepts and applied them to Malevich and Kandinsky's non-objective and abstract paintings further supporting Fry's argument concerning imitative art. Creativity and imagination allow the pure freedom of form, thus giving synergies between the imaginative life and Suprematist ideals. Fry argues that the artist has 'creative vision' (Fry, 1981, p.35), which he defines as 'the most complete detachment from any of the meanings and implications of appearances' (Fry, 1981, p.35). This creative vision is the artist's vision that is broken down into what Fry regards as emotional elements of design. Research shows that if you apply Fry's theory of aesthetics to abstract and non-objective painting it can be considered a valued, artistic and academic method. The research endorses this suggestion by considering Fry's application of the imaginative life to Malevich's painting and his use of formal elements in allowing the audience to experience sensation in rhythm of line, mass, space, light and colour.

Fry rejects the idea of the artist working for the aristocrat or plutocrat, insisting the artist 'must work for himself, because it is only by doing so that he can perform the

function for which he exists; it is only by working for himself that he can work for mankind' (Fry, 1981, p.43). This is comparable to Kandinsky, who argued that painting is 'a power which must be directed to the improvement and refinement of the human soul' (Kandinsky, 2006, p.106) and the artist needs 'to realize that he has a duty to his art and to himself' (Kandinsky, 2006, p.107).

Fry argues that industrialisation and commercialisation within art has produced artists whose creative impulse and inspiration 'has been crushed and atrophied' (Fry, 1981, p.48) indefinitely. Fry argues that the artist, whose intention to make art in this manner, 'is to produce, not expressive design, but dead patterns' (Fry, 1981, pp.48-49).

Although, the reason Fry did not accept non-representative works as art was because he argued, 'even the slightest suggestion, of the third dimension in a picture must be due to some element of representation' (Fry, 1981, p.206). Fry stops his investigations at the point of having to inquire about the reason why humans have an indifferent feeling when viewing works of art, as he would be entering the realms of 'mysticism' (Fry, 1981, p.211). The research aspires to provide further debate, discourse and understanding in the notion of feeling and mysticism as the misunderstood art of imitation.

Kandinsky is wary of beauty when arguing for abstract form and colour, as this 'shall produce works which are mere decoration' (Kandinsky, 2006, p.91). For form and colour to be respected in painting, Kandinsky, rightly argues that the 'artist must train not only his eye but also his soul' (Kandinsky, 2006, p.91).

Kandinsky discusses the ideas of painting from a representational approach, for 'elements of the new art are to be found, therefore, in the inner and not outer qualities of nature' (Kandinsky, 2006, p.49) but, this research aspires to show how the spiritual elements of these qualities can be appropriated to the notion of a non-representational outlook. This can be achieved using Bell's formalist theory of significant form and strengthens the aspiration of the research in the application of Kandinsky's representational premise towards abstract art.

The chapter, 'The Movement of the Triangle', gives further evidence to theosophy's influence upon Kandinsky's artistic approach. Kandinsky presented the 'life of the spirit' (Kandinsky, 2006, p.14) in the form of a triangle that is divided into equal, horizontal widths. This is a direct reference to theosophy and the seven stages in the evolution of humanity. The life of the spirit can ascend and descend within the stages of the evolution of humanity, if the spirit is stronger or weaker, respectively. In other words, the spirit descends due to materialistic desires, whereas the pure spirit ascends freely towards enlightenment.

Kandinsky argues that an audience who witness colour, 'awakens a corresponding physical sensation, which undoubtedly works upon the soul' (Kandinsky, 2006, p.49) and it is these colour associations that 'cause vibrations in the soul' (Kandinsky, 2006, p.52).

This research supports the findings in the chapter, 'The Language of Form and Colour' where Kandinsky, declares colour and form are paintings 'two weapons'

(Kandinsky, 2006, p.54). Form has strength to represent itself, whereas, 'colour cannot stand alone; it cannot dispense with boundaries' (Kandinsky, 2006, p.54). It is argued by Kandinsky that form 'has a power of inner suggestion' (Kandinsky, 2006, p.56) and with the addition of colour 'have different spiritual values' (Kandinsky, 2006, p.56). Thus, it is form that dictates the 'outward expression of this inner meaning' (Kandinsky, 2006, p.57). This research considers Kandinsky as being accurate when arguing that composition is crucial to the success of form. Within this research, the success of the outward expression of form is reflected and contemplated upon in the indistinct space between the works of art and the spectator.

Malevich is the strongest advocate for non-objective works of art, as these new forms represent progress within art and humanity. Malevich argues for a complete rejection in the imitation of reality, both nature and objects, claiming, 'the transferring of real objects onto a canvas is the art of skilful reproduction, and only that' (Malevich, 1969, p.24). Malevich argues that 'the artist can be a creator only when the forms in his picture have nothing in common with nature' (Malevich, 1969, p.24):

> In attempting to reproduce the living form, they reproduced its dead image in the picture. The living was turned into a dead, immobile state.
> (Malevich, 1969, p.25)

Malevich, puts forward a robust defence of pure form being the future of painting as these forms 'will themselves be a living thing' (Malevich, 1969, p.32). It is the consciousness of 'intuitive feeling' (Malevich, 1969, p.32) which allows pure forms to exist. The research presented is in agreement with Malevich, in that 'the subject will always kill colour' (Malevich, 1969, p.34) and due to the subject, colour will not be seen in its purest form. Kandinsky says the artist needs 'to consider only the direct use of simple colours' (Kandinsky, 2006, p.71). Malevich argues that the governing

quality of form is its 'mass' (Malevich, 1969, pp.34-35) and through this, form gains energy from tension with other forms.

In *Essays on Art 2* (Malevich, 1969), Malevich argues 'all imitative art is illusory' (Malevich, 1969, p.26). He bases this standpoint from the experience the viewer has when faced with a painting imitating nature. The painting is an illusion on reality.

Malevich argues that the colour used in painting forms is in accordance 'to the scale that has arisen in my creative centre' (Malevich, 1969, p.127). Thus supporting Kandinsky's claim of internal necessity to be creative and imaginative according to 'artistic feeling' (Kandinsky, 2006, p.84).

The spiritual in painting is not about impersonating an image or spiritualist vision; it is about the artist expressing their inner spirit through colour and form. Kandinsky on no occasion said that spiritual harmony can be achieved alone through painting an interpretation of it, as an 'exact replica of a spiritual harmony can never be produced' (Kandinsky, 2006, p.64). Hence, the research, considers spiritualist-painting fantasy that functions as a weak visual aesthetic. Although, artists still set out to achieve what Kandinsky says cannot be created, such as Linda McCray and Katerina Machytkova. Danto counters Kandinsky's argument, by suggesting that any form of art can be all-encompassing of mental states (Danto, 2008, pp.244-245).

The defining point of non-objectiveness in Suprematism is the 'plane or line which determines the sensation of dynamics' (Malevich, 1969, p.138). This dynamic sensation corresponds to the tensions and relationships created by the plane in the

production of form, with Malevich considering these sensations 'an expression of the essence of phenomena in the non-objective functions of the universe' (Malevich, 1969, p.137).

Colour, as Malevich argues, creates sensation therefore placing colour above form as 'the fusion of man with the universe takes place not in form but in sensation' (Malevich, 1969, p.139). This connection is the chief aim of Suprematist painting. Research reveals synergies with Malevich, Baudrillard and Steiner who 'challenge us not merely to assimilate a body of new ideas but rather to develop new organs of perception that eventually lead us to new vistas beyond the limits of reality already familiar in us' (Howard, 1991, pp.7-8).

I ascertain that Baudrillard's theory of hyperreality has synergies with Malevich's ideas on imitation and the dead image.

According to Baudrillard, simulacra has three categories of value, the first is 'counterfeit' (Baudrillard, 1983, p.83), present from the Renaissance to the industrial revolution; the second value is authority in 'production' (Baudrillard, 1983, p.83) from the industrial age; with the third value of 'simulation' (Baudrillard, 1983, p.83) which is the currency of the code in today's society. It could be said that these three categories put forward by Baudrillard have synergies with Plato and his typological hierarchy of the maker, object and visual representation of an object. This argument is debatable as Fuery and Fuery argue that 'Baudrillard goes against the line developed by Plato, arguing instead that everything is a copy of a copy' (Fuery and Fuery, 2003, p.118).

For Baudrillard, abstraction 'is no longer the double, the mirror or concept' (Baudrillard, 1983, p.2). Simulation 'is the generation by models of a real without origin or reality: a hyperreal' (Baudrillard, 1983, p.2). This argument by Baudrillard, confirms simulacra as the truth of knowing no truths, for the value in production is reduced as the production is a re-production of the product already in existence, hence the term hyperreal.

I put forth Baudrillard's notion of hyperreality and proposed relations to imitative art. Baudrillard's argument for simulation and the hyperreal defines the experience of an audience viewing imitative art, for the audience associate a re-produced painting of nature through recognisable signs, for example, a tree, but, as Baudrillard says: 'It is rather a question of substituting signs of the real for the real itself' (Baudrillard, 1983, p.4).

> Never again will the real have to be produced.
> (Baudrillard, 1983, p.4)

This is illustrated through Baudrillard's discussion of God. God, Baudrillard declared, is not a real entity and all images of the idea of God 'were not images, such as the original model would have made them, but actually perfect simulacra forever radiant with their own fascination' (Baudrillard, 1983, p.9). It could be said that the imitative picture of reality is simulacra. This is because it only exchanges the sign 'in itself, in an uninterrupted circuit without reference' (Baudrillard, 1983, p.11). When the audience, when faced with an imitation of reality, is when 'nostalgia assumes its full meaning' (Baudrillard, 1983, p.12). This allows the audience to experience the re-represented image through familiarity of memory. In relation to duplication

(imitation of the real), Baudrillard argues that the replicated Lascaux caves, which audiences view instead of the real caves, leaves the viewer indifferent because 'the duplication is sufficient to render both artificial' (Baudrillard, 1983, p.18). Thus, it could be said that the audience experience gained from viewing imitative reality through duplication is artificial as the image and the experience are hyperreal, or in the words of Malevich, dead.

Baudrillard says 'illusion is no longer possible, because the real is no longer possible' (Baudrillard, 1983, p.38).

In reference to the production of commodity, Baudrillard, says production is hyperreal, because it attempts to re-establish a sameness 'of the real which escapes it' (Baudrillard, 1983, p.44). This research puts forth the idea that this is the equivalent of a gallery audience viewing pictures imitating reality, for they wish their historical experience to be real, which it is not. This argument is more compelling than Malevich, who believed he could be transported to the place in time, through the reality of the image.

This research associates the galleries and auction houses as the modern 'hypermarket' (Baudrillard, 1994, p.75) for viewing works of art. People visit hypermarkets to view objects of commodity, just as the audience views art, the objects 'interrogate us, and we are summoned to answer them' (Baudrillard, 1994, p.75). This game is played out in simulation within the circuit of art.

Toffoletti argues that works of art 'support Baudrillard's claim that the transaesthetic moment of one where everything has become aestheticised – that is, manufactured into a sign for consumption' (Toffoletti, 2011, p.15). This is parallel to Malevich, who in his essay 'On New Systems in Art' (Malevich, 1969) claimed 'evolution and revolution in art have the same aim, which is to arrive at unity of creation – the formation of signs instead of the repetition of nature' (Malevich, 1969, p.94).

Toffoletti says works of art 'belong to an order [second order of simulacra] of signs founded on a system of serial production, accruing meaning relative to a capitalist economy of value exchange' (Toffoletti, 2011, p.21). Economy of value, research shows has undertones of Malevich's theory of economic social movement. Exchange in commoditisation of objects and the question of object authenticity with regard to an image becomes no different from the reality it displays, therefore taking on the perception of reality and becoming a reality within itself. Toffoletti says 'the fourth order is the phase of integral reality' (Toffoletti, 2011, p.28). The image therefore cannot perform as an image at this stage. Toffoletti argues that Baudrillard is hypothesising over the audience's closeness and absorption of imagery becomes too complex for discussion, as images 'are [the] world' (Toffoletti, 2011, p.30). This research shows that Toffoletti's claim has similarities to Fry's theory of actual and imaginative life as we cannot experience actual life as it is too close to our emotion to be fully realised (Fry, 1981, p.18).

With images today being used in the context of information, communication and documentation, Toffoletti argues that Baudrillard was correct in stating that these images become 'an ultra-reality' (Toffoletti, 2011, p.33). This ultra-reality 'is all

encompassing and immediate, that predetermines our responses to images and kills off any element of surprise or originality' (Toffoletti, 2011, p.33). The present research maintains that this argument is similar to that of an audience viewing imitative art, because it sets up familiarity.

Toffoletti dismisses Baudrillard's theory of a conspiracy of art as a limiting ideology because Baudrillard does not comment on works of art or biographies in detail (Toffoletti, 2011, p.43). It could be argued that Toffoletti falls into the same category of critics, as well as artists, who misunderstand Baudrillard's thoughts on art (Baudrillard, 2005, p.78). Hegarty is in agreement with Toffoletti, claiming Baudrillard's lack of detailed critique of artists weakens his argument of art as simulacra (Hegarty, 2004, p.117). However, research reveals that Baudrillard is interested in art; explicitly the participatory relationship of the audience with the art object as both are implicated in confirming one and others hyperreal existence. Therefore the research puts forth the argument that a detailed critique of artists is unnecessary, as this becomes irrelevant in the argument for art in simulacra put forward by Baudrillard.

Research suggests that Baudrillard is not interested in the representation held within works of art, as the content is already a simulacrum of itself, a hyperreality. This is arguably the reason why Baudrillard did not analyse art in detail as it was already in simulation. For Baudrillard, art is an object, the same as any other (Baudrillard, 2005, p.18).

Baudrillard argues that art has lost its narrative of the old masters and has been replaced by an art that does not recognise 'its destiny' (Baudrillard, 2005, p.56). Research advocates that art is no longer produced for the evolution of humanity and society within either representational or non-representational art.

Toffoletti argues that Baudrillard demands 'we pay attention' (Toffoletti, 2011, p.65) to the fact that:

> Art is in denial about its disappearance.
> (Toffoletti, 2011, p.65)

The disappearance of art is due to 'art's excess, [in] that it ceases to function as a critical medium once it becomes absorbed into everything else' (Toffoletti, 2011, p.65) as it has with the development of media, communication and technology.

Hegarty criticises the artists Jeff Koons, Sherrie Levine and Richard Prince, claiming their use of simulation is false. This is because the appropriation of an object is not simulation. The object, being one of mass culture, is already in simulacra. By the artist appropriating a cultural object, 'the original is constantly being referred to in its originality (even if this is supposed to be lost) by the new work, and the new work is a copy, not a replacement' (Hegarty, 2004, p.159).

'When Nothing surfaces in signs, when Nothingness emerges at the very heart of the sign system, that is the fundamental event of art' (Baudrillard, 2005, pp.27-28). It is an aspiration of the research to apply this theory to imitative art and put forth the argument that the visual imitation of reality becomes a signifier of nothingness.

Thus, the visual imitation of the illusion of reality becomes a meaningless objective, as the object, can be considered a hyperreal entity.

The notion for the existence of a hyperreal entity within the gallery is heightened through the argument for a rejection of gallery lighting and the space that exists between the works of art and the spectator. In my work, this is achieved through extending factors for consideration, such as, the combination of coloured LEDs, acrylic paint and thermochromic pigment. Additional contributing factors in extending knowledge are to be found in the justification for the spiritual in the indistinct space between the wall based sculpture and the viewer.

Literature Review

The Literature Review offers a cumulative reading of contemporary theories and practices concerning the picture frame, painting, wall-based sculpture, light, the role of the spiritual in art and the gallery environment.

The study of existing literature on historical and functional purposes of the picture frame relate principally to the European picture frame, whereas conceptual theories on the picture frame revolve around the loss of the picture frame in modern art. The investigation into the functionality of the frame within this practice-led research is to determine originality in the development of the self-illuminating frame.

Literature based on light and painting is predominantly centred on how paintings are lit in a gallery context, with such texts being sourced from conservation and preservation departments. The thesis extends light research into texts on light science and questions the use of this knowledge within existing curatorial practice.

The literature reviewed relating to the spiritual in art focuses upon the awareness of an inner sensation experienced when viewing art in the distinct space between the works of art and viewer. This aspect of the spiritual in art is compounded by literature on perception and the role of light in philosophy. Whilst literature regarding the spiritual in art with religious connotations is acknowledged, it is of no interest to aspiration of this research.

Marin's essay, 'The Frame of Representation and Some of its Figures' in *Rhetoric of the Frame* (Duro, 1996), is one of fourteen selected essays arguing in support of the picture frame and the importance it 'serves to create a space for the artwork that the work in itself is capable of furnishing' (Duro, 1996, p.1). Picture 'framing is the very basis of disposition' (Kemp, 1996, p.11) as argued in *Frameworks: Form, Function and Ornament in European Portrait Frames* (Mitchell and Roberts, 1996), whereby the authors systematically classify the historical developments of the European picture frame.

Mitchell and Roberts challenge the historical context of the picture frame when evidencing the problematic nature of placing original picture frames with its designer, maker or painting. This makes the chronology of the book at times overly complicated, as frames are not re-defined by name in later illustrations that denote similar styles. The historical framework and its relationship to the original named frame is lost.

This is a common problem as Lebensztejn argues in *Destruction and the Visual Arts* (Lebensztejn, 1994); many great paintings when reproduced are cropped, therefore taking away full appreciation of the work in its frame when reprinted. It is rare to see reproductions of paintings in their frame (Lebensztejn, 1994, p.118). Although, this argument put forth by Lebensztejn can now be seen as dated since deluxe images of frames surrounding their paintings is evidenced in books, such as, *Framing the Nineteenth Century: Picture Frames 1837-1935* (Payne, 2007) which includes a survey of frames from England, mainland Europe and Australia, and *The Gilded*

Edge: The Art of the Frame (Wilner, E. 2011) with its emphasis on the history of the American picture frame.

Other books relating to the picture frame are published by galleries in which the research resides, for example, *Frames and Framings* (Newbery, 2003) focuses on picture frames from the Ashmolean Museum's collection; *Italian Renaissance Frames at the V&A: A Technical Study* (Powell and Allen, 2009) with its accent on Italian frames within the Victoria and Albert Museum collection, with similar research taking place at The Metropolitan Museum of Art's collection in *Italian Renaissance Frames* (Newbery, et al. 1990).

In contrast to the above author's qualitative methodology, Kirsh et al. in *Seeing Through Paintings* (Kirsh et al., 2002), provides scientific case studies demonstrating quantitative methodologies in the examination of the painting supports and the painted surface. These investigations relate to the different types of surface used in paintings and the effect artificial light has upon them. The literature on light and its effects upon paintings are discussed later in this review, with journals from museum's department of science.

Research shows little evidence in reference to the American, Robert Kulicke, implying an understated position held in the development of frames for modern art. This underrated importance could not be further from the truth. The article, '20th Century Frame Innovator: Spotlight on Robert Kulicke' (Gherman, 1990, pp.48-51), focuses on the design concepts and construction of Kulicke's most influential frames. In contrast to Lebensztejn, Kulicke does not relate Mondrian to frameless frames,

instead, he points out the functional and aesthetic value of the 'Mondrian Platform Frame' (Gherman, 1990, p.95). Painters used thin strips attached directly to stretchers thinking: 'they were eliminating the picture frame, but they were actually inventing the principal element and basic form for all mainstream twentieth century frame designs for non-realistic paintings' (Gherman, 1990, p.50).

Kulicke designed the Plexiglas frame for the photographic wing of MOMA, New York, "for conservation purposes, for a clean presentation and to present the work of art on its own terms and for its own sake" (Gherman, 1990, p.51). This Plexiglas frame surrounds the majority of photographs in galleries, museums and homes today. It has also been suggested that Kulicke also designed 'the Lucite frame for Andy Warhol, for two-sided visibility' (Lyon, 1971, p.62).

The final frame developed by Kulicke is the metal section frame. This was produced for commercial sales, framing posters and prints in homes and offices. It comes as a surprise, the relative obscurity of Kulicke, considering the sheer popularity of the frames he produced. Having been overlooked in historical terms, this research advocates it is time to position Kulicke as an influential frame designer of the twentieth century.

Simmel's article, 'The Picture Frame: An Aesthetic Study' (Simmel, 1994, pp.11-17), brings individual threads of the thesis together through questioning unity, distance, society and autonomy. Simmel argues that the frame acts as a boundary to the artwork by 'excluding all that surrounds it, and thus also the viewer as well' (Simmel, 1994, p.11). By excluding the viewer, the frame's boundary gives the

artwork a 'distance from which alone it is aesthetically enjoyable' (Simmel, 1994, p.11). Simmel's critique of the picture frame through observational research is literal and his proposed intentions are dated and do not reflect the metaphysical arguments of the time. Simmel says 'the two prime qualities of a work of art [is] its inner unity and the fact that it is in a sphere removed from all immediate life' (Simmel, 1994, p.12), arguing that the picture frame is impenetrable, keeping with tradition that the importance of the frame is to allow the gaze back into the picture but to keep the world out.

Simmel concludes his argument by saying the architectonic frames of the great masters 'create an impenetrably strong connection – and thereby a boundary' (Simmel, 1994, p.16) when compared with the square frame of the moderns that exists 'only as mechanically functioning elements of that structure' (Simmel, 1994, p.16). Although as argued by Kulicke, the square frame of the moderns does in fact, 'represent progress, integrating the frame into a far-reaching principle of cultural development' (Simmel, 1994, p.16). This view is supported by Tarasov, when describing the picture frame as a 'cultural phenomenon' (Tarasov, 2011, p.13), for it 'allows us to introduce into our investigation the spectator, the artist and the collector' (Tarasov, 2011, p.13).

Richard Phelan's article, 'The Picture Frame in Question: American Art 1945-2000' (Phelan, 2003, pp.159-175), argues for a theoretical, metaphysical framework investigating both the function of the picture frame and frameless paintings from an artist and audience perspective. Phelan argues that when the frame is present it presents its internal image to its audience but, when the frame is absent it affects

audience gaze and the relationship concerning the boundaries of the paintings themselves (Phelan, 2003, p.165).

Phelan assisted in broadening the context of the frame as a metaphysical decision, more so than the symbolic motif as seen in decorative frames. Thus, the frame as a metaphysical device acts as a requirement for aesthetic contemplation on behalf of the viewer. This contemplation was traditionally symbolised through the gold gilt decorative frame of past styles (Phelan, 2003, pp.162-63). The artworks presented in *Installation/Painting* use the self-illuminating frame to aid contemplation, but without the symbolic weight of past styles.

Phelan discusses the frameless works of Rothko and Newman (Phelan, 2006, p.165), but the research disputes these artists' paintings as not being frameless. In reference to Kulicke, these artists' paintings are indeed framed by a thin wooden strip (Gherman, 1990, p.95). Regardless of Phelan dismissing this, he does briefly discuss the frameless paintings of Frank Stella, Ellsworth Kelly and Robert Ryman (Phelan, 2006, p.168). Research recognises these artists as the first to disregard the frame in totality, especially Ryman.

Tarasov, argues that the early Russian Symbolist's, with their decorative painting style 'conflict[ed] with its frame' (Tarasov, 2011, p.317), as they painted text and verses onto the frames (Tarasov, 2011, pp.271-277). This would date the Symbolist frame as the first thin gilt strip frame, with its 'lightly decorated ribbon setting the painting off from its surrounding space' (Tarasov, 2011, p.317).

Simmel, dismissed painting onto the picture frame as an extension of the picture frame itself since it 'completely negates the work of art's autonomous being and thereby the significance of the frame' (Simmel, 1994, p.13). The research shows that Simmel's critique of artists painting onto the picture frame, such as, John Marin, Howard Hodgkin and Kandinsky weakens the significance of form as well as autonomy of the artwork and frame alike.

The stimulation for the introduction of light within this research comes from visiting James Turrell's exhibition at Yorkshire Sculpture Park in 2007. It was the exhibition that inspired the research to investigate further the beauty light has upon the human spirit, questioning how light could be introduced into painting. This question became refined when viewing the work of Ellsworth Kelly at Tate Liverpool in 2008. After the influence of Turrell's work, I became incensed when viewing the work of Kelly. Kelly has said colour and form is all a painting needs (Falconer, 2009, p.31). The research agrees with this assertion as a tradition of painting and when seeing the work of Kelly, I expected to see it in its full glory. This was not the case as when viewing *Colours for a Large Wall* (Kelly, E. 1951) the white paint seemed to have a yellow tint; upon closer inspection, I noticed the overhead artificial (yellow) lighting in the gallery was the cause of this discrepancy. With modern lighting rigs and a choice of available lights, why can galleries not exhibit painting with no such deficiency? After reflecting upon these exhibitions, the idea of self-illuminating frames was born.

The articles compiled on light within this review are recognised for their importance and future use by artists and curators alike in understanding the complexities and

impact light has upon artworks, the gallery space, audience enjoyment and visual perspective. It is due to the number of people involved in making decisions on hangings and lighting in galleries that makes this issue so problematic. Lank argues 'it should be clear that it is not the curator, per se, who is at fault but that the whole question of judging a hang within a gallery [that] needs to be re-examined in the context of certain limiting technical options' (Lank, 1992, p.167). Klonk says that it is designers and not scientific debates who gallery and museum directors use to aid curatorial design today as 'science has, for a long time being, ceased to be a determining or legitimating discourse for museum practice' (Klonk, 2009, p.12).

The article, 'Function of Natural Light in Picture Galleries' (Lank, 1984), provides quantitative research illustrating the impact that various combinations of natural daylight with blue and red fluorescent light bulbs has upon the painted surface at specific times in the day. Lank, argues in favour of skylights, highlighting their importance as high illumination weakens the reflective light on the painted surface.

The research agrees with Lank's conclusion that skylights decrease the reflective light on a painted surface as witnessed first-hand in the Lady Lever Art Gallery (Liverpool, England), Musee de L'Orangerie (Paris, France) and the strip skylight in the Musee du Louvre (Paris, France). However, there is a gap in Lank's research, in that he does not extend his argument in relation to the picture frame and its function in the dispersal of light onto a painted surface.

In 1992, Lank produced a synopsis article titled, 'The Display of Paintings in Public Galleries' (Lank, 1992, pp.124-135), based on the exhibition *Palaces of Art: Art*

Galleries in Britain 1790-1990 (1992, Dulwich Picture Gallery, London). The exhibition centred on the design of top-lit (skylight) galleries in Britain between 1790 and 1990. This article discusses the issues surrounding architectural design considerations when hanging paintings in relation to interior design and lighting conditions of country houses and public galleries.

Lank, argues for a more refined architectural design of galleries with the sole aim being placed on the hanging of the works of art and not the interior design or public's preference. Lank provides a list for architects to follow 'from an apparent inability to give clear guidelines on the essentials of picture display' (Lank, 1992, p.168).

One guideline on illumination, states that light should be 'evenly distributed over the area of the hang and never focused onto the painting' (Lank, 1992, p.169). This is in direct conflict to observations made within galleries and museums during research for this thesis. It can be categorically stated that the majority of paintings observed in galleries and museums are lit with the focus of illumination aimed directly at painting from above, not equally distributing the light over the painted surface. This observation was evident when viewing Gustav Klimt sketches (Tate Liverpool, 2008).

McGlinchey's article, 'Colour and Light in the Museum Environment' (McGlinchey, 1993, pp.44-52) has similar references to Lank. However, McGlinchey extends and supports Lank's argument of dysfunctional museum displays and gallery hangs by stating:

> Artworks displayed in museums come from a variety of origins.
> Consequently, it is impossible to reproduce the design elements from their

original settings and still maintain a coherent display in a new museum environment.
(McGlinchey, 1993, p.44)

This article is important to the thesis for its extended argument on the effect wavelengths have upon colour when viewing paintings in a gallery setting: 'In order for any colour to be accurately registered by the eye it is necessary for light of that particular wavelength to be present in the light source' (McGlinchey, 1993, p.47). It is this initial starting point, put forward by Lank, McGlinchey and Holzman, which supports the proposal of this research disregarding lighting within the gallery environment and allowing control of these light-waves through the development of the self-illuminating frame.

From the bulletins by Saunders et al., it is clear the articles build upon research from previous bulletins but, whilst this research is detailed, it is at times difficult to place into context. The individual articles and specific nature of the bulletins authored by the Scientific Department of the National Gallery do serve as informational documents for the conservation and preservation of paintings but, only for the National Gallery collection. The limited number of paintings investigated within the bulletins brings into question the validity of the research for use by other galleries. This is due to the variables found in gallery lighting systems and architectural design as discussed in earlier Saunders et al. articles.

A gap in the research of Saunders et al. exists because the bulletin did not conclude that damage by the loss of lightfastness in some of the natural pigments used in the fourteenth to sixteenth century was already underway before the investigation into long-term colour change began. If varnish is a main factor in the change of

appearance of colour in a painting, then an investigation into varnish deterioration levels and types needs to be investigated as valuable research to conclude informed results. Saunders et al. does not reference the work of Jones (1993) and his use of the Fresnel equation or Kubelka-Munk theory. If Saunders et al. used such models; research suggests that it would give their investigations further justification.

Saunders, studies the appropriate colour temperature and colour-rendering effects of fluorescent lamps available to galleries and museums; investigating the impact of ultra-violet radiation upon the painted surface (Saunders, 1989, p.61). Saunders, concludes, 'since this ultra-violet light is not necessary for accurate perception of form or colour, it should be eliminated by effective filters whenever possible' (Saunders, 1989, p.67).

Further literature on light and painting in galleries concerns the use of protective glass. This area of research lacks depth due to the limited number of texts produced on the subject. Saunders and Reece wrote an article titled, 'Protective Glass for Paintings' (1994), in which they investigated such properties as reflectivity, strength and weight, colour and ultra-violet absorption. Pilkington and Tru Vue provide glass for galleries and museums today and it is their research and products leading the development in glass for exhibits. In 2002 Crossland and Grund conducted a case study titled, 'Sun-Fading and UV-Glass Experiment'. In this experiment, the authors exposed Japanese woodblock prints with direct sunlight over a period of eight months. This exhibited 'the accumulated damage that the private collector might otherwise expect to occur over perhaps 5, 10 or 15 years of typical exposure' (Crossland and Grund, 2002, Ukiyo-e Gallery). This is in direct conflict with the

claims made by companies providing UV protective glass. Crossland and Grund state the experiment is not based on scientific premise but, it is clearly observed and concluded that 'UV-shielding glass offers at best a very minimal degree of protection from sun-fading exposure' (Crossland and Grund, 2002, Ukiyo-e Gallery).

Michalski, in his article 'Towards Specific Lighting Guidelines' (Michalski, 1990, pp.583-588), argues for an understanding of the lux value of light within galleries which are mostly ignored (Michalski, 1990, p.583). Michalski centred his argument on the issue of balance between audience visibility and object deterioration from the position of the conservator (Michalski, 1990, p.583).

Research into the use of LEDs within the gallery environment is limited to date due to it being a relatively new technology. The Getty Conservation Institute (Los Angles, USA) has researched, developed and published information on LED technology since 2002 and as recently as 2016 delivered workshops such as Master Class on Museum Lighting: Options Beyond White LED. The National Gallery (London, England) replaced all the halogen bulbs with 'ERCO Optec LED spotlight, controlled with a new Dali system' (National Gallery) between 2011 and 2013. There has been no follow up research published to date.

Druzik and Eshoj (2007) evidence an example of the fragmented nature of existent research regarding gallery light. This research references light and colour damage of paintings using both artistic and scientific interpretation. This contrasts with McGlinchey (1993), who dismissed the historical work of artists when arguing for

the scientific investigation into light damage upon pigment colour in the painted surface. The research places great value in the experimentation of artists and scientists alike, with the aim of the artist being aesthetic and that of the scientist being of hypothetical investigation.

This research, supports Druzik's and Eshoj's argument for the 'communal approach' (Druzik and Eshoj, 2007, p.51) to museum lighting with regard to conservation and preservation of paintings. The fourth category, asks for 'consensus protocols for human assessments including issues of aesthetics and visual performance' (Druzik and Eshoj, 2007, p.53). This fourth category is based on scientific assessment. However, the research supports the argument for an additional sub-category to include artist experimentation into light and colour with a particular focus of its effects upon the painted surface as these texts support audience experience, which is arguably equal in value to scientific hypothesis.

Lu Na's paper concerns gallery light design in China and argues for psychological connexion in lighting design for galleries and the feel good factor of the audience (Na, L. 2009, p.1739).

Na's research contrasts with Veitch and Newsham who argue 'that lighting quality exists when the luminous conditions support the behavioural needs of individuals in the lit space' (Veitch, 2001, p.2). Variables considered, included the perceived control over lighting in the work place environment and related performance levels, 'directing the viewer's attention to particular elements in the environment' (Veitch, 2001, p.4).

Veitch has synergies with Na's research as they both argue for an environment, be that an office space or art gallery, which allows the audience to engage with the space in behavioural and emotional terms respectively. This upholds O'Doherty's theory of the audience experiencing the gallery space first and the work of art second.

Inside the White Cube (O'Doherty, 1986) is an excellent example of placing the gallery space into context and argues how the impact of modernism has affected the relationship of the audience and how art is presented within the gallery space.

For O'Doherty the gallery space defines modernism by its lateral extension of the picture plane and relative discourse. With this in mind, the gallery space alters the audiences' model of viewing works of art (O'Doherty, 1986, p.38). This presented the audience with something immediate as the artists of the seventies used the gallery space as 'project and gesture' (O'Doherty, 1986, p.77) to explore 'consciousness' (O'Doherty, 1986, p.78). Klonk says that Beuys was critical of the gallery space as a white cube and counters O'Doherty's argument that 'the museum was never a hermetically sealed space separated from everyday concerns (Klonk, 2009, p.217). Art Meets Science and Spirituality in a Changing Economy conference of 1990, puts forth the argument for the gallery to become a space for political and social discourse. The artists at this conference 'saw the process of living as the most creative art form' (Wijers, 1990, p.7). Toffoletti, who places Baudrillard's fourth order of simulation into the context of art and the gallery space, argues that the gallery space cannot perform as the gallery space anymore because the gallery space

is in simulation. Therefore, the gallery space becomes a multi-functional environment to pursue ideas of not only two- and three-dimensional visual features.

A gap in O'Doherty's contextualisation of the gallery space exists in the fact that he does not comment upon the origins of the white gallery wall. An interview by Maat et al in *Tate Etc.* magazine ascribes the white gallery wall to 1920s architectural concerns such as hygiene, associations with infinite space and 'the Nazi period of the 1930s' (Maat, N. et al., 2011, pp.80). The white wall became popular with 'temporary exhibitions becoming increasingly important in the museum, and with them the moveable partition wall and flexible ground plan' (Maat, N. et al., 2011, pp.80).

Research supports O'Doherty, Na and Veitch, for the self-illuminating frame emits warm coloured light into the gallery space that engages the audience emotionally and immediately with the paintings. Thus:

> Aesthetic judgments concern the appearance of the space. Satisfaction and preference judgments include an emotional component: how the space makes the viewer feel. Satisfaction is the state of feeling that one's needs are fulfilled; by implication, conditions that produce satisfaction or comfort are those that one prefers.
> (Veitch, 2001, p.6)

With the words of Na ringing loud in the ears, the white gallery space is too clinical and cold in allowing emotional accessibility to the artwork. If the appearance of the gallery space as stated by Na allows the emotion of a person to come to the fore, then as the research maintains, artworks need to be lit correctly, in a welcoming gallery space to benefit the audience experience when viewing works of art.

Veitch's research on affect theory, informs gallery design that 'people prefer higher illuminances than recommended practice levels crosses international differences in illuminance practices' (Veitch, 2001, p.7), and 'there is considerable individual variability in illuminance preferences' (Veitch, 2001, p.7). Veitch suggests that sex and age do not alter results significantly apart from known sight deterioration with age and the use of spectacles (Veitch, 2001, p.7). This backs up Saunders et al. research into light and the additional satisfaction the audience gains from thoughtful gallery design and lighting systems.

The research by Veitch and Na highlights a gap in knowledge into behavioural and emotional effects on humans within various lit environments, specifically the art gallery. Thus bringing into question the value of the white wall in contemporary galleries and whether the colour white allows for a positive and welcoming audience experience?

Bornstein's article on lumia introduces the colour perception experiments of Katz and Guilford. Katz's work focused on how colour perception distinguished between 'surface and film colours' (Bornstein, 1975, p.205). Film colours are produced by both the subtractive and additive colour mixture systems in lumia. Guilford experimented with colour perception for over forty years, and concluded 'unmixed hues are usually preferred to compound, mixed ones' (Bornstein, 1975, p.206), with the audience then being given an 'affective value (AV) of stimuli relative to their hue' (Bornstein, 1975, p.206). Bornstein concludes that Guilford is accurate with his investigations into hue being the most influential effect concerning colour experience, and that the aesthetic from below approach is a reliable form of analysis.

The article by Bornstein provides further evidence of the research's argument for the awareness of experience through a new visual perspective and a feeling of pleasantness as honourable tasks to which research can rely upon as a measureable entity in determining successful criteria.

Malevich and Kandinsky inspire the philosophical and theosophical reasoning for the research put forward through their texts on art. *Concerning the Spiritual in Art* (Kandinsky, 1912), is the most influential and basic text of abstract art, whereby, Kandinsky argues his assertion on art's role to reveal the inner life of man; explaining the 'three mystical sources' (Kandinsky, 1912, p.173) of 'internal necessity' (Kandinsky, 1912, p.165) which can be received through any object (including nature). Malevich, however, argues emphatically against the imitation of nature or object within art; holding artists in contempt who copy reality. Thus, celebrating the non-objective in his books, *Essays on Art. Vol.1.* and *Essays on Art. Vol.2* (Malevich, 1969).

This present research approves of Malevich's belief in the non-objective but not his disregard for aesthetic value, which is shown in his 'philosophical colour system' (Malevich, 1969, p.120).

Douglas addresses Malevich's 'motivation to adopt objectlessness, indeed the very word itself, which was used by the Russian avant-garde in preference to the Western term *abstraction*, is related to objectless perception whereby the mind must first fo-cus upon an object and then through meditation the object becomes objectlessness'

(Douglas, 1986, p.190). This intuition 'was the psychic source of Suprematism, "intuitive reasoning" or "intuitive will"' (Douglas, 1986, p.190).

Kandinsky and Malevich attended lectures by Steiner (Lachman, 2008, p.59, Henderson, 2014, p.235), edited in *Colour* (Steiner, 2001). Steiner is influential in his thinking towards colour and its effect upon human thought. His advances in observation and feeling of colour to reveal its reactive and mystical qualities furthered scientific developments in social sciences and fields of psychology: 'The primary purpose and result of Steiner's lectures on the arts is to show various ways by which to transform art from a profane to a spiritual activity' (McDermott, 1991, p.ix).

Af Klint's art and life was based on her mystical visions and beliefs that were heavily influenced by Rudolf Steiner. This is in contrast to Kandinsky 'whose exploration into the spiritual in art was a very conscious process' (Fant, 1986, p.157). Steiner's influence is evident due to af Klint's interest in a "dual-truth" (Zegher, 2005, p.26) which has great similarities with:

> Steiner's concept of life as an evolution towards a balance between opposing forces also applied to forms and colours, which he felt were physical representations or reflections of invisible forces.
> (Zegher, 2005, p.28)

Af Klint had a major realisation because of Steiner's writing on:

> …two fundamental sins in painting: the first, copying nature; the second, fancying that one could depict the spiritual world directly. Precisely contradicting all she had been doing throughout her occult career.
> (Fant, 1986, pp.159-160)

Ake Fant's essay, 'The Case of the Artist Hilma af Klint' is 'the first study on her in English' (Tuchman, 1986, p.38) and is still today the most concise and well-researched text to date. Taking into account the subsequent essays and texts which have arisen through recent publications and exhibitions, such as, *Hilma af Klint – A Pioneer of Abstraction* (Muller-Westermann, 2013). Research discloses that 'nearly all of the artist's written notes on 26,000 pages were digitalised' (Muller-Westermann, 2013, p.33). With this taken into account, I surmise that the authors of the exhibition catalogue essays, who only describe unseen works of af Klint, add nothing to the limited texts that are already in existence. This is disappointing as the authors had open access to af Klint's Foundation and 26,000 pages of notes. This catalogue regurgitates text from the other two referenced books within this literature review.

Within the exhibition and catalogue, titled, *3 X Abstraction* (The Drawing Center, New York, 2005) the author, Zegher, puts forth the term abstract in relation to the work of Agnes Martin, who 'never practiced non-Western spiritual disciplines' (Zegher, 2005, p.31).

Zegher brings Martin's theories on perception and audience experience to the fore and places Martin's work in a new context, that of the mind. Zegher quotes Martin:

> Behind and before self-expression is a developing awareness in the mind that affects the work. The developing awareness I will also call "the work." It is a most important part of the work. There is the work in our minds, the work in our hands, and the work as a result.
> (Zegher, 2005, p.31)

Art is the product of awareness in the mind, which becomes the resultant work itself. Zegher makes a strong argument within Martin's practice for 'space of *perception*

between the work and the viewer: perception in the sense of both consciousness and vision' (Zegher, 2005, p.35). Zegher's idea that perceptual space between the work of art and its audience is of importance and has parallels to the space explored between the wall-based art and spectator promoted within this research and the artworks exhibited in *Installation/Painting*.

Zegher cites widely from the exhibition catalogue *The Spiritual in Art: Abstract Painting 1890-1985* (Los Angeles County Museum of Art, 1986) in her article on abstract notions (Zegher, 2005, pp.23-41), especially when discussing Kupka and Malevich. This is disappointing, as it does not add to knowledge already in existence.

Critic, Roger Fry, uses aesthetics to aid audiences of art to open and free their minds to appreciate the sensation of feeling when viewing a work of art. Fry argues for the development of the 'imaginative life' (Fry, 1920, p.14), the name given to inner feelings humans experience when viewing art. Clive Bell in *Art* (Bell, 1987) expresses this feeling as 'significant form' (Bell, 1987, p.4) and places emphasis on aesthetics of personal experience and how this differs within each individual. Significant form has greater connections to this research than the imaginative life due to the ideology of its audience to feel the sensation of experience in the space between the wall-based art and the spectator. Bell is comprehensive in the fact that only some paintings move us aesthetically and argues against using the term beauty to describe objects that do not provoke aesthetic emotion, hence the term significant form.

This research aspires towards the notions put forward by Fry on contemplation and beauty, but not through the imitation of nature. Plato's texts on imitation in art (Gaiger, 2008, p.21) led him to conclude that painting is the lowest denomination in his theory of ideas. This is the polar opposite to theosophy and the principles of the evolution of humanity that place artistic sensibility in the higher manas of the human mind.

Gaiger argues that Plato's theory of imitation in the arts is flawed as he addresses two points of weakness. Gaiger disputes Plato's dialogues and their relativeness to each other in relation to art, considering the texts as confusing when applying Plato's notion of a 'principle of truth' to imagery (Gaiger, 2008, p.28). Gaiger claims that for Plato, 'truth consists in a relation of correspondence or *homoisosis* between two things' (Gaiger, 2008, p.28). This indicates a true to life representation in proportion, dimension and scale of the object. Gaiger argues that this definition is not concise in reference to Plato's theory of ideas. Within the theory of ideas, Plato places the idea of a material object as the highest 'level of reality' (Gaiger, 2008, p.28), with the material object itself second and the representational image as the weakest level of reality. In levels of skill, Plato categorises the maker of the material object as a higher skill than that of the imitator, painter or artist. Plato's reasoning is that the maker has to have 'knowledge of design' (Gaiger, 2008, p.29) which the imitator does not. The painter does not need to know how the material object works in order to paint it.

Gaiger does not agree with Plato placing the idea above all in terms of imitation. I dispute Gaiger and agree with Plato's levels of reality. This is because the idea is

first formulated within the human mind and is the starting point of any artistic practice. Gaiger counters this argument by saying, 'nothing constraints us to privilege conceptual knowledge over sensory experience' (Gaiger, 2008, p.29). Gaiger does not 'accept the conclusion that representation of the visible appearance of an object belongs to a lower order of reality' (Gaiger, 2008, p.29), but if the artist is imitating objects by copying then it could be said that the true representation of objects would be at their lowest level. This is because the artist as imitator of reality cannot justify the true nature of objects in two-dimensions as there is little creativity or imagination in copying from reality.

Gaiger, also disagrees with Plato's theory that an idea is more advanced than the painting as the 'purpose is to give pleasure to the viewer by creating a semblance of reality' (Gaiger, 2008, p.33). I surmise that Plato is correct in his elucidation that 'the non-identity between an artwork and its model in nature as a misrepresentation: an imitation is always less than the thing that it imitates' (Gaiger, 2008, p.32). I must admit that the use of the artist as an innovator, to imagine and create, is stronger in terms of Plato's theory than his comments that imitation is 'potentially harmful and corrupting' (Gaiger, 2008, p.33) to its audience. This statement stands true to the painters of representation but, not that of the abstract non-objective painter, with the former being non-creative and non-imaginative; whereas, the latter uses the resources of the mind to imagine and create without constraints of a likeness to reality. This supports the argument through the working practices of Malevich and Agnes Martin's use of reflection and contemplation.

Gaiger, argues that Bell's theory of significant form is weakened by his insistence that it relates to formal elements and does not consider the 'representative element' (Gaiger, 2008, p.118) of a painting, thus, declaring his theory a 'closed circuit' (Gaiger, 2008, p.118). The research offered, counters Gaiger's reasoning, by putting forth the argument that the inclusion of representative elements would not allow the audience to be fully relieved of their daily lives, the representative elements would always bring the audience back to experience. As Bell says, aesthetic emotion is realised when the audience engages with the formal elements (Gaiger, 2008, p.118). Applying Bell's theory of significant form to non-objective painting seems justifiably logical, even if this was not Bell's aim when writing *Art*.

Gaiger is not as scathing in reference to Fry, for Fry does not agree 'that representational content is entirely irrelevant to the value we place on art' (Gaiger, 2008, p.118). Fry argues that audiences react to the arts 'dramatic idea' (Fry, 1981, p.210) and the notion that we can be stirred by the design of formalist structures. It could be said that Bell and Fry's formalist theories, if applied by an audience, would allow greater appreciation of non-objective painting, as they would value tension as a dramatic idea between the formal elements and permit them to receive, in Bell's words, aesthetic emotion.

Research supports the idea that the imaginative life can give life to line. Fry's essay, 'An Essay on Aesthetics' (Fry, 1909) has influenced the research aspiration to emphasise the philosophy of formal aesthetics within contemporary painting. The aesthetics of Fry though do not go as far as Malevich, in that Fry concludes aesthetic appreciation for the imaginative life. This is more a state of mind or internal physical

emotion whereas; Malevich's theory is grounded in scientific ideals and concludes Suprematism as a new Suprema race for the future.

Similar to Malevich, Bell argues that pictures with descriptive qualities do not possess aesthetic emotion to move us and 'are not [considered] works of art' (Bell, 1987, p.6). For a work of art to be true, the sensation of feeling within must be prevalent as significant form. Line and colour within an imitated landscape only hint at the aesthetic emotion; it does not go far enough to provoke it, and 'representation is a sign of weakness in an artist' (Bell, 1987, p.10).

Malevich and Bell have stated as well as anyone the problems with justifying the sensual beauty of nature in painting. Bell suggests viewers of paintings who do not know how to feel when faced with abstract, pure forms, do not understand the art because they only wish for a material image.

Interesting research undertaken to counter the argument put forth that non-representational art is of a higher spiritual value than representational and imitative art is that of the work of Zuckerman, Uliuchz and McLaughlin. Their research investigates the role of personality and sensation seeking when viewing nature painting based on the categories of tension and complexity (Zuckerman, Uliuchz and McLaughlin, 1993). Results of their investigation concluded that:

> Most persons like nature paintings that are complex, tension-free, and repre-sentational rather than expressionistic or semi-abstract . Within the realistic or representational categories the most liked ratings are from the romantic school as exemplified in the landscapes of Church and Bierstadt.
> (Zuckerman, Uliuchz and McLaughlin, 1993, p.570)

Male personalities with high sensation seeking were more inclined to high tension and complexity in painting than high seeking sensation females. Their research shows a lack of interest on behalf of researchers in the exploration of personality traits within the field of art.

John Ruskin is against the idea of abstract art, regarding the relationship of colour and form as beauty within the picture frame. "'Form is form, Ruskin said, *"bona fide* and actual, whether in marble or in flesh – not an imitation or resemblance of form, but real form.'" (Dougherty, 1955, p.112). This confirms Fry's ideas of the line having an expression of life and Ruskin approaches art in a similar vein, for the painting satisfies 'the sense[s], while it speaks to the intellect' (Dougherty, 1955, p.113), therefore, the mind initiates the idea for the creative impulse. This again disputes Plato's hierarchy.

It can be said for art to be beautiful; it has to communicate with the senses and not the intellect of the mind. If a painting succeeds in this, the spectator can bring their personality to the represented image and not just an informed intellect, which can be argued, is the only function of non-representational art. Ruskin appreciated the formal aesthetics but 'never thought so little of art that he limited it to those purely sensual appeals (Dougherty, 1955, p.115).

In a similar fashion Schapiro argues positively for Courbet's realism as 'great individual art' (Schapiro, 1941-42, p.172) because of Courbet's compassion of ordinary people. The subjects chosen for realism were limitless and were more interesting than 'the rich and the elite by their great sincerity' (Schapiro, 1941-42,

p.174). Folk art as well as literature became the foundation for realism in areas of society that included commerce, religion and the army. Baudelaire refers to the primitive nature of sculpture and 'why peasants are so delighted by a piece of wood or stone that has been industriously turned, [yet] remain blank at the sight of a beautiful picture' (Schapiro, 1941-42, p.177). This is in contrast to the works of art exhibited at the Salons where the aristocratic opinion was to deride the mundane style of realism.

The visual arts are an effective way of communicating a message and a narrative in which spiritual formation can arise. When observing biblical scenes the spectator can 'alter one's moral vision of things' (McCullough, 2015, p.8). This extends the spectator's mind beyond emotional and earthly values usually associated with the visual arts, thus providing an opportunity in developing a deeper understanding. McCullough sees spirituality as a passage to 'self-awareness in relationship to God, and under a transformative power of grace' (McCullough, 2015, p.12); with a life in prayer allowing spiritual formation to take place.

For a definition of spiritual formation involving non-theological values, McCullough references George Lindbeck who suggests that people who are humanistic and Marxist in thought 'are in their own way spirituality well-formed' (McCullough, 2015, p.13). This is due to such persons evolving 'the capacities and disposition to think, feel, and act in accordance with their worldview no matter what the circumstances' (McCullough, 2015, p.13). McCullough aims to discover the character in which the arts contribute in the development of the capacities to allow people to think, feel and act in relation to spiritual formation and biblical scriptures.

It is through continuous observation and contemplation of the visual arts that one can develop meaning with the view of changing one's perspective outlook of their worldview.

McCullough is in agreement with Gordon Graham's theory of art, who proposes a new reality of art in which 'rather than assuming a movement from reality to art and assessing an artwork on that basis, instead, one begins with art and moves toward corresponding reality' (McCullough, 2015, p.25). By this, Graham is suggesting that spectators view artworks in relation to their own experiences and if the spectator is willing to be open to engaging with the imagery then such artworks have the ability to change spectators viewpoints 'address[ing] ideas, values and perceptions' (McCullough, 2015, p.26).

McCullough classifies the term story as a fundamental characteristic of art, as it is not only emotionally suggestive but also intellectually enlightening (McCullough, 2015, p.39), thus allowing new perspectives and values to be understood by the spectator. Art is initiated from and realised within all manner of contexts. The contexts are a given and not created by the artist. This is because contexts such as social and historical work within the parameters of a time and place is therefore interpreted within these realms.

McCullough's research envelops attentiveness within spirituality as the 'arts invite, almost indeed require, that we slow down, wait, listen, defer judgement, achieve a suspension of egotism' (McCullough, 2015, p.39), to allow new experiences to be felt from observing works of art. This attentiveness is similar in religious people

when in prayer awaiting a divine presence. When attentiveness takes hold it permits new perspectives and understanding to come forth in the imagination. McCullough argues that it is the continuous and repetitious of looking, listening and waiting that gives spiritual formation. In relation to McCullough's argument in terms of spiritual formation, McCullough says that the arts can enlighten the resolution of God in both creation and redemption.

Taylor in Refiguring the Spiritual (Taylor, 2012) discusses the works of Beuys and Turrell in relation to the fightback against the artworks of Warhol and Koons, whose works revolve around commodification, corporatisation and financialisation. Beuys' interest in art is philosophically grounded in personal, social, political and economic renewal and re-generational understandings rather than the psychoanalytical. Beuys exhibits works of art, such as fat, which is the most uninteresting material for an artist into the higher realms of culture conveying the 'transformative and regenerative power of art' (Taylor, 2012, p.19). This is understandably due to Beuys' interest in religion and his Christian upbringing and the ideals of his faith in God being the creator of rebirth, renewal and redemption. Beuys disagrees with Kandinsky's 'view of abstraction and dematerialisation of the work of art, [but] he shares his spiritual vision and understanding of art's redemptive power' (Taylor, 2012, p.23). This is similar to Steiner's anthroposophical views whereas Kandinsky placed his faith in theosophy and Blavatsky's writings. Beuys approved of Steiner's belief in 'that most of the important ideas art is charged with figuring are inseparable from Christianity' (Taylor, 2012, p.31).

Taylor argues that the value of religion in modern society is still important for evolution. Taylor refers to Benjamin Buchloh's criticism of religion and his understanding that the emergence of the social sciences in the 1960s and 1970s led to religion being 'the vestige of primitive or infantile mentality and is destined to disappear with the inevitable march of history' (Taylor, 2102, p.33). Taylor stands firm in his belief that this is an erroneous ideology and that Buchloh is incorrect in reference to Beuys' understanding of historical religious activity in relation to his artistic practice and the detrimental effect of materialism upon society.

It is arguable that artworks alone cannot bring about social change in the same way as spiritualist communities intended, for example, the Amish, whom 'spiritual transformation prepared the way for social reformation' (Taylor, 2012, p.27).

Beuys' theory of art replicates the theory put forward by Plato, in that "Sculpture begins in thought and if thought is not true, the ideas are bad and so is the sculpture. The sculpture's idea and form are identical" (Beuys, 1986). This research suggests that the idea and thought of the idea is the work of art. If this is the case, then the argument for whether the creation of physical art works is a valued practice in modern day society must be questioned.

For Beuys and Kandinsky art is for healing. Acting on creative potential for curative purposes, the argument for art to evolve positive societal change allows art in the sense of the idea to take formation. This Beuys expresses as 'social sculpture (Taylor, 2012, p.38).

Beuys' interest in Idealist philosophy lead him to 'claim social, political, and cultural practices, institutions, and systems can be themselves works of art' (Taylor, 2012, p.37). This brings forth the notion that Beuys' belief in educational practice as an artistic platform can develop self-transformation, thus leading to positive social change through freedom in creating of works of art.

Beuys' underlying belief in Christianity and the concept that God is creativity allows Beuys to develop his theory that man has the potential to be creative and this is the special quality of the educator. The educator therefore becomes a work of art (Taylor, 2012, p.39) as creativity establishes and concludes in the process of formation. Beuys' concept of social sculpture is therefore invisible as it is 'a purely spiritual substance' (Taylor, 2012, p.40). In conclusion to Beuys' principles then art is everyone and everything but in the form of the idea.

Taylor suggests that modern philosophy based on research into the social sciences is incorrect in relation to the body and mind dichotomy. Taylor bases this point of view from the writing of Merleau-Ponty and his work into perception and the pre-reflective cogito. At the heart of Merleau-Ponty's work is the cognitive processes and consciousness:

> The "anonymous functions," which are 'more ancient than thought," constitute the blind spot without which vision is impossible. Vision, therefore, is always shadowed by an irreducible invisibility.
> (Taylor, 2012, p. 129)

Taylor further strengthens this idea with research into colour, yet colour is the communication of wavelengths of reflected light using information processors in the

brain. Yet, sensation to perception is timely and knowledge is impossible from memory, as the:

> …present is never present but is always already the past. The most recent research has established that perception always lags behind the activity of the eye.
> (Taylor, 2012, p.137)

'Whereas Kandinsky and his followers are concerned with the spiritualisation of the material, Beuys and Turrell are committed to the materialisation of the spiritual' (Taylor, 2012, p.190).

Cultural value in society arguably validates itself in terms of authenticity of visual information through the formation of images and how the visible information is consumed. Yet it can be argued that the visibility of visual culture gives rise to invisibility. Fuery and Fuery give the example of the Mona Lisa (Da Vinci, 1503) which is now seen in the spectator as a famous painting, not the visual expression to which it was first appreciated; cathedrals, such as Notre Dame, which is considered as a tourist site and not thus seen as a place of prayer (Fuery and Fuery, 2003, pp.121-124). Arguably, the examples given are not always seen in this manner as suggested by Fuery and Fuery, as the Notre Dame is still used for prayer services on Sunday.

Fuery and Fuery argue invisibility for visual culture in political terms, using the example of homeless people, maintaining 'when most affluent Westerners walk down a busy street in a large city they see street beggers enough not to step on them' (Fuery and Fuery, 2003, p.125). Consequently, the homeless become invisible in relation to visual culture. It is not that they are hidden it is just they are unnoticed by

the public as a spectator. Therefore, visual culture is a two-way exchange as visual culture forms the spectator just as the spectator forms visual culture.

Arguably, representational images in relation to spiritual formation in primitive and modern society provides spectators:

> …to be elevated by them, and are moved to the highest levels of empathy and fear. They have always responded in these ways; they still do.
> (Freedberg, 1989, p.1)

The educational interpretation of religious and representational images of spiritual formation lies in the significance to which they cannot only affect the emotional expression of the spectator but also behavioural concerns.

It could be argued then that this response has similarities to the two-way consumption of visual culture as it is produced for and by the spectator due to the reading of the image.

Freedberg argues that when people are speechless and emotionally moved in galleries after viewing great works of art they 'feel that history and common judgement have rightly sanctioned its status in the canon: we feel no doubt whatsoever of its presence; we feel the fullness of its aura and its great force' (Freedberg, 1989, p.432).

Freedburg's only claim 'is the need to integrate the experience of reality into our experience of imagery' (Freedberg, 1989, p.434).

Kuspit, in 'Reconsidering the Spiritual in Art' (Kuspit, 2003) argues, and the research strongly agrees, that the writings of Kandinsky, Malevich and Mondrian are to be considered worthy texts for contemporary art. For I surmise they are in fact the very texts which have a profound influence upon how art should be approached.

The main question Kuspit posed was: 'Can art still offer spiritual enlightenment as Kandinsky thought it once did, or was capable of doing?' (Kuspit, 2003). For Kandinsky, the 'spiritual experience' (Kandinsky, 1912, p.28) was based upon the sensation of colour and how this impacts upon 'inner life' (Kandinsky, 1912, p.1). Kandinsky cannot escape religious connotations of the spiritual, as Kuspit states, the reason for reconsidering the spiritual in art now, is because Kandinsky's audience understood what was meant by the spiritual through attending church, whereas in today's audience 'there is no religious tradition to sustain it' (Kuspit, 2003).

Kuspit, argues Warhol's 'business art', is today supported by a 'business culture not a religious culture' (Kuspit, Part 1, 2003) as was the case in Kandinsky's day. Kuspit claims how business uses art to 'appropriate supposedly intrinsic value and claims to advanced consciousness' (Kuspit, Part 1, 2003). This raises further problematic issues in relation to the commercialisation of the spiritual within abstract art and 'its inevitable reduction as luxury product' (Kuspit, 1986, p.314). Taylor argues that the commercialisation of art as commodity, has had an intrinsic detrimental effect upon the evolution of art as the auction house, elitist, egotistical system directs the art markets value of style in our materialistic society, which if anything, I surmise devalues the spiritual in art.

Pickstone, argues Kandinsky's loathing for Victorian materialism as 'rather snobbish' (Pickstone, 2011, p.35). The research suggests that Pickstone is missing Kandinsky's point of Victorian materialism, as it was this era that deadened the inner spirit. For Victorian materialism was based more on production, whereas, modern materialism is served more by consumption. The research challenges Pickstone's argument that materialism is snobbish, suggesting materialism is but a shroud of darkness covering the spiritual.

Kandinsky, in *Concerning the Spiritual in Art* (Kandinsky, 1977) listed colour relationships and associations with music, saying they 'have no scientific basis, but are founded purely on spiritual experience' (Kandinsky, 1977, p.37) to which Pickstone argues, 'Kandinsky was wrong on both counts' (Pickstone, 2011, p.35). Yet, Pickstone provides no evidence to suggest Kandinsky was wrong. Indeed, research finds it difficult to accept Pickstone's opinion as Kandinsky acknowledged there were no scientific understandings for his associations.

Pickstone presents an argument in which Kandinsky and his colour associations are not of spiritual or theosophical philosophies, but are instead the effects of synaesthesia, therefore having 'largely eliminated the need for any very spiritual explanation of the significance of colour in his work' (Pickstone, 2011, p.36). This argument by Pickstone is contested by Lone, who argues there is no evidence of Kandinsky being a synesthete, despite various commentaries on the subject. (Lone, 2006, p.72-75).

To counter the above, Pickstone references the artist Garry Kennard, who uses scientific references when discussing the spiritual, which is rather contradictory taking into consideration he is a Reverend in the Church of England (Pickstone, 2011, p.36). This contrasts with Kuspit, who writes of Kandinsky using the spiritual in art as a way of self-healing when in the act of painting (Kuspit, 2003).

Pickstone, rightly argues that the 'contemporary Church sits powerlessly on the side-lines of intellectual and cultural debate' (Pickstone, 2011, p.38), spiritual freedom is 'no longer anchored in religion which has been discredited, bringing the idea of spiritual freedom into intellectual disrepute' (Pickstone, 2011, p.38). Loss of religion and church practitioners weakens the spiritual belief today, leaving us only with the inner-self as salvation from materialism.

Algeo, contrasts Pickstone's argument and puts forth the claim that Kandinsky used the notion of the spiritual in his artistic practice for 'self-transformation' (Algeo, 2004, p.1). Algeo, compliments Kuspit, who argued that Kandinsky used the spiritual in art as self-healing from bouts of depression (Kuspit, 2003). Algeo, maintains Blavatsky did have an influence on Kandinsky and his writings, thus opposing Pickstone's argument further. It could be suggested as doubtful that opposing critics of Kandinsky stand unbiased in their points of view; for instance, this research accepts the theosophical standpoint rather than the theological as the modern foundation of the spiritual in art.

Ringbom, confirms Algeo's claim that the early influence of theosophical writing upon Kandinsky was significant; in particular, the books *Man Visible and Invisible*

(Leadbetter, 1908) and *Thought-Forms* (Besant and Leadbetter, 1908), and argues that these books had a positive impact upon the spiritual artists at the beginning of the twentieth century (Ringbom, 1986, p.136).

Algeo, substitutes Kandinsky's term 'spiritual triangle' (Kandinsky, 1977, p.15) to the 'triangle of humanity' (Algeo, 2004, p.3), but for the purpose of this thesis, Kandinsky's original term the spiritual triangle will remain. The spiritual triangle is based on the idea put forward by Madame Blavatsky, for 'it envisions humanity as consisting of persons at different levels of progress, [and] at different stages of spiritual evolution' (Algeo, 2004, p.3). Kandinsky did not proclaim Bodhisattva as the pinnacle of the spiritual triangle as Algeo maintains, for Kandinsky writes only of the artist and places Beethoven in the upper echelon of the spiritual triangle (Kandinsky, 1977, p.15). The artist gives the spiritual light to others, for it is the artist who has the ability to see such things others cannot.

Algeo, says the only significance in the progression of the spiritual triangle, 'is the gradual improvement of the human condition' (Algeo, 2004, p.3). This is in accordance with the relationships between the Bodhisattva and Hinduism, thus connecting Kandinsky's idea of the spiritual in art to Buddhism. Kandinsky wrote *Concerning the Spiritual in Art* for himself and artists to read, not for the theosophical society, as Algeo rightly says, Kandinsky proposed:

> The improvement of the world and the human condition is the purpose of art. That improvement can result only from an increase in self-awareness, that is, an increase in spirituality.
> (Algeo, 2004, p.4)

Algeo's theosophical claim, relates Kandinsky's inner necessity to Hindu tradition 'as the *svadharma* of a being [is] its self-nature or inner foundation' (Algeo, 2004, p.4). Algeo defines evolution as a goal that:

> …is set from within and it expresses our inmost nature. We transform ourselves in order to become that which we truly are.
> (Algeo, 2004, p.4)

One argument put forward by Algeo, and is supported by research, is that Kandinsky is a theosophical artist, 'because his motive for the practice of his art was to improve the condition of all human beings by helping them in the process of self-transformation' (Algeo, 2004, p.4). Kandinsky's use of art to self-transform is supported in Kuspit's article 'Reconsideration of the Spiritual' (Kuspit, 2003). Both Algeo and Kuspit realise these words by Kandinsky to be crucial in understanding the notion of the spiritual on a personal level.

Beit-Hallahmi asserts a theological standpoint in Kandinsky's practice, arguing that an audience in art and religion go through similar psychological and preparatory processes prior to their experience and response: 'They include the activation of the imagination and the emotions, and an identification with elements of the artefact presented to the audience' (Beit-Hallahmi, 1983, p.239). I find confusion in Beit-Hallahmi's issue of belief within his argument, as surely it is belief that is activated and not imagination. To suggest the religious audience, use their imagination to believe in their religion is a weak argument to put forward. Research shows Beit-Hallahmi is correct when describing the response of an audience to works of art, in that: 'The artistic product creates in the individual member of the audience reverberations, which go deep into the unconscious' (Beit-Hallahmi, 1983, p.239).

'The Universal Brotherhood of Man' (E. A. Neresheimer, 1897), is a non-religious, theosophical doctrine to unite humanity. The doctrine, argues 'neither Science nor Religion' (E. A. Neresheimer, 1897) aid the evolution of humanity, unlike the 'perception of Truth from *within*, where all knowledge and wisdom reside' (E. A. Neresheimer, 1897). Neresheimer gives three paths to aid the reunification of the soul after the soul has journeyed 'through matter during many lives' (E. A. Neresheimer, 1897). Taken only from the truth within, starting with a "love of mankind"' (E. A. Neresheimer, 1897) to 'independence of thought and the courage to rely on one's own intuitions' (E. A. Neresheimer, 1897), will humanity begin its journey of evolution to the next stage.

Machell discusses the work of the Secret Doctrine and the relationship of theosophy to art. In the first instance, Machell questions the similarities between 'What is Art?' (Machell, 1892-1893, p.3) and 'What is Truth?' (Machell, 1892-1893, p.3), with the search for truth being at the heart of theosophical investigation and belief. It is 'abstraction' (Machell, 1892-1893, p.3) of the idea that is problematic with both the question of what is art and what is truth.

By using the term art as a description of higher art, Machell argues, that:

> Art is essentially the expression of an ideal. This ideal will vary in its degree of approximation to Truth, in proportion as it approaches the abstract essence of things.
> (Machell, 1892-1893, p.3)

Art, according to Machell's definition, is 'the expression of the ideal, which must be the highest conceivable form of Truth, the study of Art must be the pursuit of Truth, and that is aspiration' (Machell, 1892-1893, pp.5-6). This idea is taken from the

seven stages of evolution of humanity in the Secret Doctrine, with Machell dividing

the stages into classes examining 'which class we really do belong' (Machell, 1892-

1893, p.6). The classes for which humanity aspire toward are divided into art, science

and religion. Machell asks 'that every man should try to develop in himself that

perception of Art which is a key to the harmony of Nature, and to his own position in

that harmony' (Machell, 1892-1893, p.6), thus placing the class of art above the

classes of religion and science.

Truth, therefore resides internally, with Machell arguing that abstract art is the

highest form of art. The research aspires to position abstract and non-objective art

above representational art in the argument for truth. This is because abstract and non-

objective art involves the interpretation of internal spiritual sensations in its

production and appreciation, and not the unimaginative skill of copying the

experience of memory as provided for in representational art.

Just as Kuspit says the spiritual in art is irrational, so Machell articulates, 'many

people declare that the harmony of the universe is a myth, a poetic fancy, a delusion;

that all is discord' (Machell, 1892-1893, p.11). For humankind to develop and

progress to the next stage in the evolution of humanity, society must begin to accept

and appreciate the unity of truth in both harmony and the spirit of the universe.

Machell concludes:

> Where then will you look for the completion of the harmony, but in yourself.
> The artist can only suggest, the spectator must seek in *himself* the elements of
> harmony; and only so will he find what is the use of a work of art.
> (Machell, 1892-1893, p.15)

With the exception of Pickstone, Machell and Algeo acknowledge the positive influence theosophy had upon Kandinsky, but they do not further their arguments on how the artist can move forward when regression surpasses progression within the spiritual triangle.

One of the most important texts relating to the spiritual in art is the exhibition catalogue, *The Spiritual in Art: Abstract Painting 1890-1985* (Ed. Weisberger, E. 1986). In the opening article, 'Hidden Meanings in Abstract Art' (Tuchman, 1986, pp.17-63), Tuchman, associates the spiritual in art to individual artists and movements, placing Malevich's Suprematist movement and the fourth dimension as the leading exponent.

However, when discussing the transcendental movement Tuchman fails to distinguish the differences between the transcendentalist and spiritualist movements. This is needed as the transcendentalist has synergies with theosophical thought and the idea of listening to an inner-self; whereas the spiritualist believes in communicating directly with otherworldly spirits. Painting with Light has synergies with transcendentalism and its relationship to the inner-self, but not interpretations of spiritualist visions.

Ringbom, argues that the transference of the spiritual is derived from theosophy, which took 'the notion of vibration [from Buddhism] as a force producing all the shapes of the visible as well as the invisible world' (Ringbom, 1986, p.147). Kandinsky adapted this idea of vibration (Ringbom, 1986, p.148).

Bowlt, brings to light knowledge which has been dismissed in the majority of historical texts concerning Kandinsky and Malevich, such as, the magazine *Zolotoe Runo* (Golden Fleece) (Bowlt, 1986, p.171). Bowlt argues Kandinsky and Malevich were creatively inspired 'from their interests in spontaneity, fortuitousness, gesture, and intuition rather than from established, ordered philosophical systems' (Bowlt, 1986, p.167). Bowlt uses the critic Genrikh Tasteven's idea that 'the Russian avant-garde was an outgrowth of Symbolism' (Bowlt, 1986, p.167).

The Symbolists believed the 'path of true illumination lay via intuition and cognition, not via objective knowledge' (Bowlt, 1986, p.170). The only issue lay in the fact that the Russian Symbolist philosophers 'were persons of literature rather than of visual perception and they disclosed little understanding of or interest in the avant-garde artists' (Bowlt, 1986, p.170).

Bowlt argues that, 'it would be misleading to say that the avant-garde studied occult texts in earnest, attended spiritualist séances, or experimented with hypnosis, galvanism, or Yoga' (Bowlt, 1986, p.170). This is in direct opposition to the majority of published texts concerning Kandinsky and Malevich, which clearly argue that both were deeply inspired by such notions. Bowlt also argues that the avant-garde artists of Moscow and St. Petersburg were introduced to occult 'ideas at dacha parties, public lectures and in popular press, often without knowing where they came from or who invented them' (Bowlt, 1986, p.170).

Bowlt highlights texts from The *Zolotoe Runo* (Golden Fleece) (Moscow, 1906-9) magazine which form criteria for abstract painting. These texts are usually attributed

to Kandinsky's *On the Spiritual in Art* (1912, Kandinsky). On the contrary, these were first published in 1906, shortly after the Revolution, in which an:

> …editorial statement demonstrated its total disregard for mundane reality: *Art* is eternal for it is founded on the intransient, on that it cannot be rejected. *Art* is whole for its single source is the soul. *Art* is symbolic for it bears within in it the symbol, the reflection of the Eternal in the temporal. *Art* is free for it is created by the free impulse of creativity.
> (Bowlt, 1986, p.171)

It was also in this first issue that 'Blok published "Slova i kraski" (Words and Colours), in which it is argued that a child's primary medium of expression was colour, as of primitive peoples, was more genuine, more immediate than professional art' (Bowlt, 1986, p.171), again attributed to Kandinsky. Painting with Light argues for this research to be acknowledged by authors of Kandinsky as this demythologises two important aspects of Kandinsky's practice.

Another unjust assertion in art history is argued for by King, who proclaims Kandinsky's *Improvisations* series is 'directly influenced by the illustrations in 'Thought Forms'' (King, 1998, p.24) and 'are assumed to be influenced by Theosophical ideas' (King, 1998, p.24). The audience, only has to read the titles of Kandinsky's *Improvisations* to find connotations towards the real world and the fact they are not pure abstract paintings. Indeed, the Stedelijk Museum, states: 'Preliminary studies and related works show that this is a variation on the theme of the Garden of Eden' (http://www.stedelijk.nl/en/artwork/2409improvisation33ori-enti#sthash.RAcv9d7U.dpuf). Blotkamp, claims abstract art was first developed in Holland 'by the relatively unknown painters Bendien and Jan van Deene' (Blotkamp, 1986, p.104). Blotkamp refers to a written text by van Deene who:

> ...wrote that the works represented only "inner things"; a painting should not render personal feelings but "the wonder of life, its beauty and sweetness." (Blotkamp, 1986, p.104)

This claim by Blotkamp regarding the origins of abstract art contrasts with the wider notion of Picabia's painting titled *Caoutchouc (Rubber)* (1909) which is 'considered to be one of the first abstract works in Western painting' (Marcade, 2008). Research supports this claim as af Klint's first abstract painting was in 1906, predating Picabia by three years and Kandinsky's claim of *Composition 7* (1911) by five years.

J.P. Hodin takes a 'historical' (Hodin, 1961, p.175) and 'ideological' (Hodin, 1961, p.175) position in his book, *The Spirit of Modern Art* (Hodin, 1961). It must be made clear that Hodin is interested in the spirit and not the spiritual within art although he begins by saying: 'There is an enigmatic character about modern art, a mystery, something which requires to be understood before it can be enjoyed and appreciated' (Hodin, 1961, pp.174-175). It could be argued that Hodin is indirectly aiming towards the spiritual, using words such as mystery, with a departure in the direction of Bell, using a similar notion to significant form, as an audience must understand before they can appreciate the work of art. This is because, as Hodin articulates, modern art opposes the senses and our understanding of the conventions in which we live our lives, thus leaving us 'often left alone and wondering' (Hodin, 1961, p.175) what semiotic codes are present. Hodin supports O'Doherty's notion of audience alienation, as this is the new prerequisite of contemporary art. Hodin references Professor Thomas Munro's definition of art, written on Naturalism in 1951, that we are lost as we look at art of the old, with the eyes of today. On this evidence, it could be put forth that the idea of today's audience who wish to admire skilful narrative

representation must have old heads of yesteryear thus not understanding the work of today.

Hodin argues for the ideological stance of 'art as expression' (Hodin, 1961, p.179). This expression reflects the truth of 'the philosopher, the scientist, [and] the psychologist' (Hodin, 1961, p.181). This is similar to Machell, who argues that: 'Art is essentially the expression of an ideal' (Machell, 1892-1893, p.3), but in relation to art and not theosophical thought. However, both Machell and Hodin, argue for the value of art through expression of human thought.

This is in contrast to King, who argues that science today, 'appears to be more receptive to the spiritual than the arts (King, 1998, p.21). King acknowledges the difficulties in using the word spiritual in relation to art and science, with his definition of the spiritual enveloping religion, the occult and transcendent ideologies (King, 1998, p.22). King, locates science in the spiritual in modern art by asking what replaces religion as inspiration for the spiritual:

> If the modern artist rejects traditional religion, what is the source of the spiritual? In particular, it is in the occult teachings of Theosophy and Anthroposophy.
> (King, 1998, p.23)

King (1998), makes an error, similar to Hodin (1961), by using the term, spirituality, thus adding confusion to his argument for the spiritual. For King, 'the void is a key concept in the spirituality of the transcendent, particularly in Buddhism, but is deeply problematic in the West, particularly to the artist' (King, 1998, p.23). The void, as an idea, is a challenge for westernised society who place value in quantifiable material over spiritual designs. Artists view the spiritual in art with mistrust and this could be

due to it being 'rarely part of the curriculum in mainstream art colleges' (King, 1998, p.24).

King and Machell compare Kandinsky's, 'The Movement of the Triangle' and its ordered evolutional levels of humanity within theosophy: 'This image fits well with Theosophy, but with the rise of socialism after 1917 it exposes an elitist view of art that sat uncomfortably with the new order' (King, 1998, p.25). This perceptive criticism by King is not apparent in Machell's critique, but it is crucial in alluding to the fact that the notion of the spiritual has been compromised by materialistic desires of humanity, thus the reason art is seen as an elitist pleasure. If only the artist can aspire to the highest realms of the triangle and is able to show the lesser, non-artists the light required for promotion, is it any wonder that contemporary art alienates the general audience.

The crux of King's argument, is a 'willingness of scientists to write about God as if an outcome of their science' (King, 1998, p.27). King says 'the *subjective* entered science with quantum mechanics' and 'it gave the scientists the first real excuse to talk about the spiritual' (King, 1998, p.27). King complements this scientific method with the anthropic principle, 'which finds wider evidence for the central role of human existence or consciousness in the structure of the universe' (King, 1998, p.27). It could be argued that this is a theory Malevich would have admired due to his interest in cosmology.

The levels of evolution in the spiritual triangle relate directly to theosophy and the seven levels of the evolution of humanity. All of which have not been scientifically

or artistically proven accurate. This research shows a missed opportunity for King in justifying his research and acknowledgement of the spiritual and its importance within the history of art and science.

Roberts, says 'the quest for pure art as the goal of abstraction was inspired by a mystical search for a state of oneness with ultimate reality' (Roberts, 2011, p.148). It was held that 'abstraction continued the symbolist dream of overcoming the material world' (Roberts, 2011, p.148).

One book that unifies the spiritual in art and use of internal content is *The Transformative Vision* (Argüelles, 1975). With art history re-establishing its focus from 'objects of perception to perception itself' (Argüelles, 1975, p.2). Argüelles, argues for the study of art to become 'a study of the psychic categories or possibilities expressed by the spirit as it passes through the human form' (Argüelles, 1975, p.2), stating the 'transcendence of reason, and the visionary role of the artist' (Argüelles, 1975, p.3) as paramount.

Two significant terms for Argüelles are 'psyche and techne' (Argüelles, 1975, p.3). Psyche is used in reference to 'human behaviour that relates to the right cerebral hemisphere' (Argüelles, 1975, p.4) to which Argüelles connects with feminine qualities and intuition, whereas techne is used to describe the 'left cerebral hemisphere functions of logic' (Argüelles, 1975, p.4) and is seen as male and intellect. Argüelles uses theosophical notions in his aim to resolve and unify male and female elements of human consciousness, psyche and techne respectively, to

restore cosmic accord within the universe, but as Argüelles argues this 'resolution is not a conclusion but a beginning' (Argüelles, 1975, p.4).

Argüelles, argues that artistic visual responses to reality and imitation is humanities 'failure to pass beyond their own cultural/perceptual glosses' (Argüelles, 1975, p.40) which in turn ends the will of 'greater evolutionary development and instead becomes an end in itself, the individual becomes a parody of his labours' (Argüelles, 1975, p.40). The research supports Argüelles as illustrated by the findings of Malevich and his description of artists who imitate nature and objects, for they become an artistic imitation of themselves and thereby enter the realms of hyperreality as theorized by Baudrillard in *Simulacra and Simulation* (Baudrillard, 1994).

Argüelles takes the stance of other theorists, such as Kuspit, in the sense that the spiritual in art is considered unworthy when stating creativity that transposes 'intuition is neglected, despised, and looked upon with suspicion' (Argüelles, 1975, p.164). Argüelles concludes his argument that 'civilisation' (Argüelles, 1975, p.169), instead of society, is the root cause to staleness and fragmentation of art and man as the speed of life leaves 'no time and no preparation to deal with life except in fragments' (Argüelles, 1975, p.170). Fry and Bell supplemented this argument with their terms, imaginative life and significant form, respectively. With artists developing abstract and non-objective styles, Argüelles argues 'the artist may be able to avoid the pitfalls of art-for-art's-sake and contribute to the greater development of the transformative vision' (Argüelles, 1975, p.170).

Argüelles, argues the Symbolist movement motivated the artist away from transposing the object and towards 'integrating psychophysical process that weds intelligence and feeling, sensation and intuition into a fully realised whole that can be expressed outwardly through *symbols*' (Argüelles, 1975, p.171) as was art's path for evolution. This proposes that the inner content rather than the imitation of reality is of greater importance.

Argüelles's underlying argument is that the development of Westernised society, through science and technology, has detached humanity and our ability to realise and make sense of the transformative vision that expresses the inner-self (content) within art.

Fry's definition of the imaginative life has synergies with Argüelles' notion of psyche, for they both perceive intuition to have a greater influence on the mind than logic when an audience is to view a work of art.

The counter argument with greater historical weight is that of visual art and its formation with religious spirituality. It could be said that works of art on religious formation have a higher understanding than that of the inner spiritual sensation as discussed earlier within this thesis. Therefore, showing a deeper spiritual understanding of faith concerning representational art than in non-representational art. McCullough's interest lies within the 'relationship between the sensory and the spiritual' (McCollugh, 2015, p.xvi) and how the visual interpretation holds meaning within spiritual formation. It is debatable whether McCullough's claim that all art

'communicates some sense of life' (McCollugh, 2015, p.xvii) is valid as the role of non-objective art is exactly that, non-objective.

Methodology

The key methodologies used to develop Painting with Light are based in historical, philosophical, theoretical and experimental practice-led research. The methodology used within this thesis is grounded in ontological practice for epistemological purposes. The objective of the epistemological framework is to question whether the self-illuminated frame can be shown as a useful device in painting and be viewed as a wall-based sculpture. The framework also investigates if the space between the artworks and the viewer is integral to the experience of the spectator. In gathering evidence to support these claims, both practice- and academic-led research have been undertaken using qualitative and quantitative methodologies.

Painting with Light sets out to establish a qualitative understanding of the picture frame as a wall-based sculpture, effects of lighting systems and artists' use or non-use of the picture frame within gallery and museum settings from an empirical approach. Studying frames, lighting systems and artists' works within various galleries and museums within England and France stimulated this research. Initial research into understanding how the frame and light were balanced was of great interest and is documented in sketchbooks for reference.

The empirical information gathered from significant initial primary research was developed in a practice-led approach in the form of studio experimentation. This focused on the selection of picture frames, from simple handcrafted to detailed machine cut frames. Various sizes and colours of frame were investigated to challenge the loss of the picture frame in relation to non-objective, abstract painting. After initial practice-led studio experimentation with the frame, its purpose was

contemplated in its truest sense. Was the frame to be a border, protective or aesthetic in value? This led to permutation within the design process on how light could be an effective addition to the picture frame and develop not only the idea of the frame being a wall-based sculpture, but also challenge the space between the artworks and the spectator. This research is detailed in chapter '1.1 Picture Frame as a Device for Contemporary Painting'.

The development of the first self-illuminating frame was crude in its creation using plywood, enamel paint and coloured LEDs. Once the experiment yielded an aesthetic and experience I sought, the next stage of development was to introduce canvas and thermochromic pigment. Iterative experimentation, investigating the stability of the thermochromic pigment when mixed with acrylic paint commenced. This is detailed in chapter '3.2, Relationship between the Self-Illuminated Frame and Acrylic and Thermochromic Pigments'. This was the most challenging and significant aspect of the practice-led research, for it was most problematic in attaining the correct visual aesthetic and balance of pigment and paint the research set out to achieve.

The practice-led research established a positivist approach for the interpretation of qualitative information taken from participant questionnaires and interviews upon their sensory experience when viewing the works of art in the research exhibition.

Quantitative data collection based on self-completion questionnaires and structured interviews, where possible, gave measurable data to determine the success or failure of Painting with Light's claim in that the self-illuminated frame was a new technical device in art to aid audience experience. To aid justification in this process, a

positivist approach was taken in that the audience did not have prior knowledge of the gallery being a darkened space or what the aim of the research exhibition wished to establish. This allowed unbiased opinions within the participants' answers and formalised the testing of the self-illuminating frame and its aim to become a useful tool in art practice in relation to the space between wall-based art and spectator.

The collection of academic-led research analysed secondary existing sources of texts, such as, academic journals, essays, theses, newspaper articles and artist-authored books. These secondary sources provide critical theory and debate which support the findings within the research. The principal finding to the original proposal anticipated developing paint derived from everyday objects, but due to reasons surrounding health and safety and the current lack of advancement in melting and pulverising matter (everyday objects), this was substituted to smart technology and specifically thermochromic pigment.

Quantitative analysis proves that the works of art presented in the exhibition did provide a new experience for its audience through the development of the self-illuminating frame. A number of participants commented positively upon the new combination of coloured LEDs inserted into the picture frame and the new experience this produced. In answer to the spiritual experience spectators felt when viewing the artworks presented in the exhibition, an overwhelming percentage of participants stated they sensed a new and positive sensation when viewing the paintings. This substantiates the principal claims put forth by the research that the works of art were able to develop a new experience for the spectators, thus permitting the use of a self-illuminating frame as a tool in contemporary painting and

to justify the ongoing aspiration of the spiritual to be an existent quality in contemporary art and society.

The methodology used within this thesis can offer an ethnographic method that gives a point of reference in terms of relational artistic phenomenological premises. Research shows that this culmination of material has not materialised before and it is anticipated that the thesis be accessed by researchers, curators and gallerists in the future to aid curatorial practices.

The techniques the research engaged with to develop the works of art successfully, centred on the production of the self-illuminated frame and the stability of thermochromic pigment when mixed with acrylic paint. First, the placement of an assortment of frames surrounding non-objective painting was explored to see if they gave an additional value to the overall visual aesthetic. After positive reflection on the frame surrounding non-objective art, the research inserted various coloured LEDs into the picture frame. The success in the insertion of the LEDs initiated the idea for further research into the investigation of the self-illuminated frame. Subsequently, multiple experiments of design, and working in collaboration with R. Jackson and Sons, a picture framing company based in Liverpool, began in earnest. The development of a functional self-illuminating frame with LEDs and a reptilian heat mat, which was able to react with the thermochromic pigments on the canvas were inserted within the structure of the picture frame. It was at this point that the picture frame for painting became a wall-based sculpture. The final task in completing the execution of the works of art was to investigate the use and mixing of thermochromic pigment and its properties in relation to acrylic paint.

Practice-led research in the development of the self-illuminating frame was disadvantaged by the relatively new technology in LED production. The quality, strength and limited colour of the LEDs has been problematic and this continues to be the case as different coloured LEDs emit various levels of illumination. This is observed when viewing the works of art in the exhibition. Solutions came about through experimentation in scale of the frame in relation to which coloured LEDs were used. Another disadvantage was due to the thermochromic pigment being dye and not pigment-based. The properties of the thermochromic pigment were not as consistent as the acrylic paint when mixed. The application of acrylic paint at times destroyed the thermochromic pigment properties making them non-functional.

The advantage of using LEDs and thermochromic pigment was its direct positive impact upon the gallery space. The gallery space lit only with the emittance of the LEDs within the environment itself, allowed the dark gallery space to become an immersive atmosphere. This aided the audience to develop awareness through experience. This awareness is confirmed in the mind, which allows the space between the artworks and spectator to be brought closer together. Zegher states this as the 'space of perception, between the work and the viewer: perception in the sense of both consciousness and vision' (Zegher, 2005, p.35).

Installation/Painting presented itself through a research exhibition and manifesto at Arena Studios and Gallery in April 2014.

Interviews and questionnaires took place to gauge opinion in respect to the spiritual in art and its value today, the aesthetic value of the works of art, and the audience

experience of the artworks and the immersive gallery space and manifesto. The unique contribution that the interviews and questionnaires give to the research is paramount in readdressing the aspiration of the spiritual and picture frame's importance in contemporary painting.

Painting with Light is unique in its approach and outcome. This is achieved through the combination and insertion of LEDs and thermochromic pigment with a hidden heat mat secured beneath the canvases surface. This investigation has found no research to equal it.

The conceivable establishment of *Installation/Painting* results in a new idea and experience for its audience, allowing elements of the spiritual to be felt in an atmosphere designed by the self-illuminated frame and within the enclosed space of the gallery. *Installation/Painting* extends the histories and philosophies of the picture frame and light. An acceptance of the manifesto is welcomed, but as with all manifestos, not all can approve it, but I hope, it will at least assist discourse in contemporary art.

Chapter One: Picture Frame

Picture Frame as a Device for Contemporary Painting

The earliest reference of a picture frame can be observed in Egyptian tomb paintings (Gill, 2001, p.84) and Greek vases (Hurwit, 1977, p.1). In the Renaissance, the frame acted as a barrier to frescos on exterior architecture and as a window within buildings of worship. Roberts, argues 'the separation of painting from architecture was accomplished in the wake of the Van Eyck brothers in the fifteenth century' (Roberts, 2011, p.163). In later paintings, the dividing form of the frame is first evident in traditional iconic images (Mitchell and Roberts, 2008, p.26). Ceiling paintings have frames constructed and applied to architecture before the painting began, thus acting as a window, separating the painting's imitated world to that of the real world. Roberts, argues, 'through separation the framed painting loses its purpose as part of a greater whole' (Roberts, 2011, p.163), in the overall architectural design. This places the framed painting 'as an object among objects, as a piece of furniture, a commodity' (Roberts, 2011, p.163).

Marin argues that the context of 'the frame as edge and border, as boundary and limit' (Marin, 1996, p.81), using the terminology of cadre, cornice and frame, 'sketch out the problematic of frame, framing and framework' (Marin, 1996, p.81). The English term, frame, Marin argues:

> ...can be something upon which the canvas is stretched in order to make it ready to receive pigments. Rather than an edge or border, rather than an edging ornament, it supports the substructure and the surface of representation.
> (Marin, 1996, p.82)

Marin, concludes the frame becomes 'an indispensable parergon, a constitutive supplement. The frame renders the work autonomous in a visible space' (Marin, 1996, p.82), thus allowing the painting to become 'the object of contemplation' (Marin, 1996, p.82). Derrida, argues for the frame as a parergon, in his essay, 'Parergon: The Truth in Painting' (Derrida, 1978). The frame becomes a supplementary object to the painting but, it does not take away the importance of the painting. However, Tarasov, argues, 'the frame itself has neither 'interior' nor 'exterior': it is a special zone that permits the exterior and the interior to interpenetrate' (Tarasov, 2011, p.16). The frame, as a border, supported 'spatial orientation: the frame directs the gaze upon the object that it so firmly holds in its embrace' (Tarasov, 2011, p.11).

The portable panel frame, designed in the 1500s, is recognised as the beginning of the picture frame as it is known today. However, detailing both the history and development of the frame is problematic. This is due to the limited number of European frames from the fifteenth century onwards having their maker's signatures engraved on them (Mitchell and Roberts, 2008, p.150). Many names given to frames were of the artist or patron who used them between the fifteenth and nineteenth-centuries.

With the development of machinery and painting, artists themselves began making their own frames in the nineteenth and twentieth-centuries (Mitchell and Roberts, 2008, p.358). West, argues the picture frame, regardless of the development and progression of industrialisation, the middle-class and birth of capitalism, 'is one of continuity and change in which change is erased and continuity often falsely

affirmed' (West, 1995, p.64). West argues that the re-framing of paintings, with a mechanically produced frame is false. This is due to the multiple, mechanically produced versions that gave the agent, or buyer, many options to disrupt the fluidity of having frames made specifically for a painting. To distort the history of the picture frame further, 'frames would often get broken in transit (Tarasov, 2011, p.306) with many frames and paintings being separated. The purchase of paintings by patrons and museums aided this confusion of picture frame history. Patrons brought paintings who in turn would change the frame, therefore matching the frame to the interior of the house or room in which they hung. Museums such as the Victoria and Albert Museum, Louvre, the Medici family gallery and the Museum of Modern Art (New York), have all disregarded original frames and replaced them with one house style frame to surround all paintings within their collections (Wilner, 2000, Mitchell and Roberts, 1996, Gherman, 1990).

By the early 1800s, 'the framemaker was transformed from a specialist in ornamental sculpture into an anonymous and unremarkable craftsman' (Tarasov, 2011, p.300). With the picture frame and the unfilled frame, the frame became 'a piece of furniture prepared, selected, and purchased for its own value rather than for its subordinate value to an important painting' (West, 1995, p.65). This allowed the unfilled frame to be the 'signifier for the commodity culture of which it was a component' (West, 1995, p.66).

Tarasov, argues, the loss of ornamentation led to the loss of the picture frame, as the 'ornament is no longer an expression of our culture' (Tarasov, 2011, p.330). It was the ascendency of form as concept, replacing representation, which led to the loss of

the picture frame. Loss of the picture frame, aided the by the development of non-objective, abstract art, affected the audience gaze. This had a profound effect upon individual audience visual perspective. With flat colour painting as the dominant concept, form 'outstripped its bounds' (Tarasov, 2011, p.331), and in doing so challenged the audience to support 'the transcendental and its endeavour was to reveal as much as possible of the inner significance of things' (Tarasov, 2011, p.331).

With the avant-garde taking form as content, Tarasov argues, it 'was a crucial attempt at the transgression of human boundaries in art history' (Tarasov, 2011, p.332). Therefore, the audience must embrace the spiritual, as a painting with form as content, requires 'not aesthetic experiences but appreciation that its endeavour was to penetrate the essence of being' (Tarasov, 2011, p.332).

> 'A painting must not be simply imitation,' wrote Gleizes and Metzinger, 'it should openly declare its existence'.
> (Tarasov, 2011, p.332)

With the acceptance of form as content, a new style in painting arose and with it a 'new process of perception' (Tarasov, 2011, p.332), whereby a painting was 'no longer linked by the law of optics but by a common search for essences' (Tarasov, 2011, p.332).

> The framed picture had outlived itself as a cultural phenomenon.
> (Tarasov, 2011, p.335)

Roberts argues that the picture frame is 'a fundamental opposition between the idea of the *Gesamtkunstwerk* and its antithesis, aesthetic art, contained in the very image of limit – the (picture) frame' (Roberts, 2011, pp.162-163).

Practice-led research was informed by *Frameworks* (Mitchell and Roberts, 1996) and *Destruction and the Visual Arts* (Lebensztejn, 1994), which discussed influential artists who constructed their own frames. Mitchell and Roberts, reference Rossetti, Klimt, Degas, Whistler, Toorop, Balla, Dali and Magritte, whereas, Lebensztejn, declares an interest in Degas, Poussin, Manet and Seurat, whilst also commenting upon the frameless work of Mondrian and Malevich.

Kandinsky and Balla (Tarasov, 2011, p.334), were the first artists to paint onto their frames, with Kandinsky using it as a device 'to make the viewer enter the picture and grasp, in a mystic way, the 'supernatural' power of its beauties and forms' (Tarasov, 2011, p.342). This can be seen in *All Saints 1* (Kandinsky, 1911) and *Day of Judgement* (Kandinsky, 1912) (Tarasov, 2011, pp.337-338) and *Speed + Sound* (Balla, 1913), thus taking away the frame as a border. The frames of Degas and Seurat are of particular interest as these artists painted their frames with corresponding colours and tones matching those of the paintings they surrounded, similar to the observations of Marin.

It could be argued that the American artist and framemaker John Marin was correct in suggesting 'fancy frames as the enemy of art' (Russell, 2000). Marin's picture frames 'were not intended to present the picture, but simply to complete it' (Russell, 2000). Upon inspection, Marin achieves his intention by simply decorating his frames with paint. These painted frames act as an extension to the image on the painted canvas, for example, *Full Moon Over the City, No. 2.* (Marin, 1949). Marin says of this painted frame: "The picture should be so painted that all the weights should be released at the boundaries of the picture." (York, R. 2000, p.70). The

overall effect of Marin's painted frame is remarkable even though his watercolour paintings were representational landscapes. As Kramer says: 'the painted frame remained an essential pictorial idea for Marin and one of his most original conceptions' (Kramer, 2000, p.13). Marin is the moderniser for the painted frame and his influence can be observed upon the painted frames of Howard Hodgkin.

The subsequent text in this chapter investigates and comments upon the practice-led research into the use of various frames explored as possible devices for non-objective, abstract style painting. The following visual investigations are a direct creative response to the academic-led research that has been undertaken.

The practice-led research within the studio prior to Painting with Light is shown in Figure 1 to Figure 7. These Figures are placed within this thesis to show the importance of the frame as a device in a contemporary context. With this aspect of research being empirical and reflective, the reader is asked to accept the stated evidence as a true representation of the practice-led experimentation.

Figure 1 expresses the initial difficulty in overcoming the frame as an object and the style of painting it should surround. The paint in the syringe acts as a metaphor for a portrait of a deceased family member, with the frame acting as a protective support. This is the first painting in the research to use a frame.

Figure 2 and Figure 3 are direct responses to the reading of Steiner and his theories on colour. According to Steiner and as can be seen in the paintings, blue allows the

viewer to enter the canvas, whereas, yellow pushes the viewer outwards with red acting as a balancing colour.

Figure 4 to 7 present the first crude handmade frames with coloured LEDs inserted within, these paintings preceded the research and are the first experiments in unifying paint and coloured LEDs. It was due to the success of these paintings that the research evolved the idea further into the concept of Painting with Light, but before this development, an understanding of the frame's value in relation to non-objective painting was required.

The first series of paintings investigate the relationship between the frame and non-objective painting. The research examines the frame as a support in relation to the aesthetic value of non-objective painting. All the frames had been purchased or found before the realisation of the paintings. This was due to the frame being the main point of departure for research into the development of the self-illuminating frame.

Practice-led reflection upon the frame's aesthetic value, for example, will the frame surrounding non-objective painting detract the viewer's attention away from the painting? In answering this question, the research, considers the individual aspects of the frame's style and scale when exploring the affect they have upon non-objective painting.

The first three paintings, Figures 8, 9 and 10 explored the frame as a tool for non-objective painting; these were wooden hand-constructed machine cut frames. These

three frames constructed by hand, honoured the traditional principle that the artist creates his own works, from conception to realisation. These frames were each constructed before the painting commenced. This was to reflect upon the style of frame and its appropriateness for non-objective painting and to strengthen the choice of frame.

The paintings experimented with absorption of oil into wooden panels and the examination of the panel as a support for the application of paint. Seepage of paint is evident in Figures 8 and 9 due to the nature of grain on the surface of the wooden panel. It must be stated the seepage detracts the viewer's gaze from appreciating not only the quality of non-objective painting, but its frame too. The sharp edge of non-objective painting disappears and with it the concepts and theories of purity and the spiritual within art.

Figures 8 and 9 explore balance as the painted wooden panel and surrounding frame are painted in the same colour. This follows in the tradition of artists in the Impressionist movement who used white and coloured frames as a protest towards academic paintings surrounded in gold gilt frames. Seurat and Pissarro (Lebensztejn, 1994, p.129) were leading artists who experimented in painting corresponding tonal values of colour from the painting onto the frame to enhance the visual aesthetic of the painting. This is similar to Marin in America at the time.

The idea of painting directly onto the frame and wooden panel was directly inspired by the work of Howard Hodgkin. An early example of an artist integrating the

painting and frame is Marsden Hartley, *The Hero* (Marsden, 1914), (Kirsh and Levenson, 2000, p.251).

Figure 10, is inspired by the above research and explores the appearance and relationship of paint on both the frame and the wooden panel. With the frame already treated and finished in varnish, the painted surface of the frame appears flat and matte whereas, the wooden panel shows brush strokes of the artist with reflection of natural light. In Figure 10, the frame as a border disappears due to the frame and painted surface being similar in colour. This led the research to question the perception of space, as without the frame to act as a border the painting allows the eye to wander beyond the frame and onto the gallery wall.

Early practice-led research supports the findings of Marin, who wrote in a letter to Alfred Stieglitz saying, 'my picture must not make one feel that it bursts its boundaries' (Kramer, 2000, p.9). The development and use of the self-illuminating frame to act as a border aids the element of focus the spectator requires to achieve an awareness of experience. If the self-illuminated frame was not present, then the audience's mind and eye would drift freely and the art works would lose their value in aiding awareness of experience. The confined space within the self-illuminated frame helps the concentration required by the audience to find a unity towards the self and allow an awareness of experience to take place.

In Figures 11 and 12, experimentation with the frame and mat commenced respectively. The frame in Figure 11 surrounds the painting, but also is part of the painting itself as it is attached to the stretcher. Unlike traditional frames surrounding

the full painting, Figure 11 has negative spaces at each side of the painting due to its oversized frame. This allows the wall to become an element of the painting as the wall itself becomes framed. Upon reflection, the negative space between the painting and frame becomes a distraction to the eye. Research suggests that this is due to our conditioning when viewing frames with their paintings touching the frame's edge.

Photography and works on paper use the mat to frame their objects within the frame. Figure 12 shows the mat as the main frame of the painting. The mat attached to the canvas frames a further yellow rectangular piece of canvas attached to the main canvas. With the mat acting as a frame, it suggests that the yellow rectangle has greater visual power, because the corners of the mat frame are in line with the corners of the yellow rectangle. The white mat simplifies the framing of the painting and enhances the overall aesthetic value of non-objective painting in this instance. The scale of the paintings presented here assists the frame's enhancement of non-objective painting. Figure 11, however, has elements to be explored further, for example, the additional space between the painting's edge, its frame and the possible connotations of the spiritual within art and the art works presented.

Commercially constructed, machine cut gold gilt effect frames were selected for experimentation due to their traditional associations of style, function and decoration. The gold gilt frame developed its style continuously throughout history by adapting aspects of frames from the Cassetta to Baroque periods (Mitchell and Roberts, 1996 p.153). The styles of frames developed as interior design fashions changed and the upper classes wished to show their wealth by framing the most expensive works in

their collections with the finest gold gilt frames (Mitchell and Roberts, 1996, pp.156-162).

Figures 13 and 14 explore historical aspects of the gold gilt frame surrounding iconic paintings, for example, Sebastiano del Piombo, *Madonna with the Child, Arsenale*, 1517 (Mitchell and Roberts, 1996, p.45). Figures 13 and 14 are painted blue and red respectively in reference to colours used to represent iconic figures such as the Virgin Mary (blue) and robes of saints (red), in addition to other connotations such as death and rebirth. Figures 13 and 14 consist of oil paint applied to primed wooden panels; the use of wooden panels is in reference to the first framed wooden panels that depicted religious scenes within altarpieces (Mitchell and Roberts, 1996, p.26).

Gold gilded frames, many grand in scale and design, surround countless modern masters. The historical reasoning behind framing old masters in gold gilded frames is due to patrons, dealers and owners wishing to place their own stylistic values upon the painting (Mitchell and Roberts, 1996, pp.162, 170, 176). The more expensive the painting the more elaborate the frame, for example, Auguste Renoir's, *Portrait of Therese Berard*, 1879 (Mitchell and Roberts, 1996, p166). The Musée D'Orsay and Musée de l'Orangerie in Paris exhibit masters framed in gold gilt such as Edouard Manet, *Olympia* (1863), and Paul Cezanne, *Dans le parc de Château Noir* (1898), respectively. The original function of the gold gilt frame was to refract light onto the painted surface, from the ripple mouldings (Mitchell and Roberts, 1996 pp.101, 107). The gold gilt frame became duller and less important as developments in light from candle and gas to electric improved (Mitchell and Roberts, 1996, p.178).

Figures 13 and 14 illustrate the additional power created by paintings just through choice and style of frame. Refraction of light onto the painted surface in Figure 13 and 14 is minimal if evident at all; this is a result of the lighting conditions. The inner of the frame in Figure 6 focuses the viewer's gaze onto the painted surface; a similar highlight of the frame is evident in Figure 14, only situated in the middle section of the frame. Introducing light within a self-illuminated frame in Figures 13 and 14 would over power the frame, thereby detracting the viewer from the style and function of the frame. Self-illumination of the painted surface is a criterion upon which Painting with Light is established, but the self-illuminated frame and the painting must work in unity. For this reason, the self-illuminated frame was not fully integrated in relation to the ready-made commercial gold gilt frame. This is explored later when developing the self-illuminating frame.

Figures 15 and 16 continue an exploration of the gold gilt style frame surrounding non-objective painting. Figures 15 and 16 are small, commercially cheap constructed photographic imitations of larger traditional gold gilt frames, both very simple in design and without decoration with a glass cover. The frame for Figure 15 was purchased before the painting; with the introduction of the glass front and its reflective qualities, a change in paint was explored. The green circle is painted in gouache for its dull quality; it is this dullness that aids the viewer becoming absorbed into the green circle. Figure 15 does not have a mat to focus the viewer; this is not required as the scale of the green circle against the surrounding gold frame balances with the empty whiteness of the paper. The balance of frame and colour of paint is crucial at this stage in the development of the works of art; but it must be stated that these experiments are produced in small dimensions.

The frames in Figures 16, 17 and 18 were purchased after reflecting upon their suitability for surrounding each non-objective painting. Figure 16 investigates the use of a mat and its value in framing non-objective paintings. It is evident the mat within the gold gilt style frame helps to re-frame the non-objective ink on paper and focuses the viewer's gaze. The frame and non-objective ink on paper in Figure 16 do not work together. The frame over powers the ink on paper; not only does the gold of the frame detract but the composition and style of the non-objective ink on paper is too weak to stand up against the gold frame. Regardless of the scale of both frame and non-objective ink on paper, the balance between the two would not work in this instance; the frame is too constricting with the mat and this makes it difficult for the non-objective ink on paper to breathe. The same can be observed in Figure 17, as the frame is identical in scale, design and construction. Figure 17 explores the value of non-objective painting in comparison to the Impressionist's ideals of the white frame (Kirsh and Levenson, 2000, p.251). The white frame in Figure 17 allows balance with the non-objective style of the ink on paper as the white of the frame does not over power the ink on the paper as seen in Figure 16. The reduced highlights reflected from the frame in Figure 17 facilitate the balance of the non-objective ink on paper. The mat being off-white helps to re-frame the non-objective ink on paper as it breaks the monotony of the white within the frame. The off-white mat is unnoticeable in Figure 16 due to the power of the gold gilt frame and its detractive qualities to the non-objective ink on paper.

Figure 18 follows in the style of Kandinsky and uses a plain, commercially purchased black frame without a mat. Figure 18 balances the non-objective elements of the ink on paper with the frame. Similar to Figure 15 the non-use of a mat is

striking in Figure 18: the observed non-objective ink on paper has space within the frame for the viewer to witness balance of non-objective works on paper within a frame. As stated previously, use of a mat and frame constrict the visual elements of non-objectivity. Reflecting upon the issue, the works of art may only work within a surrounding frame without a mat.

Figure 19, is surrounded with a commercially purchased decorated frame, continuing in the tradition of hand painted decorative frames of the fifteenth century, known as illuminated manuscripts (Lebensztejn, 1994, p.121). These illuminated manuscripts are not illuminated like the self-illuminated frame within Painting with Light, they are decorative designs hand painted directly onto the frame. The scale of the frame in Figure 19 seems to over-power the oil painting it surrounds, focusing the viewer's gaze on the frame and its decoration rather than the content of the painting. The over powering of the frame has been limited though by the colour choice of the paint. Oil paint was used for its reflective nature, but the Perspex covering over the painting has subdued this, and similar issues can be observed within Figure 15.

Figures 20, 21 and 22 are watercolours. Figure 22 investigates the use of a commercial silver frame and its appropriateness for non-objective painting. The scale of the mat in Figure 22 is larger in comparison to Figure 16, 17, 20 and 21. The large mat in Figure 22 gives the non-objective elements within the painting space to balance. The crude frame painted onto the paper surrounding the immediate non-objective painting aids the balance of the silver outer frame and the non-objective painting itself. The silver frame, mat and the painted frame on the paper all assist in the balance of the painting and frame as one.

Identical dark brown wooden frames with a glass covering surround Figures 20 and 21. The mat in Figures 20 and 21 are thinner than in Figures 16 and 17, this is due to the different styles and materials used the frame's production. The dark wooden frame in Figure 20 and 21 does not receive highlights and the mat can focus the viewer's gaze onto the painting whereas, in Figures 16 and 17 the mat within either the gold or white frame acts as a constrictive barrier between the frame, non-objective style of ink on paper and the viewer's perspective. The brown frames were purchased after the watercolours were completed; the darkness of the brown frame balances with the blues of the watercolours and works as a whole.

The relationship of non-objective painting and the frameless picture frame is explored in Figure 23. The yellow and green gouache act as a replacement for the missing photographs which have been cut out of passport photograph paper. The passport photograph paper is attached to the paper supporting the gouache on the paper and the surrounding frameless picture frame. The vibrancy of the reflective white passport paper connotes the idea of the frame as a window and focuses the viewer's gaze onto the yellow and green gouache. The contradiction of a frameless picture frame connoting a window only came about through reflection upon the frameless picture frame's use as a tool for non-objective painting; it was unintentional within the experiment. The reflection of the white from the photographic paper sets the shape and colour successfully, and gives the composition value, which is needed due to the frameless picture frame.

The use of common cardboard photograph mounts, reminiscent of old school photographs, are presented in this investigation in Figures 24 and 25. Figure 24 has an inner silver band which acts in a similar manner to the highlights shown on frames

in Figures 14, 15, 20 and the mat in Figures 15, 16, 20, 21 and 22 when framing non-objective painting. The cardboard mount frame in Figure 24 is unbalanced because of the weak compositional elements in the non-objective painting. The non-objective quality in Figure 25 balances with the surrounding cardboard mount frame due to its simple design. It has a thin gold band a small distance from the paper it surrounds, thus engaging the viewer with the non-objective painting. Jim Nutt is an artist who experiments with family photograph frames, for example, *He Might Be a Dipdick But They Are a Pair* (Nutt, 1972), (Bailey, 2002, p.125). A comment upon Figure 25, reminds people of an old television set. The reason for this comment is due to switching off an old television, where the picture would be squashed from the top and bottom of the screen into a horizontal line, as can be seen in the painting presented in Figure 25.

In conclusion, the experimental research within this chapter based on the validity of the picture frame in reference to non-objective painting is seen to be successful. The research presented is aspirational, in that it can serve as a visual reference for artists to explore the uses of the picture frame with non-objective, formalist qualities in the future. Research supports the findings that there is no requirement of either form or flat colour content of the non-objective style painting and its relationship with the picture frame to work in harmony. One condition to be considered is the use of a varnish over the painting as the reflection of both the glaze of the varnish and glass deter the viewer from seeing the true colour of the painting.

Chapter Two: Light

Light

This chapter explores the development of light, questioning its active qualities as a wall-based sculpture in an immersive environment and its impact upon the audience. To understand this development of light, the research focuses on the anomalies affecting audience experience when viewing contemporary art within the gallery space. The research brings together research findings into the indistinct space that exists between artworks and the spectator. In this practice-led research, the light emitted from the self-illuminating frame aspires to engage the viewer within the space between the works of art and spectator in a spiritual self-reflective manner.

It is a criterion of the research that audience awareness of visual perspective and experience is challenged through interaction with the self-illuminated frame within the space between the wall-based artworks and spectator.

In terms of historical referencing, Butterfield claims that El Lissitzky was the first artist to create light space art when he produced *Prouns* (Lissitzky, 1920-23) (Butterfield, 1993, p11, Klonk, 2009, p.116). The room in which the semi-relief was attached to three walls, predated Mondrian's *Salon de Madame B. a Dresden* (Mondrian, 1926) by three years. The rooms were different in style and purpose with El Lissitzky's being a work of art, whereas, Mondrian's room was a studio and living space. Upon viewing Mondrian's Paris studio at the Liverpool Tate exhibition, *Mondrian and his Studio* (2014), the experience provided an insight into Mondrian's

beliefs and lifestyle; it gives a feeling of authority, calmness, unity and order, all words associated with Mondrian's non-objective painting.

O'Doherty connects modernism directly to the gallery space and the art exhibited within, stating 'we see not the art but the space first' (O'Doherty, 1986, p.14), in which the 'conventions are preserved through the repetition of a closed system of values' (O'Doherty, 1986, p.14). It could therefore be suggested that the gallery space is seen as a place for intellects to discuss objects of art as O'Doherty acknowledges this modernist academicism of art by the adage that "ideas are more interesting than art", and 'as modernism gets older, context becomes content. In a peculiar reversal, the object introduced into the gallery "frames" the gallery and its laws' (O'Doherty, 1986, p.15). Therefore, the object placed in the gallery becomes the personality of the space and the space becomes more important than the art works on display.

O'Doherty, questions the value of the gallery space and audience experience with regard to the eye and spectator relationship, using Schwitters Merzbau as an example. O'Doherty suggests the idea of the gallery space as a simulacrum of itself, achieved through 'the acceptance of tableaux as a genre. With the tableau, the gallery impersonates other spaces' (O'Doherty, 1986, p.49).

O'Doherty cites Minimalism as a characteristic in the evolution of the eye and spectator relationship. This is due to the audience having 'to re-interpret an object because it is placed in a gallery space' (O'Doherty, 1986, p.52). This raises the question of why within the audience, what makes the object art worthy.

The context of light upon painting within the gallery environment follows in the development of interior lighting systems (Mitchell and Roberts, 1996, p.337). The impact of lighting systems when viewing works of art in galleries is still problematic for curators and gallerists alike (Lank, 1992), "although the least of concern to both" (Gruenberg, 2010).

Crary, claims that Turner painted *Light and Colour (Goethe's Theory – The Morning after Deluge)* (Turner, 1843) as a 'self-portrait' (Crary, 1992, p.141), arguing that the spots on the painting are sunspots, of which are the retinal afterimage of Turner's observation of the sun. This advocates Turner as the first person to experience visual perception. Fechner established that the creation of the afterimage produced perception, which is a temporal entity due to an observer's sensation being dependent upon previous stimuli (Crary, 1992, p.146). Klonk extends this argument through research into Fechner applying his theory of form of below to interior design and the emotive links to the formal quality of line. Klonk puts forth the idea of Lipps' empathy theory as a more influential development of personal experience 'in terms of the projection of people's inner states onto objects and in doing so moved art reception away from classical learning' (Klonk, 2009, p.61).

Crary's assertion based on the innovations of nineteenth century science and a move towards quantitative methodology in particular, relies upon the theory of Fechner's Law (Weber's Law). Yet research refutes Crary's claim of *Light and Colour (Goethe's Theory – The Morning after Deluge)* (Turner, 1843) as being both an afterimage and a self-portrait. This is due to Crary not addressing the other painting in this series titled, *Shade and Darkness (The Evening of the Deluge)* (Turner, 1843)

and the research undertaken by Pilikian. The research of Pilikian is based on an original poem written by Turner in which he embraces the work of Armenian painter Aivazovsky (Pilikian, 1990, p.3).

Pilikian, contests Crary's argument that *Light and Colour (Goethe's Theory – The Morning after Deluge)* (Turner, 1843) is a self-portrait and afterimage; for Pilikian claims that Turner, 'even at 67, metaphysical bliss was beyond the reach of the sense-wrought artist' (Pilikian, 1990, p.4) and were 'accompanied by verses of his omnipresent *Fallacies of Hope*' (Pilikian, 1990, p.5). It is Turner's verses which counter Crary's claims of a self-portrait and the afterimage as Pilikian says, 'Turner knew his bible well' (Pilikian, 1990, p.5). Whilst Pilikian argues for biblical Moses (Pilikian, 1990, p.5) to be used in the title of the works, Dr Loske claims Turner may have been referencing the 'British eighteenth century colour theorist Moses Harris' (Loske, 2014). Yet, Roberts confirms the biblical connotations of Turner by claiming the artist used his scientific knowledge 'to depict stories from mythology and the Bible' (Roberts, 1998, p.509).

Light artist, Robert Irwin, claims the value of human observation is the ability 'to aesthetically order the world [and] is the *one pure subject of art* (Irwin, 1993, p.23).

Irwin's practice and artwork, explore the natural movement of light in open spaces and galleries we inhabit. This allows audience participation through awareness of experience, as the continuous changing relationship with light is determined experientially. Irwin validates Hodin's claim when distinguishing between the experiences of modern art in comparison to traditional art:

> The abstract sign, human-figure, has been replaced by an expanded responsibility for the individual artist/observer as actively charged with completing the *full intent* of the work – experientially.
> (Irwin, 1993, p.25)

Irwin dismisses the colour field painting movement of the 1960s with contempt, for it 'failed altogether to address the multi-dimensional questions of a generation of artists potentially freed from the limitations of a pictorial logic' (Irwin, 1993, p.25). This leads Irwin to ask what 'an art of extended dimensions should be; what would non-hierarchical order look like? What would be its operative frame of reference?' (Irwin, 1993, p.28). Research suggests it was at this point that Irwin's practice detached itself from objects and placed itself in the individual experience of the audience.

Painting with Light disputes Irwin's belief that colour field painting did not evolve and challenge artists, by maintaining that the ideas of art today would not have presented itself if colour field painting did not question colour and its value in painting, art and perception. This research aims to highlight the importance of colour, form and light in painting and art with the introduction of thermochromic pigment. This further extends the theories put forward by the colour field painting movement and strengthens the argument against Irwin's claims of colour field painting being historically unimportant.

The light art Irwin practices has no fixed point of reference in relation to 'physical dimension' (Irwin, 1993, p.34). This has similarities to Turrell's interest in light and its material nature. Light is an 'optical material' (Taylor, 2012, p.112) even if most people do not consider this and only use light for illuminating objects.

Irwin's theories towards a creation of pure art are comparable to Martin's practice, where thoughts overcome the mind, as Irwin writes:

> Pure wonder is that special state of mind – of enthusiasm and appreciation – that gives us the balance for such an ephemeral inquiry into the pure potential of our lives.
> (Irwin, 1993, p.36)

This concept has synergies with theosophy and Buddhism, seeking evolution of humanity and art in aiding progression into the higher levels of experience and consciousness.

The audience experience in viewing Light and Space art is similar to that of the works of art presented in this research, for it allows the viewer to:

> …slowly let go of rational, structured reality, and slip into an altogether different perceptual state. In this "double depth of the dreamer and the world," the *presence* of light, the *sense* of colour, and the *feel* of space merge, becoming far more real than any literal representation of them could be.
> (Butterfield, 1993, p10)

Painting with Light extends the theories and concepts of the Light and Space art movement through evolution of the gallery environment by the light emitted from the self-illuminated frames, allowing colour through space and light to gain a 'physical presence' (Butterfield, 1993, p.14).

What separated the Light and Space movement from other light art at the time was their interaction with 'the scientists in the aerospace industry [who] were working on a variety of perceptual problems' (Butterfield, 1993, p.15). The perceptual element of the physical presence is considered in this research, but in contrast to Light and Space art, Painting with Light has an edge. Spectators viewing *Installation/Painting*,

stated a similar response to Irwin, who wanted 'to break the edge' (Butterfield, 1993, p.19) of the frame. Research suggests that it could be argued that light is limitless and without edges as hard to accept. Light and Space works have edges: that which light itself creates in the confinement of the gallery space. In open spaces, edges are created through shadows and the distance light emits from its source.

According to Butterfield, both Irwin and Turrell's early texts developed a 'manifesto of phenomenal art' (Butterfield, 1993, p.24). This manifesto showed the essential difference between the two artists when they collaborated on the Art and Technology project in 1969.

Irwin defines art as experience because:

> …we can assume that after a viewer looks at a piece, he "leaves" with the art, because the "art" has been experienced'. Perhaps this is all "art" means - this Frame of Mind.
> (Butterfield, 1993, p.27)

The experience that Irwin speaks of is a similar enquiry to what this research aims to achieve. Before the audience takes the experience away with them, the works of art in *Installation/Painting* aims to make its audience aware of experience through a new visual perspective, thus extending Irwin's principle of art as experience.

Irwin discussed an experiment in which he was 'isolated in total darkness with no sound' (Butterfield, 1993, p.28), known as the Ganzfeld Effect, in a room and upon entering light and space and walking down a street stated how 'it looked radically different' (Butterfield, 1993, p.28). This, it can be argued is experienced through meditation, when the eyes are closed for a sustained period, as Anthony Gormley

said in the documentary *Imagine* (BBC, 2015), 'infinity exists' (Gormley, *Imagine*, BBC, 2015), perception changes. When the eyes then open, there is a heightened experience of colour, space and movement. This Irwin says is a state of mind, which it is, but research would argue it is physiology of the brain and science of the eye working in unity. For the works of art presented in *Installation/Painting* to be effective, the audience must allow time for the physiology of the eye and brain to adjust to the dimmed coloured light in the gallery space.

In reference to Turrell's Roden Crater project, Taylor discusses the significance of light and time, with Turrell saying how the work 'takes place over time, but then it's interesting to know which things are stable or staying the same and what is changing' (Taylor, 2012, p.116). This time receptivity is explored in the research into thermochromic pigment and its heat reactive qualities, which allows the spectator to understand the processes involved with the wall-based sculpture and the immersive space lit between the artworks and spectator.

Butterfield states the difference between Irwin and Turrell's ideas on perception:

> Irwin begins with material and dissolves it into light. Turrell takes the light itself and makes it material.
> (Butterfield, 1993, p.68)

Douglas Wheeler presented 'room-environment pieces' (Butterfield, 1993, p.118) in which 'the one-to-one relationship between each component, including the viewer as well as the context, is an integral part of the work' (Butterfield, 1993, p.119).

Wheeler created *Light Wall* (Wheeler, 1969) and prepared his audience for this experience by sending them through 'a transitional hallway space so that the viewer could be perceptually cleansed before entering the main portion of the work' (Butterfield, 1993, p.119). Research supports the idea that Douglas' practice of transitional phases of perceptual cleansing has synergies with the concept of liminality. Liminality is the transition of thresholds by rites of passage within multi-functional hierarchical systems put forward by Van Gennep and Victor Turner (Westerveld, J. 2010, p.8). It is in this context that time is essential in viewing the art works of *Installation/Painting,* thus allowing the audience to appreciate the works in full and aid the enhancement of a new visual perspective.

Wheeler, comments upon his audience leaving the environment too early in his piece at Galleria Salvatore Ala (1975) when he said people 'who left after just a moment saw only one phase of the work and thus missed its full effect' (Butterfield, 1993, p.126), whilst adding '"the whole point was that you never had a beginning or an ending."' (Butterfield, 1993, p.126). Wheeler's art is similar to Reinhardt in that it consists of 'cycles and repetition' (Reinhardt, 1992, p.xv) and demands attention of the viewer to understand its visual communication. The art works of *Installation/Painting* are positioned in a similar theory and was commented upon by its audience. A limited number of the audience experienced the full effect of the thermochromic pigment due to the timely nature of its transformation. Again, similar to Wheeler, the audience can experience the effect of *Installation/Painting* by entering the gallery space at any time, as the thermochromic transformation of the paint is ongoing due to temperature control.

The light emitted from the self-illuminated frame is directed outward into the space of the gallery and aids the meditative atmosphere for the audience to become aware of their visual perspective through the immersive environment. Lutgens, says due to 'the possibility of perceiving art in this way is exactly what lends art its power to liberate' (Lutgens, 2004, p.34) spectators.

Lutgens says 'Wheeler called his early (1968-1970) light paintings *Light Encasements*' (Lutgens, 2004, p.37). Wheeler's painting is coloured light emanating from behind Perspex boxes in white painted rooms. These *Light Encasements* when viewed have a similar visual outcome to Turrell's light art. It is only the technique and processes that create the works of Wheeler and Turrell that differ. The development of the self-illuminated frame extends and evolves the working practices of Light and Space art in the twenty first century.

Turrell has an interest seeing one-self seeing. Lutgens describes it as:

> …self-reflective modes of perception. "I hope," says Turrell, "that you see your own seeing and that this act of self-reflection, seeing yourself seeing, says more about the way the viewer sees."
> (Lutgens, 2004, p.37)

This has synergies with the works of art presented in *Installation/Painting* as the spectator experience and awareness challenges the visual perspective through self-reflection in the space between the audience and the wall-based artworks.

Broeker discusses Olafur Eliasson's relationship with light, perception, environment and science:

> Eliasson perceives his projects as "loops," in which the theme is seeing what is seen and perceiving one's own *process* of perception: "I am interested in

the process of seeing, between the discrepancy of the knowledge conveyed and the knowledge produced by real experience. I am interested in how we basically see our lives within society."
(Broeker, 2004, p.53)

In surmising the impact of the space between the paintings and light upon audience visual perspective within the galley space, research supports the findings that it is still an undeveloped sense perception within the arts. The contemporary gallery space is a reflection of the society that supports it, that is materialistic, bourgeois, predictable and hyperreal. This research puts forth the notion that reframing the spiritual within the individual can enhance audience visual perspective through the medium of light. This concept developed in the production of the self-illuminating frame. The light emitted from the frame concentrates the audience's attention, therefore allowing the individual awareness of experience through individual visual perspective in the space between the works of art and the viewer.

The research acknowledges other uses of light in art in relation to installation art and the use of screens but this has not had a direct influence upon this current investigation. The progression of technology has influenced the uses of light in the development of contemporary art. Bornstein has documented various ways in which visual information has been transmitted to an audience; Bornstein uses the term kinetic art to describe its characteristics (Bornstein, 1975, p.203). Artists' use of light has developed together with technology, for instance projections with screens to create cinematic environments by video artists such as Douglas Gordon, the use of monitors as used by Bruce Nauman and, John Wood and Paul Harrison with their documenting of performance. Roy Asscot, a pioneer of computer generated interactive art and holography investigates technoetic pathways in relation to consciousness and spirituality. Ascott investigates the use of nano technology and

says 'that the nano is located between the material density of our everyday world and the numinous spaces of sub-atomic immateriality' (Ascott, 2006, p.65). Ascott's practice is based in the scientific field of biological processes and can be considered as an extension of the work of Beuys in relation to spirituality and human consciousness. Artists also use lasers to create art, such as Mike Gould and Mike Schreiber who use geometrical formations to create light installations which are immersive environments challenging audience perspective. The above artists and their practice create immersive environments but the art works cannot be considered in the same respect to the works presented for *Installation/Painting,* as they are not considered wall-based art or sculpture.

Chapter Three: Practice

Development of the Self-Illuminating Frame

This chapter explores visual solutions in balancing the relationship between light, reflection and the painted surface. The self-illuminating frame questions whether the sensation of vision and awareness is challenged when viewing the works of art as a valid quantitative measure. The introduction of the self-illuminated frame aspires to engage the spectator with a spiritual experience. This ambition is located in the space in between the wall-based artworks and the audience through a new visual perspective of light and colour. The works of art therefore require participation from its audience rather than the idea of conceiving visions of reality from traditional representational artworks.

The new significance that the works of art bring to the picture frame as an object is its ability to function as a self-illuminating frame. The self-illuminated frame is defined upon basic criteria such as a border and structural support, its inner structure being used to secure LEDs in place for illuminating and interacting with the painted surface. This characteristic places the self-illuminating frame as a piece of wall-based sculpture. The physical aspect of the self-illuminating frame surrounding the painting acts as a dividing border. This divide is not for religious or representational reasons as it aspires to help the audience detach their thinking from the materiality of daily life. The self-illuminating frame extends avant-garde theoretical and conceptual frameworks within contemporary art and can be categorised as the space between the spectator and the wall-based sculpture.

Research articles on light in the gallery environment have validated the understanding of light to allow research to be experimental in the development of the self-illuminating frame.

The self-illuminated frame raises new questions to not only the purity of form (square and circle) within painting but, also the LEDs ability to establish or disrupt the communication of visual awareness of the viewer through light and colour. In relation to the geometric forms used in non-objective and abstract art, if used in an aesthetic manner 'the painter could achieve what Serusier called 'equilibrium' (Tuchman, 1986, p.20).

The research suggests this is similar in association to Bell and significant form, in that the audience must have a certain level of understanding to appreciate the work of art. The idea of a presence within art is comparable to equilibrium and significant form when the viewer experiences a positive awareness through vibration.

The practice-led research explores observations taken from scientific investigations into light, the spiritual in art, audience experience and perspective with regard to the relationship between the space in between wall based-art and installation art and the introduction into that space of the light emitted from the self-illuminating frames.

The first series of paintings in the development of practice-led research were produced in relation to various surrounding frames. The frames were purchased before the realisation of the paintings. This was because the frame is the main point of departure for the research into the development of the self-illuminating frames.

Two criteria were defined in the development of the frame in the first series of art works. The purchase of machine cut frames for hand-construction and the ready-made commercially constructed machine cut frames. The reasoning for this was to discover if a suitable frame could carry the style of non-objective painting within a self-lit frame, whilst not affecting the overall visual aesthetic that was imagined as conducive in unifying the space between the viewer, painting and installation art.

The development of the frame has taken various guises from its inception as a functional object to an aesthetic and theoretical consideration of today. The frame for the works of art is also functional, acting as a holding position for the LED and protection for both the painting and LED. The position of the LED within the structure of the frame allows space between the illuminated LED and the surface of the painting. It is this atmospheric illuminated space, between the painted surface and the self-illuminated frame, which acts as the initial connection between the viewer and wall-based sculpture. A conversation between the light, colour and form of the painted surface is explored within the space of the gallery. Practice-led research recognised the need to develop the self-illuminated frames, and continue the traditional relationship of light and its additive qualities upon colour and form in painting.

It was not until 2012 that the evolution of the self-illuminating frame took on the formalist, non-objective might of the circle, square and rectangle. The reason for the delay was due to underpinning the practice-led method with that of research-led knowledge. *Yellow Square* (Figure 26, Figure 27), *Green Circle* (Figure 28, Figure 29) and *Blue Rectangle* (Figure 30, Figure 31) are extensions of the initial

experiments involving coloured LEDs of *Silver Green Blue* (Figure 4, Figure 5) and *Peach Blue* (Figure 6, Figure 7). *Yellow Square* and *Green Circle* are both oil on board, showing the oil paint absorbing the light in contrast to the reflective enamel paint applied to *Silver Green Blue*.

Yellow Square (Figure 26, Figure 27) does not allow the light to have a reflective relationship with the painted surface and gives a dull aesthetic to the colour. The low level of light due to the weak LEDs also impedes the audience's appreciation when observing the combination of light and colour. The low level of light emitted from the yellow and red LED is insufficient to engage the viewer. This is due to limited LED technology available at the time. It was hoped that a brighter, more engaging outcome to the first experiment would provide a greater understanding of the LEDs qualities. This issue was solved by further experimentation into the scale of the self-illuminated frame in relation to various strengths of LEDs used in the practice-led research. Reference in relation to the strengths and weaknesses described in the research relating to LEDs is referred to in Appendix 3: Technical Information.

In contrast to *Yellow Square*, the muted colour of *Green Circle* balances well with the addition of the LED. The light emitted from the clear LED is much stronger in strength and with it being clear does not interfere with flatness of the green oil paint. This makes for a more pleasurable aesthetic experience for the viewer due to the muted light and absorptive nature of the oil paint. The setting of the LEDs within the frame of *Green Circle* are better positioned than within *Yellow Square* thus aiding the aesthetic quality of *Green Circle*.

Blue Rectangle is oil paint on a black bitumen ground, painted directly onto a ply-wood surface. The black bitumen dominates the muted blue oil painted rectangle with its reflective nature; the position of the light weakens the combination of oil and bitumen further. *Blue Rectangle* is not able to communicate the awareness of experience through visual perspective, similar to *Yellow Square*. This is not the case with *Green Circle*, for the clear LED allows a strong awareness to develop between the spectator and work itself.

Figure 72 shows a prototype of the handmade frame with an LED inserted, named within the research as a self-illuminated frame. This frame was developed for the works of art in collaboration with frame-maker Phil Jackson from R. Jackson and Sons (Liverpool).

Figure 73 to Figure 78 show the self-illuminated frame paintings presented in the *Installation/Painting* exhibition. Figure 73 to Figure 78 are the successful culmination of experimentation in combining LEDs with coloured acrylic paint, thermochromic pigment and the effectiveness of the LED to transform the painted surface. The images taken are presented as shown in the exhibition with gallery lighting turned off. This allows the reader to observe the works of art without the anomalies that are present in everyday gallery lighting systems.

In Figure 73, the self-illuminating frame uses a single yellow LED positioned centrally in the top of the frame. In Figure 74, the yellow LED illuminates the red oval shape in the centre of the canvas, creating a reflection of the yellow light visible on the inside of the frame. This reflection is strongest at the bottom of the frame from

which the light is directed. Due to the directional nature in which the LED emits light, the light creates a triangular composition. This adds to the visual aesthetic for it is not just a red oval observed.

Figure 75 uses an additional LED in comparison to Figure 73. The LEDs inserted centrally in the top and lower frame emit light equally. This gives the surface a greater luminance value, thus allowing the viewer to appreciate the texture of the painted surface, which can be observed in Figure 76. The light emitted by the two LEDs creates a halo effect around the painted shape, thus adding another visually aesthetic element to the development of the work of art. The reflection of light from the opposite frame brightens the overall surface of the painting within the frame. Figure 76 to be considered a greater success in relation to the positive experience of the spectator as the balance of the space between the viewer and wall-based sculpture is stronger than that observed in Figure 74.

Figure 77 extends the investigation of balance of lighting on four sides using four different coloured LEDs positioned centrally on each horizontal and vertical of the frame. The strength of each LED is consistent with one another. This gives the painting balance, not only in light but also in colour and provides the viewer with a central point of focus. The direction of the LEDs helps this focus due to the way they emit light onto the painted surface and beyond into the gallery space to create an immersive environment.

Figure 78 is the pre-eminent experiment enhancing the awareness of experience and visual perspective. This is due to the balanced composition created by the scale of the

rounded rectangle and the distance the LED light travels with its reflective emittance at a lower value from its opposite frame. However, the strength of the LEDs in Figure 78 does not allow for the halo effect as achieved in Figure 76 because the brightness value is too great. This brightness also loses strength in the creation of shadow and texture on the surface of the canvas. Regardless of my criticisms, Figure 78 is the most successful experiment in the development of the self-illuminated frame. I put forth this argument due to the balance created by the emitted light, the scale of the form on the canvas and the relative distance between the form and the physicality of the picture frame.

In conclusion, the research reveals that the development and production of the self-illuminating frame as a tool for evolving contemporary painting is a positive criterion. This is based on the success in developing a new visual awareness and perspective in the space between the wall-based sculptures and the spectator. *Red Oval* (Crowe, 2014), with the single LED has the weakest aesthetic of the three experiments, whereas *Blue Circle* (Crowe, 2014) and *Rounded Edges* (Crowe, 2014) are successful because they each balance the formalist elements of light, form and distance between the image and picture frame.

The Self-Illuminated Frame, Acrylic Paint and Thermochromic Pigments

The initial enquiry into matter led to rheology and it was hoped that the physical matter of everyday objects would be transformed into paint. The research into rheology inspired the commencement of the works of art presented in this practice-led thesis. By deforming matter through methods of grinding, burning, heating, drying and freezing, it was hoped a development of paints from various pigments could be achieved. Deformation of matter into paint was to aid the initial exploration of the spiritual within the practice-led research.

After interviewing Professor Paul Hayward, whose practice involves pulverisation of matter (see Appendix 7); it was advised that the idea of using common objects as paint was problematic if not impossible. It was at this point within the investigation that the research explored other avenues and extended the idea of physical matter into that of smart technologies.

Research investigated chalk by means of grinding using a pestle and mortar. This resulted with an impure pigment as chalk contains a pigment constitute within its commercial form. Chalk pigment mixed with a binder of stand linseed oil resulted in a yellow tinted colour when dry. This initiated an experiment with cold-pressed linseed oil as directed by Professor Paul Hayward and led to the mixed pigment being clear with no yellow tint. Professor Paul Hayward's practice explores the use of matter as a source of colour.

Research into smart technologies led to thermochromic pigments, acrylic base and chameleon nano flakes to become the main source of visual investigation. Thermochromic pigment is available in limited colours of green, black, blue, magenta and orange.

Thermochromic pigment is a dye-based paint and not pigment-based like acrylic paint. The dye based thermochromic pigment was unstable in its properties when mixed with acrylic paint. This led to finding a median within the mixture of the thermochromic pigments and acrylic paint to achieve consistent results.

Figure 32 and Figure 33 are the first experiments conceived for the works of art using smart technologies. Thermochromic pigments were mixed with chameleon nano flakes and acrylic base that were applied onto sheet steel. It was assumed that with steel being a good conductor of heat, the thermochromic pigment would be more stable and the addition of nano flakes and acrylic base would aid the reactive process of making the smart substances transparent. This was not the case as can be observed in Figure 33 when the steel sheet has been heated. The blue thermochromic pigment retains some of its colour with the acrylic base overly visible. The nano flakes are subdued by the acrylic base and do not alter in colour when heated. This failed experiment led to the rejection of the steel sheet as a surface for further investigation. See Appendix 3: Technical Information for notes regarding thermochromic technologies.

Figure 34 and Figure 35 are the first thermochromic pigment tests on canvas with acrylic paint used as a ground. Magenta thermochromic pigment was mixed with

acrylic base before being applied directly onto the left side of the experiment, whereas, on the right of the sample, blue acrylic paint had been reapplied over the magenta thermochromic pigment still mixed with acrylic base. When this canvas is heated the results were again surprising. The expectation was that the thermochromic pigment would be translucent when heated above its instructed temperature of 27°C. Similar to Figure 33, Figure 35 has a visible residue of acrylic base when heated. This is regardless of the thermochromic pigment becoming translucent only on the left side of the experiment. The magenta thermochromic pigment applied onto the blue acrylic leaves a strong white colour with a faint tone of magenta still present when heated. This strong white colour is not conductive to communicating the ideology of Painting with Light as it becomes the central focus of the painting. No colour relationships are present due to this reaction between the blue acrylic ground and the magenta thermochromic pigment.

Figure 36, experiments with blue thermochromic pigment applied onto a blue acrylic ground. Figure 36, has the equivalent outcome to Figure 35, similar to magenta thermochromic pigment the blue thermochromic pigment leaves a strong white colour and is not purely translucent as the manufacture suggests. White is not translucent. Figure 35 and Figure 37 provide evidence of the acrylic base being responsible for the strong white residue left after heating the thermochromic pigment. This is also evident in experiment Figure 38. In contrast to the left side of experiment Figure 36 and the right side of experiment Figure 34, evidence shows when the thermochromic pigment is applied directly with no acrylic base to the blue acrylic ground, the thermochromic pigment does indeed become translucent when heated.

Figure 40, begins the investigation into red acrylic paint as a ground with the direct application of thermochromic pigment not mixed with the acrylic base. The research can thus substantiate in Figure 41, the translucent nature of thermochromic pigment when applied purely. In this case, it is the translucent nature of the blue thermochromic pigment.

The experiment, Figure 42, is red thermochromic pigment applied onto red acrylic paint. This experiment focused on the absorption of a similar colour into one another. It was expected that a subtle tonal change in the colour red by applying the red thermochromic pigment onto the red acrylic ground would be observed. Upon inspection, when dry and heated it was noted that few, if any, change in the tonal values existed. This led the research to reveal that the chemical composition of the thermochromic pigment is much weaker in comparison to the composite make-up of the acrylic paint ground.

In Figure 44 to Figure 47, yellow acrylic paint is used as the ground. Yellow acrylic was chosen for its luminosity and investigated with various quantities of diluted thermochromic pigment. According to the instructions, dilution of the thermochromic pigment still allows the transformative qualities of the pigment to be effective. This is not the case within experiments from Figure 44 to Figure 47. The research reveals only a very slight change of brightness within Figure 45 when heated. This is comparable to Figure 44, which is not heated. Acrylic base was used to dilute the thermochromic pigment, hence the visible white residue seen through

the magenta and blue thermochromic pigment on the left and bottom of the experiment respectively.

With the thermochromic pigment diluted and not working effectively, application of the diluted thermochromic pigment through layers was attempted to aid the thermochromic reaction. This did not work and can been seen on the left side of the experiment in Figure 44 and Figure 45.

Figure 46 and Figure 47 are an extension of the ideas investigated within Figure 44 and Figure 45. By diluting the pigment further, again poor results were evident, thus raising concerns over the quality of the thermochromic pigment. It was only the application of pure magenta thermochromic pigment that allowed the colour to become translucent, but again this is applied over an acrylic base that had been mixed with blue thermochromic pigment which again displayed an unpleasant resultant blue white residue.

Figure 46 and Figure 47 introduce the direct mixing of thermochromic pigment with acrylic paint. This is evident in the orange strip of paint just off centre right. This initial experiment investigates the effects and strength of the pigment when combined and heated with the acrylic paint. This technique in mixing pigment with paint is explored further in Figure 48 onwards.

The experiment of Figure 48 and Figure 49 demonstrate the unstable nature of the thermochromic pigment when mixed with acrylic paint. This is a comparable result to the previous experiments involving diluted thermochromic pigment. The

effectiveness of thermochromic pigment is weak, if visible at all. Again, all the research reveals an insignificant change in brightness when the paint and pigment are heated.

In Figure 50, pure magenta thermochromic pigment is mixed directly with yellow acrylic paint when still wet. This mixing of the paint and the pigment gave the magenta a darker hue when dry. Upon heating, the thermochromic pigment became fully translucent to expose the yellow acrylic ground. This is only evident in the area where the magenta pigment is mixed into the yellow acrylic. At the lower end of the experiment as can be seen in Figure 51, the addition of acrylic base becomes more translucent than in the previous experiments but, only on the left side of the lower section.

In Figure 52 and Figure 53, the technique is reversed to that of Figure 50 and Figure 51, for the thermochromic pigment had been applied directly to the canvas and not over an acrylic ground as in previous experiments. By applying the thermochromic pigment directly onto the canvas, the effectiveness of the reactive properties within the thermochromic pigment is most efficient. This has the opposite effect to when the thermochromic pigment is applied over acrylic paint. The reactive strength of thermochromic pigment can be observed as the pigment becomes clear leaving the canvas visible. There is a slight discolouring of the pigments pure colour. This led to further experimentation in controlling the mixing and application of thermochromic pigment and acrylic paint.

Figure 54 and Figure 55 are comparable to Figure 56 and Figure 57 as they both investigate similar applied colours of acrylic paint and pigment, such as red and magenta, and blue respectively.

The intended outcome of experiments in Figure 54 to Figure 57 is visibly lacking in transformation. This again proves mixing thermochromic pigment with acrylic paint makes the thermochromic pigment unstable and non-reactive when heated.

Figure 58 and Figure 59 are similar to Figure 51 and Figure 52 as they both investigate the mixing of magenta thermochromic pigment with wet yellow acrylic paint. Figure 59 has a larger quantity of thermochromic pigment mixed into the yellow acrylic paint than in Figure 52 but, leaves more of a coloured residue than in Figure 52 when heated. This is a surprise as the research was expected to reveal the thermochromic pigment to be more translucent when less diluted, regardless of the quantity of medium used to dilute the pigment.

Figure 60 and Figure 61 explore the application of thermochromic pigment when painted over acrylic paint. Once again, the application of thermochromic pigment on top of acrylic paint renders the heat reactive compounds non-functional. The only visible difference between the unheated and heated experiment is a lighter tone in the heated version. Similar to previous experiments, the thermochromic pigment colour is still visible and not translucent when heated, thus proving that the acrylic paint is more stable than the thermochromic pigment when applied in layers with the acrylic paint. This compares with Figure 44 to Figure 49, where the thermochromic pigment

is applied over acrylic paint, thus weakening the visual effectiveness of the thermochromic compound to an inadequate value.

Figure 62 to Figure 65 use a higher quantity of thermochromic pigment in proportion to acrylic base: a three to one-part ratio. This was the only ratio that was successful in all the experiments using thermochromic pigment and was used in the final paintings in the *Installation/Painting* research exhibition. A similar result is achieved as observed in previous experiments. No visual difference is attained in using a higher ratio of thermochromic pigment in relation to acrylic base. The outcome is identical; the acrylic base does not allow the thermochromic pigment to become translucent. This again results in a strong white residue dominating Figure 62 to Figure 65. This residue resulted in a weak visual aesthetic and required further investigation to know if these combinations of thermochromic pigment and acrylic paint could be refined for future use.

Figure 64 used black thermochromic pigment but, instead of becoming translucent the pigment, upon heating, resulted in a light grey colour on the surface of the canvas. Due to this problematic issue regarding the effectiveness of the thermochromic pigment, a re-evaluation of the colour system and application of thermochromic pigment and acrylic paint for the works of art to be successful commenced.

Figure 66 continued the experimentation of a three to one ratio of thermochromic pigment to acrylic base. The difference in this experiment in relation to Figure 62 to Figure 65 is the addition of further layers of both acrylic paint and thermochromic

pigment. The outcome of applying additional layers is the same where acrylic base had been used: the resultant visible white residue. To extend this investigation, once the thermochromic pigment mixed with acrylic base and acrylic paint had dried, a pure, non-diluted layer of thermochromic pigment was applied. Upon heating, as observed in Figure 67, only the pure non-diluted thermochromic pigment became translucent. This resulted in the desired effect when using the thermochromic pigment.

Figure 68 investigates the combination of thermochromic pigment, acrylic base and chameleon nano flakes. The experiment involved using various quantities of thermochromic pigment mixed with acrylic base applied directly onto canvas in layers. The results of this experiment are also not as expected. Without the addition of acrylic paint and only the application of thermochromic pigment with acrylic base, success in the effectiveness of the heat reactive pigment was expected. This is not the case, as can be observed in Figure 69. Only a small area on the left of the canvas has become translucent when heated. This small area was painted with pure, non-diluted thermochromic pigment, thus again highlighting the thermochromic pigment working only when applied in pure form. This was the desired visual aesthetic the experiment hoped to achieve when combining the thermochromic pigment with acrylic paint, but as experienced in earlier investigations this aspect of mixing and application is the most difficult to overcome. How to achieve the translucent effects of the thermochromic pigment in combination with acrylic paint was still in question.

Figure 70 re-introduces acrylic paint into the equation. The acrylic paint is used as a ground with thermochromic pigment applied in pure form in the majority of the

painted surfaces. The small orange section on the left and the small white section to the bottom of the painting are the areas where the acrylic base is mixed and applied with chameleon nano flakes and is allowed to dry. It can be observed in Figure 71, the pure application of the thermochromic pigment has been effective when heated without dilution. This is even the case when applied to the acrylic base mixed with chameleon nano flakes.

The research concludes that the experimentation observed in Figure 68 to Figure 71, shows that the application of the thermochromic pigment in pure form is essential for the heat reactive component to be most effective. The significance of this is because of the visible translucent quality the thermochromic pigment brings to the visual aesthetic. Dilution of thermochromic pigment is not required as the strength in colour is weak in relation to acrylic paint.

Figure 79, shows the finished prototype that became the layout for the addition of the reptilian heat mat and thermostat. It is the addition of these components that constitute the works of art to be considered wall-based sculpture. These additions were required to achieve the visual aesthetic aimed for when imagining the concept for this investigation.

Figure 80, is the first work of art to combine all concepts from the practice-led research. Figure 82, *No.1* (Crowe, 2014), reveals the successful application of thermochromic pigment over acrylic paint as it becomes translucent when heated. This is achieved by having the reptilian heat mat positioned behind the canvas, thus allowing the heat reactive component in the pigment to be effective. Thermochromic

pigment is applied straight from the tube in its strongest form; no dilution with an acrylic base is considered due to its weakened potential.

The slow transformation of the thermochromic pigment to become translucent and then return to its full colour is timely. The section of the painting affected by the heat reactive pigment is an area of focus for the audience and is effective in conjunction with the positioning of the LEDs. This is because when the thermochromic pigment becomes translucent there is a loss of colour and form on the paintings surface. The positioning and colour of the LEDs is crucial in providing the balance that is required when the timely thermochromic reaction takes place.

Figure 83, *Installation/Painting No.2* (Crowe, 2014), is the largest of the series to date. *Installation/Painting No.2* (Crowe, 2014), uses black and blue thermochromic pigment over blue acrylic paint. Whilst the blue thermochromic paint is translucent when heated, the problem of a light grey coloured residue remained from the black thermochromic pigment. The harshness of this light grey residue was solved when the painting is seen under LEDs and not light from the gallery lighting system.

Figure 85, presents *Installation/Painting No.2* (Crowe, 2014) by its own illumination. The differing strengths in LED technology when used on a larger scale such as this can be observed. It is due to the new technology of LEDs that such large discrepancies exist within works of art. Such a large variation in the strength of the LEDs was not expected as this affected the balance of the light across the surface of the canvas. The resulting works of art are still successful due to the effectiveness of the changing thermochromic pigment enhancing a new visual awareness.

Installation/Painting No.2 (Crowe, 2014), is considered a success due to the balance achieved in the combination of the light grey residue and the coloured LEDs when the painting is heated. Similar to *Installation/Painting No.1* (Crowe, 2014), *Installation/Painting No.2* (Crowe, 2014), creates a focal point for the viewer as the LEDs have produced shadow and texture within the square shape located in the centre of the painting. This draws the audience closer to the painted surface and begins the process of awareness through contemplation in the blurred space between the wall-based sculpture and spectator.

Figure 87, *Installation/Painting No.3* (Crowe, 2014), is a failure. In Figure 89, pure, non-diluted magenta, green, black and blue thermochromic pigment were applied directly onto dry blue acrylic paint with the expectation of the heat reactive pigment becoming translucent. This was not the case, there was no transformation in colour of the pigment. This was not predicted, given previous experiments suggesting otherwise. The light emitted from the LEDs are somewhat diffused by the edge of the canvas and do not illuminate the surface of the canvas with the success exhibited within *Installation/Painting No.1* (Crowe, 2014) and *Installation/Painting No.2* (Crowe, 2014). *Installation/Painting No.3* (Crowe, 2014) is not to be considered for further exhibition purposes due to this reason. This is due to weak communication of the emotional significance the viewer received because of the low emitted LEDs and little visual transformation of the thermochromic pigment.

The works of art presented in the exhibition *Installation/Painting* expand upon the principles of colour theory systems developed through the colour variations of the

self-illuminated frame and its relationship with the painted surface. The variation of colour within the space between the wall-based sculpture and the spectator from the self-illuminating frames create the immersive environment, which aspires to develop the spiritual and contemplative awareness in the audience. This is only apparent in the audience when the concept of the exhibition is imagined holistically, that being the balance of light and transformation of the thermochromic pigment working in harmony with the viewer. It is only when this communication between the painting and viewer is in motion that the viewer becomes aware of a new experience and visual perspective in the space between themselves and the wall-based sculpture.

Chapter Four: Exhibition

Installation/Painting

Installation/Painting is concerned with painting, but there is a major risk that the audience could view the paintings as installation art exclusively. This is due to the experiential nature involved when observing the works of art and the blurred space between the genres of painting and installation art. The works of art presented in the exhibition are considered wall-based sculpture in terms of installation art. The reason for this is that the works are site-specific for a gallery environment. The term installation art is used in this research because the light emitted from the self-illuminated frame occupies the entire gallery space. This allows for contemplation of a unified experience on behalf of the spectator, as the paintings do not act on an individual basis. The impact this has upon the emotional and behavioural effects of the audience in a collaborative social space can be seen in terms of psycho-geography as the self-illuminated frame unifies the space between the viewer and the works of art hung on the wall. The art works presented are created in the 'space of perception between the work and the viewer' (Zegher, 2005, p.35).

This chapter evaluates the expressions taken from the audience response question-naires (See Appendix 6) collected throughout the research exhibition and aids the re-alisation and validity of the research put forward in this thesis.

In reading comments taken from these questionnaires, it seems the meditative quali-ties and awareness of experience through a new visual perspective were prevalent but, the aspect of time needed for the audience to appreciate the subtle changes in

value exhibited by the painting using thermochromic pigment was not clearly acknowledged. Tuchman points towards the influence Zen had upon The New York School with regard to the element of time in viewing the work of Ad Reinhardt: 'Granting one's vision sufficient time to perceive the resonant hues and shapes in a painting by Reinhardt is equivalent to the assumption of a meditative position' (Tuchman, 1996, p.51). This same requirement is an important aspiration for the audience when viewing the works of art on display in the exhibition.

The overall reaction of the audience upon entering the dark gallery space was one of bewilderment. The questionnaire asked the audience if their feelings or emotions changed upon entering the gallery space. Results show an overwhelming positive outcome as seventeen out of twenty-three participants stated yes, of which nine were calm, four felt nervous before feeling calm and two felt an awareness and intrigue before their calmness set in, whereas, eight felt nervous due to the dark and this did not change. One participant was scared of the dark; however, once seeing the works upon the wall it gave them a feeling of safety. Only five participants did not feel a change in their emotion upon entering the darkened gallery space.

The second question posed to the audience asked if they experienced a conversation between the self-illuminated frame and the thermochromic pigment or acrylic paint regarding which painting they were observing. Again, similar to the response in question one, the overall reaction was affirmative in that the audience did experience a conversation between the light and painted surface. One interesting comment said that the lights gave the paint different personalities, to which another added the light was very specific to the atmosphere of the exhibition. This highlights the conceptual

importance of the space between the works of art and the spectator. The light levels across the painted surface as stated by the audience aided the spectator to define the shapes in the paintings and bought the viewer closer to the work. This encouraged the audience to engage and look again, further questioning the painted surfaces.

One participant said that the communication of the paint and light changed after viewing the work on three different occasions and how moving this felt. This is the aspiration of the research, to make the audience aware of their experience through a new visual perspective within the gallery space. The audience acknowledged the experience as a progressive process, with the light helping to draw the eye towards the central focal points within the wall-based sculptures. A final comment to add, is that one participant did not realise how the light and paint conversed but, did say the exhibition linked well to the manifesto.

The next question was fundamental in the moral aspiration and justification of the spiritual within the works of art presented. The affirmative answers as to whether the audience felt an inner spiritual experience was low in respect to the first two questions where the majority of answers were positive. One participant stated it was a very reflective and in the moment experience, who felt their pulse rate alter. This participant received the full experience the research aspired to in its conception. The participant was both aware and reflective in their experience with reference to an altered pulse. Not that this experience can compare to the Stendhal syndrome spectators feel in the Sistine Chapel.

The above participant did not say whether they were spiritual in their thinking before entering the exhibition, whereas one participant said they generally have inner spiritual experiences when given the opportunity to sit quietly and study something, especially within a dark room. The research cannot evaluate the strength of the spiritual experience of this participant as they already have spiritual intentions within them. This answer posed further questions to the validity of the research, for example, with the work exhibited in the darkened space, some participants linked this to the notion of the spiritual. Upon reflection, it must be evaluated as to whether the dark gallery space skewed the communication of the spiritual experience and if the participants have an understanding of how the spiritual can relate to artistic practices in the sense the research aspires. The aspiration of this spiritual experience is explored in more detail later in this chapter.

In contrast to participants who had positive spiritual experiences, one participant stated that they do not consider themselves to be a particularly spiritual person and the exhibition did not change that. This type of participant is the one that the research, and specifically the space between the spectator and the works of art, wishes to engage with the most, to see if it can bring about a positive feeling of experience and awareness.

In relation to whether the dark gallery space is skewing the communication of the spiritual within the research; one participant answered by saying they felt a little uneasy in the dark but, also was made to feel more connected to the work. The research asks if this response is due to human conditioning, in that light in a dark space will have a positive impact upon the viewer's sensations. This element of the research is

to be investigated further in a second series of wall-based sculpture after the completion of this thesis.

The next question asked whether the self-illuminated frame functioned as a concept to illuminate paintings over traditional gallery lighting. The answers were mostly positive as one participant said; the self-illumination became the frame and cleverly tricked the senses into a sense of security. It was not intentional for the works of art to trick the senses as this participant says, but it is comprehended that the idea to trick and disturb the visual perspective of the audience as another strand of the research experiment could be considered in a second series of wall-based sculpture.

A few participants commented upon how the self-illuminating frame exposes specific parts of the paint, which, they believed, made the work more effective as it conveyed different tonal qualities within the paintings. In contrast to this, one participant stated no as it illuminates only sections of the painting, with the eye being drawn to the lights. The concept of the self-illuminating frame was partially to illuminate sections of the paint within the works of art hence the positioning of the LEDs within the frames. The reason for this was to engage the audience further in a participatory manner. The research does not reveal whether these participants answered the question regarding the self-illuminated frame as a conceptual entity, although these comments do ascribe to the positive impact of the self-illuminating frame upon the painted surface.

One participant discusses the light emitted from the frame and its influence on the gallery space as a whole, by saying it provides a different feeling to be in an art space where the lighting is to be considered, as it is not neutral. This provides an interesting perspective on what the spectator may have seen before if you were to view the works of art in this new context. This participant provides evidence that having considered the lighting within the gallery space, the works of art did have a positive impact upon the audience experience in comparison to that of the general neutral lighting in gallery spaces. Participants noted that their experience changed due to the light emitted from the frames as it brings an intimacy to the viewer within the space between themselves and the wall-based art.

One participant said no as they felt the use of different coloured lights prevented any subtlety of perception. This participant continued by saying, Rothko's painting are extremely effective in regular gallery lighting. This comment is appreciated in regard to the strength of the some of the LEDs and how they prevented subtlety of a new perspective as the technology of the LED is new. With regard to the comment on viewing Rothko's painting in regular gallery lighting, Rothko himself wished for his paintings to be viewed in low-level light as recounted by Bryan Robertson:

> Rothko asked me to switch all the lights off, everywhere [in the Whitechapel Gallery]; and suddenly, Rothko's colour made its own light: the effect, once the retina had adjusted itself, was unforgettable, smoldering and blazing and glowing softly from the walls — colour in darkness.
> (Cohen-Solal, 2015 p.282)

The final comment from the question concerning the self-illuminated frame states that it was a curious concept. It helps you disconnect from your surroundings but, can also maybe make others stand out more from the work. The self-illuminating

frame has aided this participant in disconnecting from their mundane surroundings. This is an intentional aspiration within the philosophy of the research as set out in the manifesto.

Can the frame work as a tool for non-objective paintings or should they be frameless? This was the next question posed to the audience. The overall response was positive, for example, participants said the lights are the frame in the darkness. It adds structure and keeps it all together. It does slightly change the personality of the piece with the size and the shape though. The frame is essential to the whole exhibition, it would not be as effective without the self-illuminated frames as the frames capture the viewer's attention and further develop the relationship between the space in between the works of art and the spectator.

In relation to the abstract, non-objective nature of the paintings, a few participants said the paintings gave an objective experience upon their viewing but, that the paintings were still non-objective. In contrast to this, one participant stated an appreciation for the frames as they finish off the paintings; however, as a non-objective realisation they would have made more sense to be frameless. Several participants commented upon the works possibly being frameless, but regardless of the light being framed or not, light only would have also given a frame. This would be created due to the level of emittance from the beam of light. If the works of art were frameless, the works would be classified as *Light and Space* art and not have the qualities that the research has developed for the self-illuminated frame and the blurred space between the viewer and works of art to be coherent.

The most affirmative comment from a participant said that the frame as a tool adds narrative or removes the need for one. This changed the conversation with memory linked to mood and emotion. The research presents the idea of the frame to add a narrative, which is one of intrigue. This idea of the narrative is one to think of in the future development of the self-illuminated frame. The classic trophy frame of naval dignitaries is an example of the frame adding a narrative in histories of the picture frame.

The next question placed emphasis on audience observations and reactions to the thermochromic pigment. The responses are mixed for this question with half the participants not observing, not realising or making no comment. The research found the positive answers overwhelming in their response. One participant said, as the thermochromic pigment changed slowly, it felt like performance art that changed. The perspectives of light changed how it looked dependent on the re-active nature of the paint. Other participants commented upon the transformative nature of the pigment as calming and conveying a sense of fascination. Participants said the thermochromic pigment established interest and curiosity, questioning form as it erased the observed form to create new shapes. Another participant appreciated the generative elements of the thermochromic pigment as it changes over time and would not produce the same work twice. This participant must be corrected as the thermochromic pigment does produce the same effect due to the controlled nature of the heat emitted from the reptilian heat mat placed behind the canvas.

One slightly negative comment regarding the thermochromic pigment stated the process was timely and dragged on but, was a fresh idea and could appreciate its quirkiness. This participant thought the concept of changing and evolving art was a good idea. Again, this participant understood the idea behind the works of art and the innovation in aiding the evolution of art, rather than the spiritual aspect.

The penultimate question challenged the audience as to whether they had been aware of any positive or negative experiences whilst viewing the works of art. One third of responses to this experience were positive. Participants said it was a new gallery experience that they would like to see developed. Some participants liked the idea of there being something from nothing with the creation of the light boundary together with the illusion of purity. The research reveals that the exhibition was a success for this participant as they experienced the idea of illusion and purity.

Some participants who said their experience was positive were reflecting on why and what it says about them. Other participants said this was due to the sense of nothingness in the works. The research can only hope that the participants take these ideas into their own life and radiate those feelings outwards towards others. This completes the cycle in which the research places itself within the aspirational realms of the spiritual within art.

One participant said that the dark gallery space gave a negative feel but, when observing the paintings, the feeling dissipated due to the bright lights and colour of

each painting. The dark gallery is effective because the viewer is drawn towards the works of art.

The most significantly negative comment came from a participant who said the subtlety that was meant to be present was lost in the crude lighting and reflective glass and that the works had the opposite of the desired effect. It can be argued if further time was spent in communication with the painting, then the reflection of the glass becomes invisible, just as the picture frame surrounding a painting. The participant went on to comment that the works of art were calculated rather than emotionally driven and they lacked integrity. The works of art were calculated as stated earlier in the thesis, as the idea is formed in the mind first.

In the majority of answers, participants did not expand upon the reasons given in the questionnaire. In relation to the desired effect being calculated rather than emotionally driven, the exhibition was staged as a research exhibition, which was calculated in respect to the fact that it proposed to explore the blurred space between painting, installation art and the viewer. In this sense, the research considers the exhibition, *Installation/Painting*, to have integrity. Regardless of the paintings not being emotionally driven in the sense of suggesting an emotion, the investigation into the space between painting and installation art has created the hybrid of the art exhibited.

The final question to the audience asked for their thoughts on the manifesto. Over half the audience, who participated in the first *Installation/Painting* exhibition, responded positively to the manifesto. One quarter of participants gave constructive criticisms whilst the other quarter made no comment.

Participants agreed in principle with the manifesto with one stating: 'what a series of installations'; 'the idea of light and combining it with heat'; 'really well thought-out and uses the ideas of disposable light and particles of light'. With another participant saying: 'it is time for a new wave of ideas and I think the immersive environments such as this are the way forward'. The research does not categorise immersive environments within art as a new concept. Such environments, for example, early American installation art of the 1970s and contemporary nightclubs had influenced the research.

Some participants commented positively with regard to moving away from technology as they thought as a race, now more than ever, we are disconnected from the world and not living in the moment. Another participant who agreed with the manifesto by being a fan of physical artwork confirmed this notion. The participant said that the manifesto makes a clear and concise point and makes you understand how technology has blinded us to real, physical, emotional art.

Participants' constructive criticisms focused on the discussion of technology, the computer, art and society, for example, the computer is just another tool. One partici-

pant said, if you believe the artist's hand is essential for a work to be art, then obfuscating lighting is unnecessary and becomes an affectation. This participant has not understood the connection between technology and the computer. The manifesto only uses the computer as an example of technology. In response to the lights in the frame obscuring the paint and therefore making the works pretentious, as a practitioner this is strongly denied. The research does not mistake the grandiose ideas upon which it is built but, this is within the traditions of art movements wishing to bring about social change. The research questions whether emotionally driven work alone could carry such notions of grandeur to bring about societal change as the research aspires. No manifesto that was researched uses the term emotion as an ideological statement to bring about change within art. If emotion is to be used as an ideology within movements of art then we would be faced with nothing but pretentious art, as we are today with artists forcing their psychiatrical issues upon their audiences.

The research acknowledges the contradiction sought by the audience with the discussion of technology. This research cannot escape technology. It is used in the production and use of the self-illuminated frame with LEDs, reptilian heat mats and smart technologies having developed thermochromic pigment. These technologies are only used to create the atmosphere the research set out to achieve. The emphasis is on the creation of a wall-based art and not on the technology used to create them as with other art movements using computer software, such as video, photography and contemporary social media constructs.

The research will leave the reader with one final comment taken from the audience of *Installation/Painting*. One participant said the manifesto follows in the grand tradition of artist manifestos – full of thought-provoking statements prompting reflection and deeper consideration of the meaning of each work. This participant truly understands the ideas of artists past and present who have tried to use manifestos to communicate thought-provoking statements. The experience of this particular participant reflects the use that a manifesto can have upon its audience.

Conclusion

The research presented is innovative and adds to knowledge in both aspects of research- and practice-led investigations, for example, the relationship between Malevich and Baudrillard is new as the links between a dead image and hyper-reality have not been explored prior to this research.

Painting with Light is the collated information presented from the research- and practice-led enquiry, together with the *Installation/Painting* exhibition research experiment. These investigations explored the blurred space between the viewer, installation and wall-based art, whilst highlighting the importance of colour, form and light in painting and art with the introduction of thermochromic pigment.

The self-illuminating frame interacts with the painted surface and is viewed as bringing together painting and installation art, thus furthering the knowledge of each respective field. The audience viewed the criterion of the painted surface lit by the self-illuminating frame as a success. This was due to the balance in appearance of the coloured LEDs and painted surface when observed by the spectator.

Two criteria defined the development of the frame in the first series of art works presented in this research. One being the purchase of machine cut frames, for hand-construction and the second being the ready-made commercially constructed machine cut frame. The reason for this was to discover if a suitable frame could carry the style of non-objective painting within a self-lit frame, whilst not affecting the

overall visual aesthetic that was conducive in unifying the space between the spectator and the wall-based art.

A criterion put forth in the research states that audience awareness of visual perspective and experience is challenged through interaction with the self-illuminated frame and the space that exists between the wall-based artworks and spectator. The research considers this criterion a success. This is acknowledged through the qualitative responses from the audience questionnaire, which suggested that the development and production of the self-illuminating frame as a tool for evolving contemporary painting was a positive advancement enhancing the awareness and visual aesthetic within an immersive environment. This provides further evidence for the argument put forth by the research that the awareness and feeling of pleasantness could be both an honourable and measureable entity in determining successful criteria that future research can arguably rely upon.

The practice-led research into wall-based sculpture is original in its construction using the picture frame to conceal the LEDs, reptilian heat mat and thermometer to allow the heat reactive thermochromic pigment to work. The emittance of light into the gallery space creates an immersive environment and allows the audience to contemplate their experience in the space between themselves and the wall-based sculpture. This blurred space allows the spectator to partake actively creating an experience of collective participation giving rise to the social aspect of the artwork, which brings people together in discussion, although not necessarily to changing the attitudes in the small sample of people who attended the exhibition.

Not only does the self-illuminated frame open new discourse into light orientated colour theory and artists' use of light but, brings into question light's ability to induce a spiritual experience through an awareness of visual perspective in the space between the wall-based sculpture and the spectator. The self-illuminated frame leads to a successful rejection of gallery lighting due to the immersive environment created in the space between the artworks and the spectator.

The abstract, non-objective style of the works of art aspires to focus the audience on colour and form within the space of the frame that initiates awareness of experience through visual perspective, thus giving the work purpose. Bioce stated 'an art work has a purpose only in the sense that someone has a purpose for it' (Bioce, 1972, p.70).

Throughout time, regardless of the visual characteristics employed by artists, both the public and artists themselves have revolted against new art forms. Although, if the theosophical stance is taken for the evolution of humanity, then even within art man cannot progress because of this revolt towards new forms within art, therefore exhibiting a characteristic in humanity which does not allow for its development within the spiritual triangle. The research suggests there is still no concrete evidence as to why humanity exists irrespective of science or religion.

Tuchman states 'the industrial revolution and consequent changes in the economic system, coupled with Charles Darwin's findings, not only undermined people's faith in conventional religion but also led to the perception of life as barren and devoid of meaning' (Tuchman, 1986, p.19). The research hopes to have started the shift back to

the humane artist – whose values are towards helping the re-awareness of evolving society and continuing the aspirational fight for the acceptance of the spiritual within art and society.

Robert Filliou asked himself the question, 'What is it the artist brings to society?' And his answer was a way of life. One tends to forget the far-reaching influence the changes in the visual arts have had on our society' (Wijers, 1990, p.8), such as education, health and the economy.

In accordance with Machell's search of the truth and Baudrillard's notion of works of art in simulation, therein lays another reason for an audience's possible disinterestedness in art. For arguably, creativity and imagination should aspire to rise above imitation and copying of representational ideals in helping the artist develop a new aesthetic for a new chapter in the evolution of humanity.

Research suggests that Clive Bell's theory of significant form is required more today than at any other point within the history of art due to the conceptual nature of contemporary art. Arguably, when works of art are interpretations of a known representational experience, such as a landscape, the audience can attach an emotive memory to the work, whereas, when confronted by a non-objective, abstract work of art they cannot attach a memory to induce a similar sensation.

From the theosophist point of view, I would consider significant form to be a barrier in allowing the evolution of humanity to progress; for if, the art cannot be understood then the artistic aspect of the human mind would not develop to allow lateral thought.

Whilst I side with the ideas put forward by Goethe and Steiner in relation to colour perception, the production of art as a requirement of God in terms of this research is not required for the spiritual to succeed. The artistic production in this research experiment is justified as the works of art are solely brought about by the internal impulse of the artist alone. The research suggests no inference from higher beings or God in the creative process.

In theosophical teaching, human evolution has several stages of development. If I am to believe that consciousness and the soul travel to the outer cosmos and return with an awakening of the spiritual in humankind, then we are still waiting. 'The Universal Brotherhood of Man' (Neresheimer, 1897) was written in 1897 with the end of the century in sight, yet in 2018 we are still waiting for human unity. Yes, I admit that 121 years is a small timescale in the evolution of humankind but with the development of materialism being so influential in society it has slowed down the reunification process to further human evolution. I consider that the wars of the past century have slowed down the reunification process further as war does not allow the spiritual in humanity to come to the fore. Therefore, if one fears oneself and others for any reason, even though there is no need, then evolution of humanity becomes stuck within theosophical terms.

Art is therefore essential to the development of humanity, particularly in Machell's understanding of the Secret Doctrine. Machell says: 'Art is the golden key by which beauty is perceived, and beauty is the key to harmony, and harmony prepares the way for unity, which is the point from which mankind shall one day start upon a new plane of higher evolution' (Machell, 1892-1893, p.7). Although Machell wrote this

article in 1892-93 he bemoans humanity's uninterestedness in art just as Kandinsky and Malevich did between 1910 and 1930, as did Kuspit in 1999 and so too this research in 2018.

The inner necessity of humankind is misunderstood if understood at all by modern audiences due to the gross misnomer of materiality. This brings credence to Bell and his idea of significant form. The audience of art possess a higher level of thought within the lower manas' subdivision.

The artistic power struggles within individual egos is one reason for a lack of unity. With the practice of art being of the higher level of the lower manas, it is key to this argument that artistic endeavour is considered in the higher consciousness of humankind for this argument to be justified.

The artist must help develop a new aesthetic for a new chapter in time in the evolution of humanity. Creation and imagination must rise above imitation and copying in aspiration of the truth.

In relation to the subject on light, I conclude that curators and gallerists must be more considered in their approach. Lighting and gallery space itself must be of the utmost importance in deciding the criteria upon which exhibitions and artwork galleries present.

In hindsight, the research may have been a missed an opportunity to gather further information on the exhibition itself. If the audience had been instructed when upon

entering the gallery space that the room was dark and time was required for their eyes to adjust to the subdued lighting. This could have led to a more consistent enhancement of the visual experience the audience received.

In addition, the questionnaire did not ask participants why they were at the gallery and what experience they wished to gain whilst there. Lathan, in her *Numinous Experiences with Museum Objects* (Lathan, 2009) did and her research showed a large percentage of the audience at religious sites or monuments expected a numinous experience whist in situ. By asking this question, the research may have received more unexpected outcomes in relation to the audience questionnaires.

It is through meditation the artist Filonov believes painting 'becomes the concrete intermediary between the universe and humanity' (Douglas, 1986, p.191), showing the soul of the artist. This variant in which the spiritual is witnessed in art is one the research takes pride in continuing within its practice and puts forth the information artists acquire as practitioners is as valid as the research of science within terms of conservation and preservation (Druzik and Eshoj, 2007).

It is as if Baudrillard's claim of hyper-reality exists (Baudrillard, 1983, p.4). The physical human is becoming a representation of its true self due to the development in technological communications. It is for this reason that the research wishes the audience to develop a re-awareness of the self and overlook the consumption of physical and virtual social materialistic life. The research concludes and puts forth a new argument; it was Malevich who first thought of hyper-reality because he observed that imitative works of art are dead works of art, therefore a hyper-real

copy of reality. Not only is the audience in need of renewal but, the artist too. It is for this reason the spiritual is still relevant in art today.

The awareness I have developed through this research has led to the idea of self-illuminating frames, with light being an additional communicator of sensations through form and colour. Unity and variation of light within the atmosphere of the self-illuminated frame, combined with the painted surface arguably heighten contemplation and beauty within the audience. This conclusion is evidenced within the questionnaire responses from the audience.

The relevance of this proposal to the field of art is evident in the fact that a self-illuminated frame and thermochromic pigment within non-objective, abstract painting has not been put forward for investigation before in the historical context of art. The works of art investigate successfully the use of thermochromic pigments as a new visual language and method for contemporary painting. The research therefore puts forth the argument that light reactive, thermochromic pigment and heat sensitive glass could become suggestive considerations for future contemporary art practice.

I have expanded theories and new relationships between aesthetics, the spiritual in art, audience experience and visual perspective, bringing together the frame, light and smart technologies to form a new hybrid of art in the development of the wall-based art displayed.

The formalist approach to abstract art is in keeping with Bell's theory of significant form and backs up the claim put forward by Kuspit that abstract art is no longer

being used as a communicative tool but, instead becomes the formalist decoration which materialism demands thus making 'us insensitive and unresponsive to it' (Kuspit, 1986, p.314).

Kuspit cites Schapiro, who makes the valid point about abstract art being more of an attitude than a communicative response:

> Authentically spiritual abstract art does not so much "communicate" as "induce an attitude of communion and contemplation."
> (Kuspit, 1986, p.314)

The research findings agree with the above statement, in that the spectators develop an awareness of experience within the gallery through intimacy of light allowing a new visual aesthetic to develop in the blurred space between the wall-based art and the audience.

The Dalai Lama argues that 'externally, immense progress has been made, but internally very little has been achieved' (Wijers, 1990, p.11), going so far as to suggest we are in 'danger of losing our human status if we remain exclusively preoccupied with external affairs' (Wijers, 1990, p.11).

I wish to conclude finally with the Russian avant-garde and their practice of esoteric teachings and movements:

> Ultimately, the exact correlation between the spirit and its embodiment is impossible to determine, and we must remain content with allusions, insinuations, and veiled connections; after all, these are the essential ingredients of the spiritual in art.
> (Bowlt, 1986, p.179)

Afterword

In summary, the research reveals the self-illuminating picture frame is successful in its relationship with wall-based sculpture and this thesis serves as a visual reference for artists to explore further. The findings reveal that there is no requirement of either form or flat colour content for the non-objective relationship between the painting and the frame to work in harmony.

The investigation has expanded the principles of colour theory with its development of the self-illuminated frame, its relationship with the painted surface and coloured LEDs. Colour and light within the works of art aspire towards a spiritual experience in the space between the wall-based sculpture and the spectator. This becomes apparent in the audience when the concept of research works holistically, that being the balance of light and transformation of the thermochromic pigment working in harmony with the viewer. Once this communication between the painting and viewer is in motion, then the viewer arguably becomes aware of their experience and a new visual perspective within an immersive environment.

The research suggests that replication as imitation in the eyes of imagination and creativity does not make the object an artwork as the object is still an imitation of the real object. It is therefore suggested that this is because the objects are already in simulation, even before the observation of an audience as witness.

Since the conception of the research and in particular the technologies used in the production of the self-illuminating frame, both LEDs and thermochromic pigments have advanced considerably. Luminus have developed infrared LEDs as a wall-plug

light source, UV-A LEDs that are ultra-high in power and are designed for applications such as Curing, Rapid-Prototyping, Maskless Lithography, as well as Industrial and Medical applications, and Color Mix LEDs that are for entertainment and architectural applications. Opto Diode have also developed a series of narrow-spectral-output ultraviolet light-emitting diodes (UVLEDs) for industrial and medical applications. Brigelux has developed the TM-30-15 which is the latest developed method of evaluating colour rendition in LCD screens. This is replacing CRI as the industry standard for measuring colour rendition. Philips has developed a HLD LED for projectors which uses multiple LEDs through a light tunnel to produce a very narrow beam of light. This is an advancement on normal LED projection which has a broad light distribution that loses the intensity of brightness when projected. Furthermore, DC LED chips provide power directly on the chip rather than using external circuit boards which allows for a more compact packaging presentation.

Thermochromic technology has advanced to similar levels as LED technology. Although thermochromic technology was first developed in the 1970s, it still only comprises of two types, one being crystal liquid and the other leuco dyes, both of which can be used for thermochromic paints. The thermochromic pigments used in the research were dye based. It is now possible to combine powdered thermochromic pigment with a binder to create thermochromic paint. This form of thermochromic paint has a greater permanency than that produced in dye form. LHCRHallcrest is leader in the field of temperature sensitive, color changing graphic technology known as Thermographics. They have developed thermochromic technology in several different forms such as slurry, powder, paint, water-based ink, epoxy, or masterbatch. Liquid crystals are used in many products, including forehead thermometers, room

and refrigeration thermometers, whereas leuco dye is commonly used in manufacturing and control process, advertising, consumer packaging, product labels, security printing, and novelty applications such as temperature sensitive plastics and mugs, toys and textiles. CTI is a company that has developed hydrochromic technology used for envelopes, so people are aware if post has been tampered with and temperature inks in the retail industry, such as cold and heat activation for drinks and pizza boxes respectively. It has been suggested that thermochromic industries will be a leading market for investment in the next decade.

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artefacts with the viewers emotions, memories, perception in a therapeutic manner to
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Appendices

Appendix 1: List of Illustrations

Initial Colour, Frame and Light Experiments

Self-illuminating Frame Paintings

43. Crowe, D. Figure 32. *Sheet Steel Experiment (Unheated)* (2012).
44. Crowe, D. Figure 33. *Sheet Steel Experiment (Heated)* (2012).
45. Crowe, D. Figure 34. *Blue Magenta Experiment (Unheated)* (2012).
46. Crowe, D. Figure 35. *Blue Magenta Experiment (Heated)* (2012).
47. Crowe, D. Figure 36. *Blue Experiment (Unheated)* (2012).
48. Crowe, D. Figure 37. *Blue Experiment (Heated)* (2012).
49. Crowe, D. Figure 38. *Blue Magenta Experiment (Unheated)* (2012).
50. Crowe, D. Figure 40. *Blue Magenta Experiment (Unheated)* (2012).
51. Crowe, D. Figure 41. *Blue Magenta Experiment (Heated)* (2012).
52. Crowe, D. Figure 42. *Red Magenta Experiment (Unheated)* (2012).
53. Crowe, D. Figure 43. *Red Magenta Experiment (Heated)* (2012).
54. Crowe, D. Figure 44. *Yellow Blue Magenta Experiment (Unheated)* (2012).
55. Crowe, D. Figure 45. *Yellow Blue Magenta Experiment (Heated)* (2012).
56. Crowe, D. Figure 46. *Yellow Blue Orange Magenta Experiment (Unheated)* (2012).
57. Crowe, D. Figure 47. *Yellow Blue Orange Magenta Experiment (Heated)* (2012).
58. Crowe, D. Figure 48. *Yellow Red Orange Magenta Experiment (Unheated)* (2012).
59. Crowe, D. Figure 49. *Yellow Red Orange Magenta Experiment (Heated)* (2012).
60. Crowe, D. Figure 50. *Yellow Magenta Experiment (Unheated)* (2012).
61. Crowe, D. Figure 51. *Yellow Magenta Experiment (Heated)* (2012).
62. Crowe, D. Figure 52. *Yellow Blue Magenta Experiment (Unheated)* (2012).
63. Crowe, D. Figure 53. *Yellow Blue Magenta Experiment (Heated)* (2012)
64. Crowe, D. Figure 54. *Red Magenta Experiment (Unheated)* (2012).
65. Crowe, D. Figure 55. *Red Magenta Experiment (Heated)* (2012).
66. Crowe, D. Figure 56. *Blue Blue Experiment (Unheated)* (2012).
67. Crowe, D. Figure 57. *Blue Blue Experiment (Heated)* (2012).
68. Crowe, D. Figure 58. *Yellow Magenta Experiment (Unheated)* (2012).
69. Crowe, D. Figure 59. *Yellow Magenta Experiment (Heated)* (2012).
70. Crowe, D. Figure 60. *Yellow Red Blue Orange Magenta Experiment (Unheated)* (2012).
71. Crowe, D. Figure 61. *Yellow Red Blue Orange Magenta Experiment (Heated)* (2012).
72. Crowe, D. Figure 62. *Blue Red Magenta Blue Green Experiment (Unheated)* (2012).
73. Crowe, D. Figure 63. *Blue Red Magenta Blue Green Experiment (Heated)* (2012).
74. Crowe, D. Figure 64. *Blue Magenta Blue Black Green Experiment (Heated)* (2012).
75. Crowe, D. Figure 65. *Blue Magenta Blue Black Green Experiment (Heated)* (2012).
76. Crowe, D. Figure 66. *Yellow Red Magenta Blue Experiment (Unheated)* (2012)
77. Crowe, D. Figure 67. *Yellow Red Magenta Blue Experiment (Heated)* (2012).
78. Crowe, D. Figure 68. *Blue Orange Experiment (Unheated)* (2012).
79. Crowe, D. Figure 69. *Blue Orange Experiment (Heated)* (2012).
80. Crowe, D. Figure 70. *Blue Red Blue Orange Experiment (Unheated)* (2012).
81. Crowe, D. Figure 71. *Blue Red Blue Orange Experiment (Heated)* (2012).

82. Crowe, D. Figure 79. *Prototype Installation/Painting Frame with Electrical Wiring* (2014).

Installation/Painting Exhibition

83. Crowe, D. Figure 80. *Installation/Painting No.1.* (2014).
84. Crowe, D. Figure 82. *Installation/Painting No.1.* (2014).
85. Crowe, D. Figure 83. *Installation/Painting No.2.* (2014).
86. Crowe, D. Figure 85. *Installation/Painting No.2.* (2014).
87. Crowe, D. Figure 87. *Installation/Painting No.3.* (2014).
88. Crowe, D. Figure 89. *Installation/Painting No.3.* (2014).

Appendix 1.1: Illustrations: Initial Colour, Frame and Light Experiments

Figure 1.
Daniel Crowe
Paint, 2007
Oil paint, syringe and used frame.
560mm x 560mm

Figure 2.
Daniel Crowe
Untitled (Response to R. Steiner No.1), 2008
Oil paint on canvas
400mm x 600mm
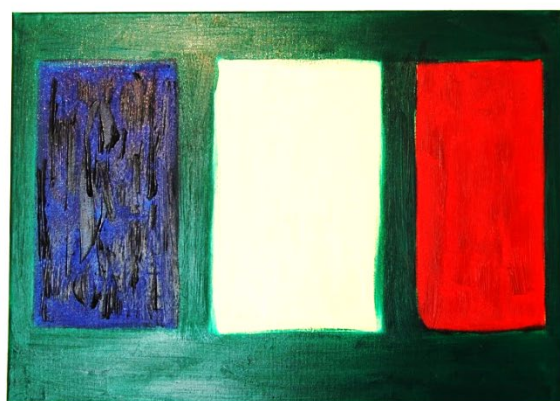
Figure 3.
Daniel Crowe
Untitled (Response to R. Steiner No.2), 2008
Oil paint on canvas
400mm x 600mm
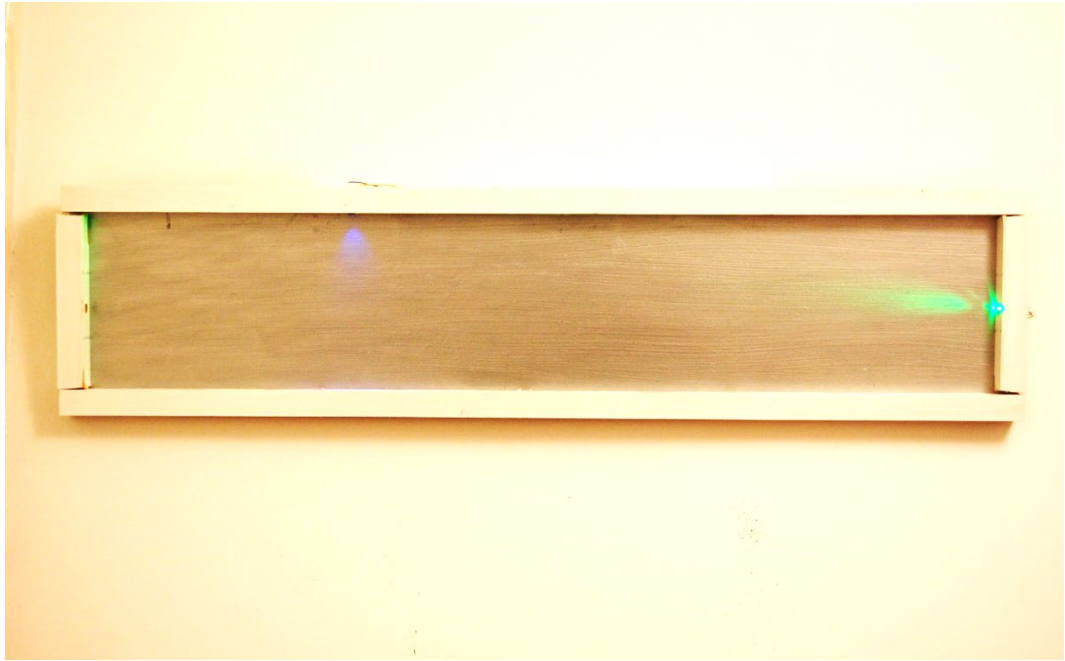
Figure 4.
Daniel Crowe
Silver Green Blue, 2009
Silver enamel paint on board, blue LED, green LED
226mm x 930mm
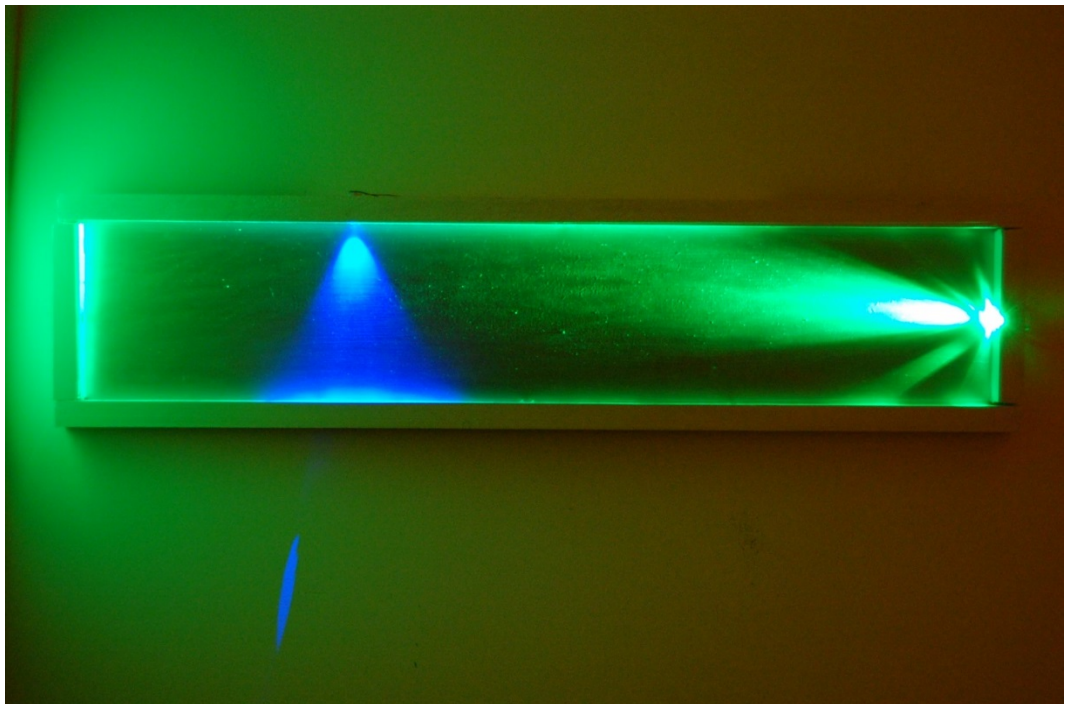
Figure 5.
Daniel Crowe
Silver Green Blue, 2009
Silver enamel paint on board, blue LED, green LED
226mm x 930mm
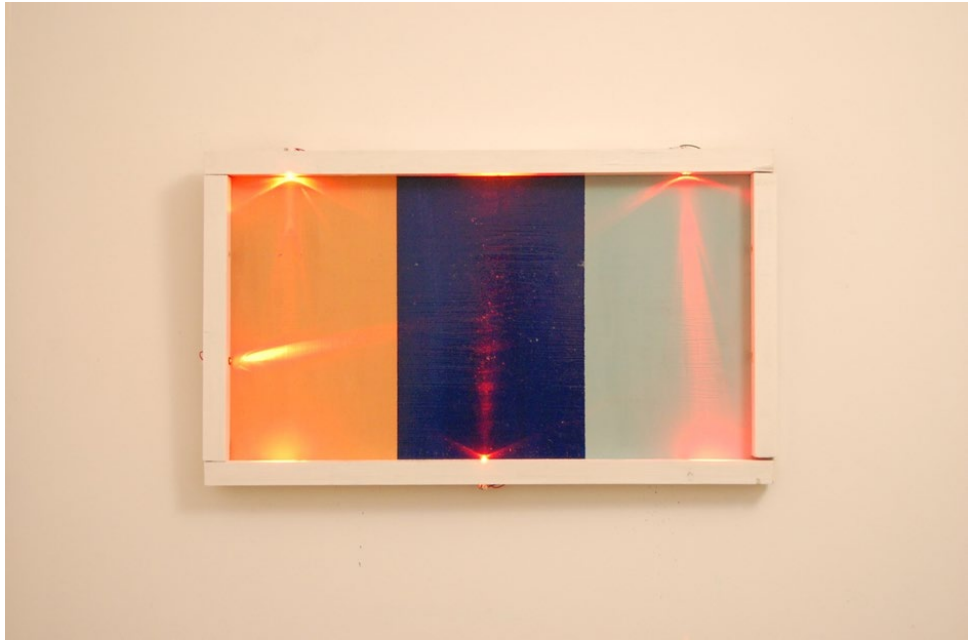
Figure 6.
Daniel Crowe
Peach Blue, 2009
Peach, navy blue and pale blue enamel paint
on board, red LED, yellow LED
300mm x 500mm
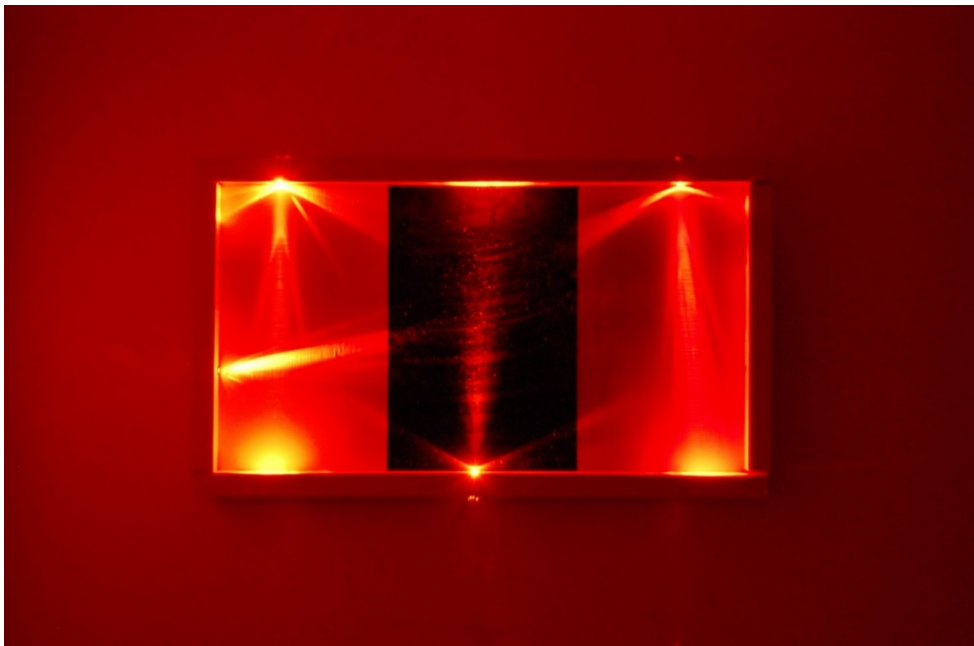
Figure 7.
Daniel Crowe
Peach Blue, 2009
Peach, navy blue and pale blue enamel paint
on board, red LED, yellow LED
300mm x 500mm
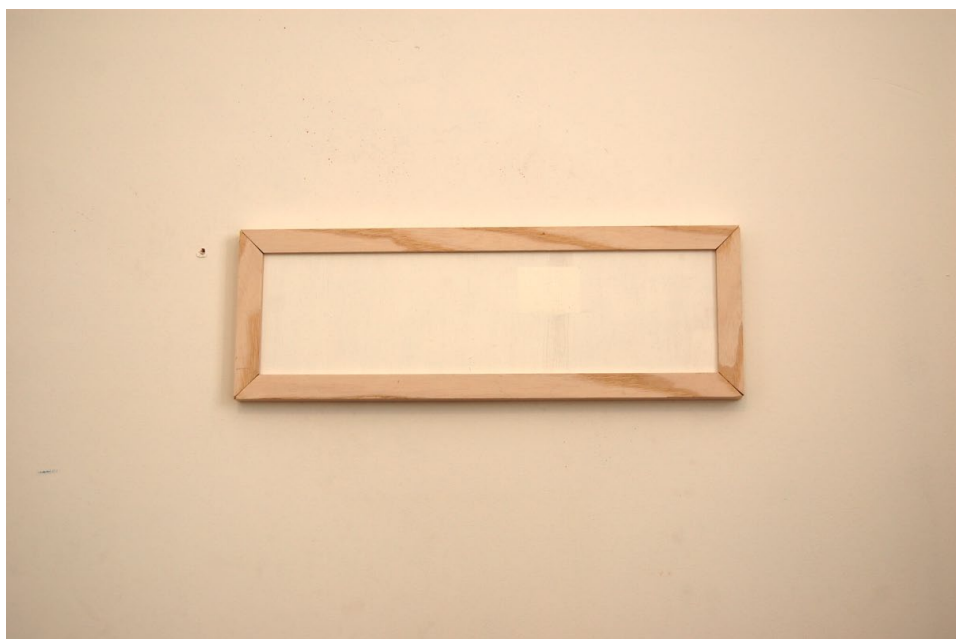
Figure 8.
Daniel Crowe
White Square, 2010
Oil paint on plywood
150mm x 500mm
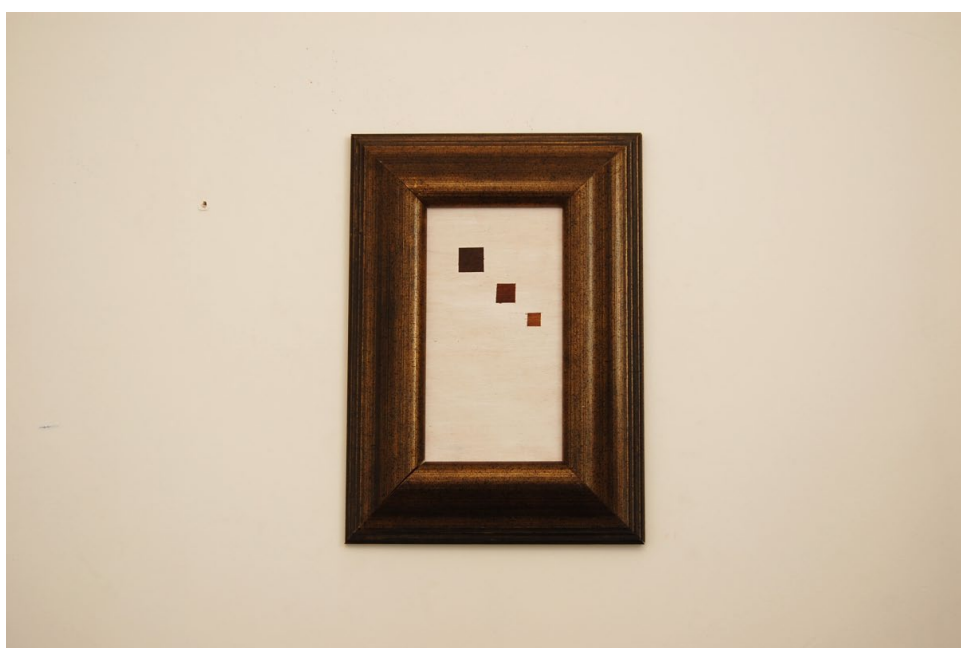
Figure 9.
Daniel Crowe
Three Square, 2010
Oil paint on plywood
235mm x 330mm

Figure 10.
Daniel Crowe
Blue, 2010
Oil paint on plywood
155mm x 345mm

Figure 11.
Daniel Crowe
Untitled (Red Canvas and Frame), 2010
Oil paint on canvas
400mm x 550mm

Figure 12.
Daniel Crowe
Yellow Square, 2010
Oil paint on canvas with mat
306mm x 406mm

Figure 13.
Daniel Crowe
Royal Blue, 2010
Oil paint on plywood
510mm x 693mm

Figure 14.
Daniel Crowe
Royal Red, 2010
Oil paint on plywood
491mm x 598mm

Figure 15.
Daniel Crowe
Green Circle, 2011
Oil paint on oil painting paper
310mm x 250mm

Figure 16.
Daniel Crowe
Untitled, 2011
Ink on paper
180mm x 230mm

Figure 17.
Daniel Crowe
Untitled, 2011
Ink on paper
193mm x 224mm

Figure 18.
Daniel Crowe
Homage to Kandinsky, 2011
Ink on paper
330mm x 430mm

Figure 19.
Daniel Crowe
Green and Black, 2011
Oil paint on oil painting paper
216mm x 216mm
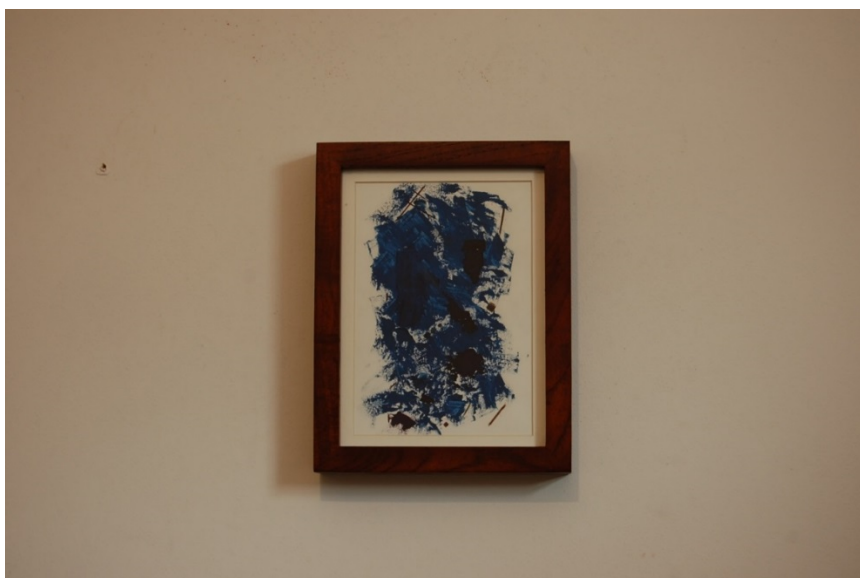
Figure 20.
Daniel Crowe
Space 1, 2011
Watercolour paint paper
224mm x 173mm

Figure 21.
Daniel Crowe
Space 2, 2011
Watercolour paint paper
173mm x 224mm

Figure 22.
Daniel Crowe
Framing Space, 2011
Watercolour paint paper
458mm x 560mm

Figure 23.
Daniel Crowe
Framing Space, 2011
Gouache paint and photo
paper on paper
180mm x 130mm

Figure 24.
Daniel Crowe
Lines, 2011
Watercolour paint on paper
307mm x 258mm

Figure 25.
Daniel Crowe
Line, 2011
Watercolour paint on paper
107mm x 152mm
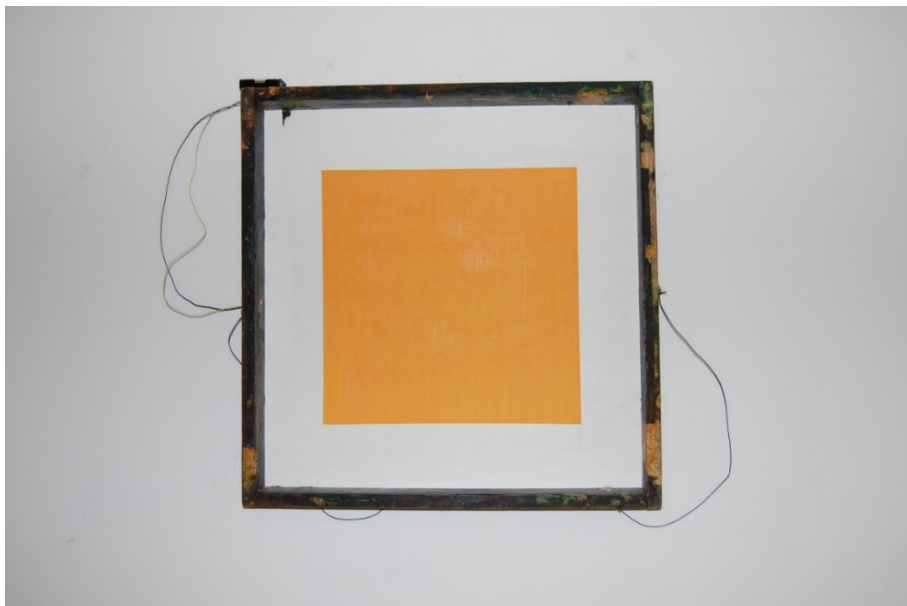
Figure 26.
Daniel Crowe
Yellow Square, 2012
Oil paint on plywood, yellow
LED, red LED, used frame
560mm x 560mm
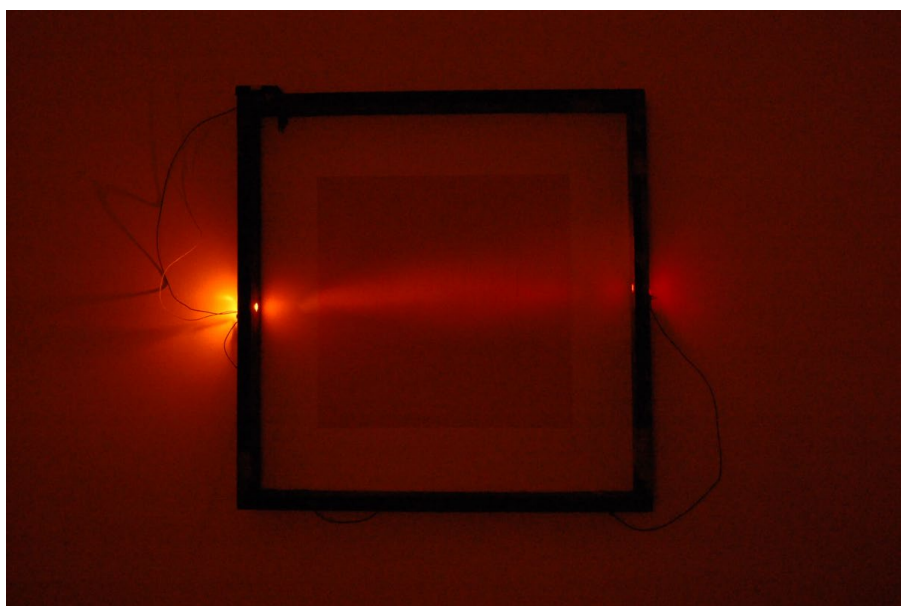
Figure 27.
Daniel Crowe
Yellow Square, 2012
Oil paint on plywood, yellow
LED, red LED, used frame
560mm x 560mm

Figure 28.
Daniel Crowe
Green Circle, 2012
Oil paint on plywood, clear
LED, green LED, used frame
560mm x 560mm
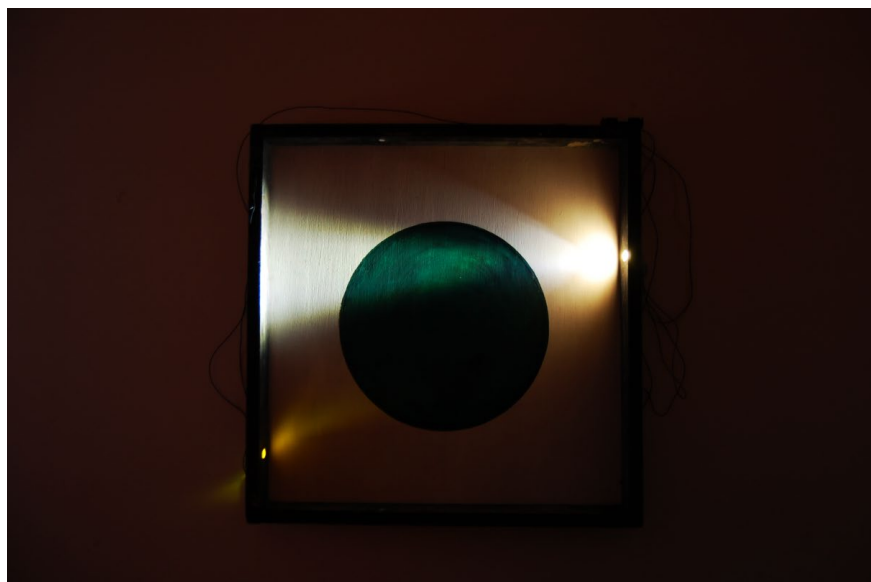
Figure 29.
Daniel Crowe
Green Circle, 2012
Oil paint on plywood, clear
LED, green LED, used frame
560mm x 560mm

Figure 30.
Daniel Crowe
Blue Rectangle, 2012
Oil paint on plywood, clear
LED, used frame
800mm x 510mm
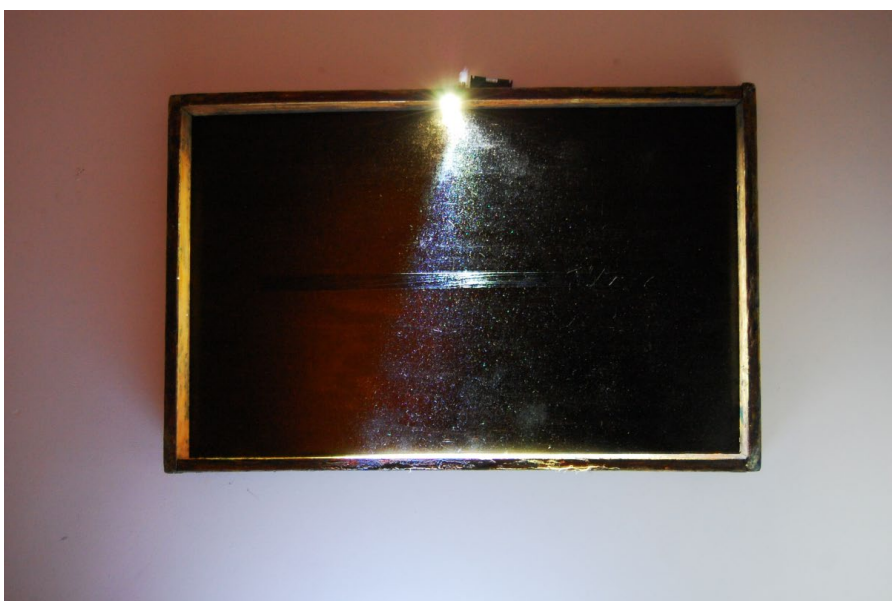
Figure 31.
Daniel Crowe
Blue Rectangle, 2012
Oil paint on plywood, clear
LED, used frame
800mm x 510mm

Appendix 1.2: Illustrations: Thermochromic Pigment Sample Experiments 2012-14
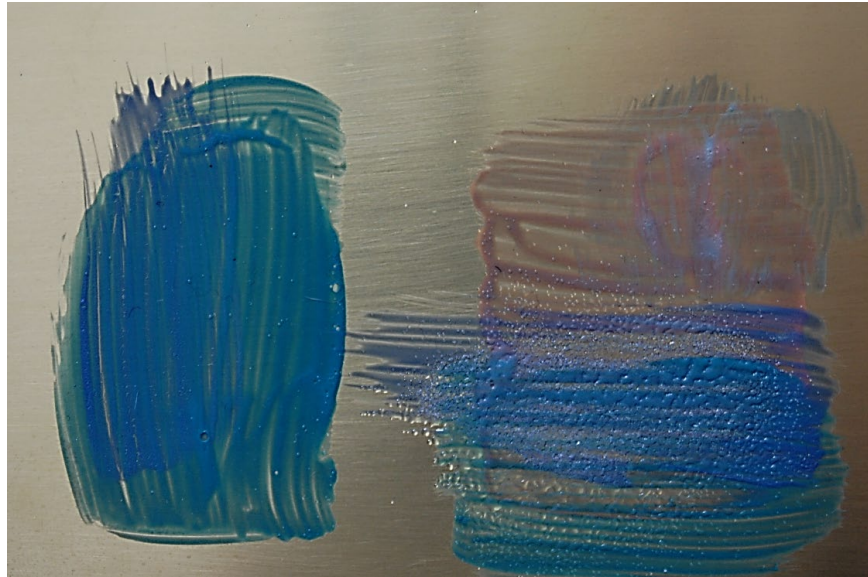
Figure 32.
Daniel Crowe
Sheet Steel Experiment (Unheated), 2012
Blue, magenta thermochromic pigment
with acrylic base on steel sheet
111mm x 120mm
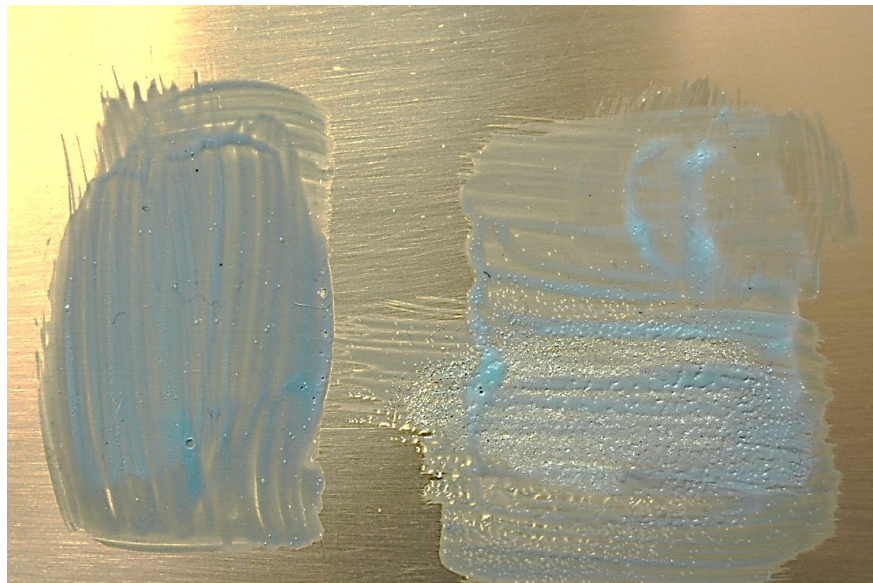
Figure 33.
Daniel Crowe
Sheet Steel Experiment (Heated), 2012
Blue, magenta thermochromic pigment
with acrylic base on steel sheet
111mm x 120mm

Figure 34.
Daniel Crowe
Blue Magenta Experiment (Unheated), 2012
Blue acrylic, magenta thermochromic
pigment with acrylic base on canvas
90mm x 115mm

Figure 35.
Daniel Crowe
Blue Magenta Experiment (Heated), 2012
Blue acrylic, magenta thermochromic
pigment with acrylic base on canvas
90mm x 115mm
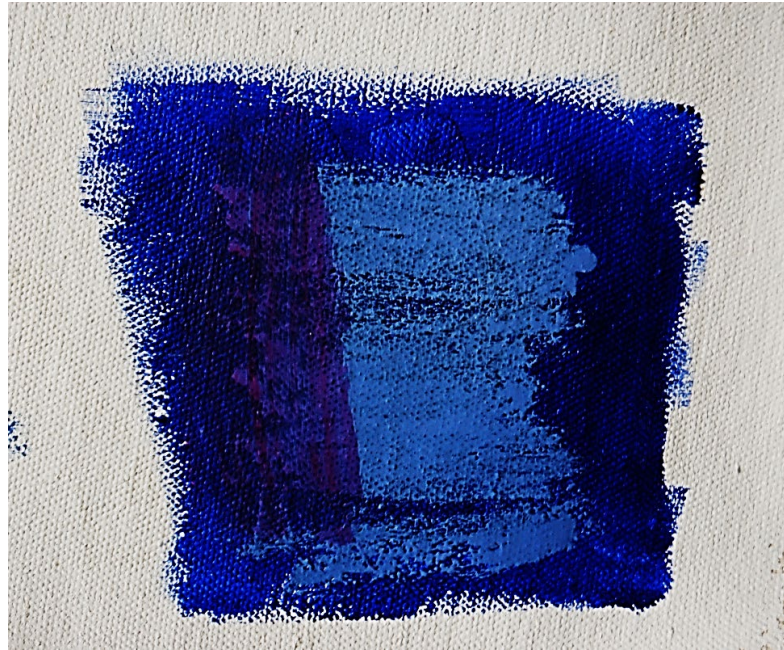
Figure 36.
Daniel Crowe
Blue Experiment (Unheated), 2012
Blue acrylic paint, blue thermochromic
pigment with acrylic base on canvas
95mm x 115mm
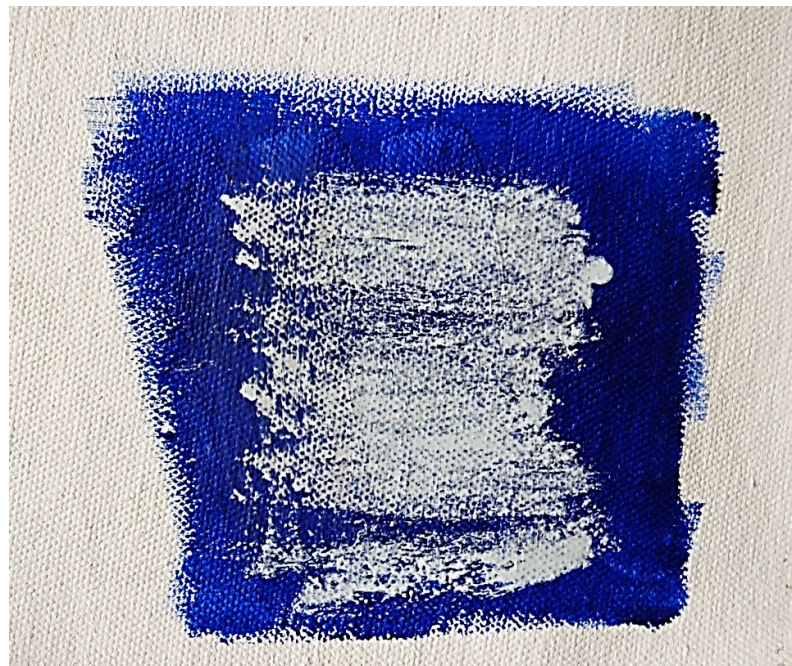
Figure 37.
Daniel Crowe
Blue Experiment (Heated), 2012
Blue acrylic paint, blue thermochromic
pigment with acrylic base on canvas
95mm x 115mm
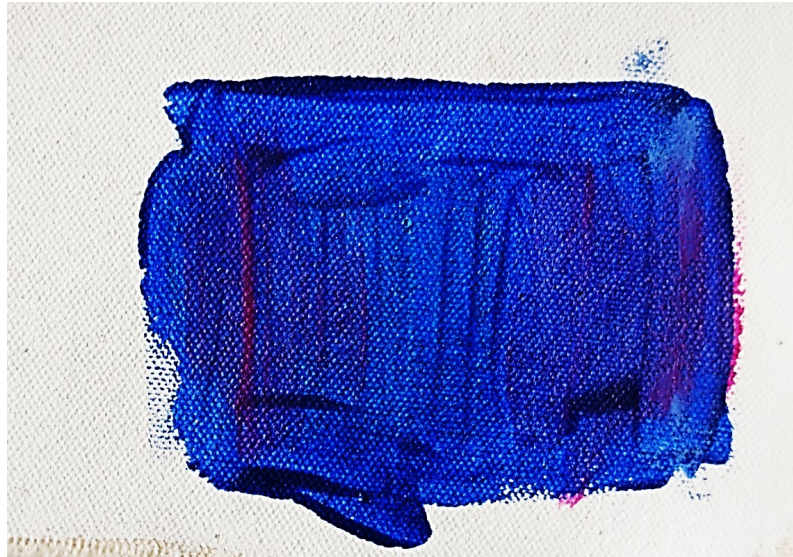
Figure 38.
Daniel Crowe
Blue Magenta Experiment (Unheated), 2012
Blue acrylic paint, magenta thermochromic
pigment with acrylic base on canvas
80mm x 105mm
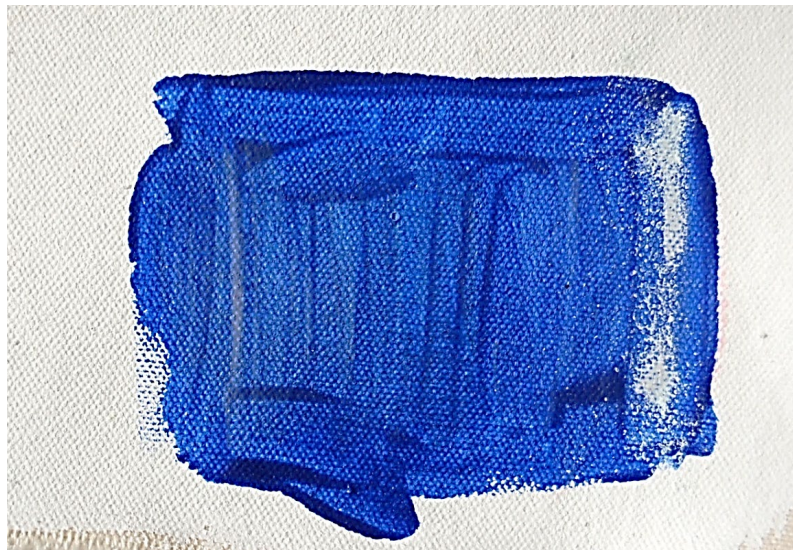
Figure 39.
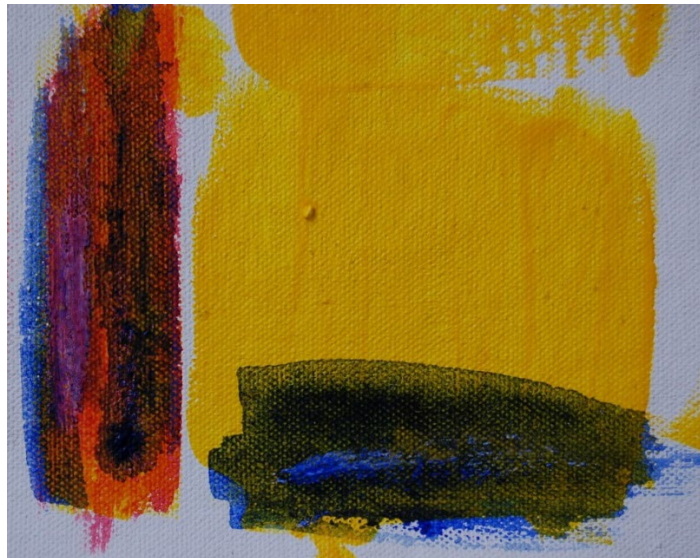Daniel Crowe
Blue Magenta Experiment (Heated), 2012
Blue acrylic paint, magenta thermochromic
pigment with acrylic base on canvas
80mm x 105mm
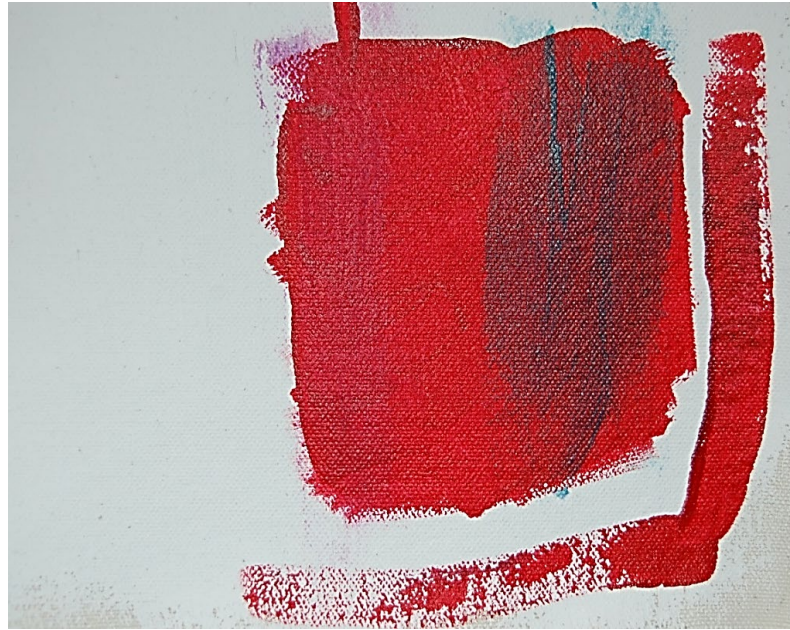
Figure 40.
Daniel Crowe
Blue Magenta Experiment (Unheated), 2012
Red acrylic paint, blue, magenta
Thermochromic pigment on canvas
130mm x 120mm

Figure 41.
Daniel Crowe
Blue Magenta Experiment (Heated), 2012
Red acrylic paint, blue, magenta
Thermochromic pigment on canvas
130mm x 120mm
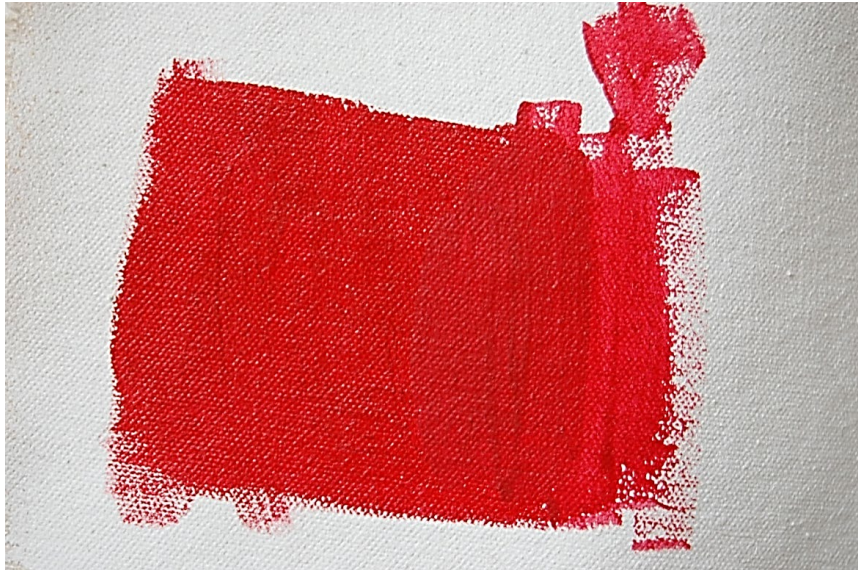
Figure 42.
Daniel Crowe
Red Magenta Experiment (Unheated), 2012
Red acrylic paint, magenta thermochromic
pigment on canvas
90mm x 110mm
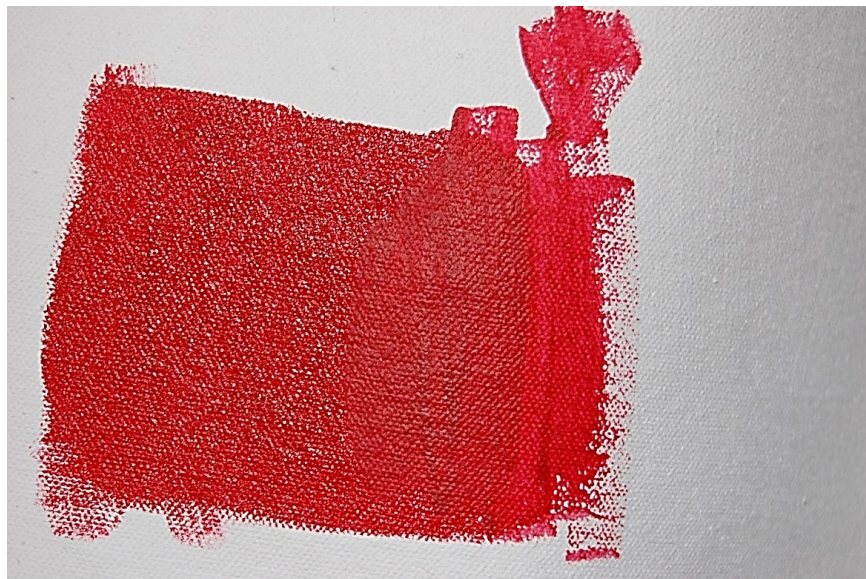
Figure 43.
Daniel Crowe
Red Magenta Experiment (Heated), 2012
Red acrylic paint, magenta thermochromic
pigment on canvas
90mm x 110mm
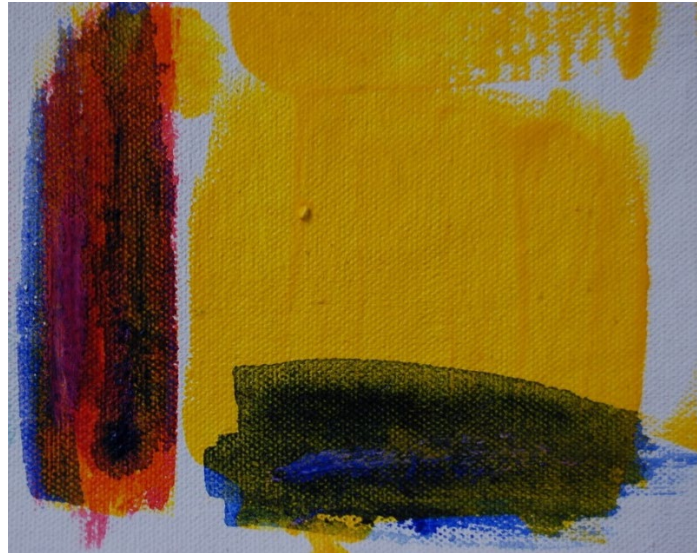
Figure 44.
Daniel Crowe
Yellow Blue Magenta Experiment (Unheated), 2012
Yellow acrylic paint, blue, orange, magenta
thermochromic pigment and acrylic base on canvas
110mm x 110mm

Figure 45.
Daniel Crowe
Yellow Blue Magenta Experiment (Heated), 2012
Yellow acrylic paint, blue, orange, magenta
thermochromic pigment and acrylic base on canvas
110mm x 110mm

Figure 46.
Daniel Crowe
*Yellow Blue Orange Magenta
Experiment (Unheated),* 2012
Yellow acrylic paint, blue, orange, magenta
thermochromic pigment and acrylic base on canvas
110mm x 110mm

Figure 47.
Daniel Crowe
*Yellow Blue Orange Magenta
Experiment (Heated),* 2012
Yellow acrylic paint, blue, orange, magenta
thermochromic pigment and acrylic base on canvas
110mm x 110mm

Figure 48.
Daniel Crowe
*Yellow Red Orange Magenta
Experiment (Unheated),* 2012
Yellow, red acrylic paint, blue, orange,
magenta thermochromic pigment on canvas
115mm x 110mm

Figure 49.
Daniel Crowe
*Yellow Red Orange Magenta
Experiment (Heated),* 2012
Yellow, red acrylic paint, blue, orange,
magenta thermochromic pigment on canvas
115mm x 110mm

Figure 50.
Daniel Crowe
Yellow Magenta Experiment (Unheated), 2012
Yellow acrylic paint, magenta thermochromic
pigment on canvas
75mm x 125mm

Figure 51.
Daniel Crowe
Yellow Magenta Experiment (Heated), 2012
Yellow acrylic paint, magenta thermochromic
pigment on canvas
75mm x 125mm

Figure 52.
Daniel Crowe
Yellow Blue Magenta Experiment (Unheated), 2012
Yellow red acrylic paint, blue, magenta
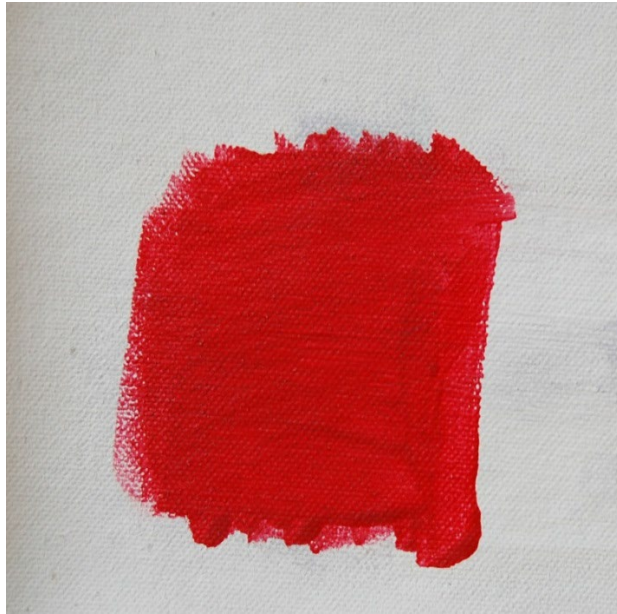thermochromic pigment on canvas
85mm x 110mm

Figure 53.
Daniel Crowe
Yellow Blue Magenta Experiment (Heated), 2012
Yellow red acrylic paint, blue, magenta
thermochromic pigment on canvas
85mm x 110mm

Figure 54.
Daniel Crowe
Red Magenta Experiment (Unheated), 2012
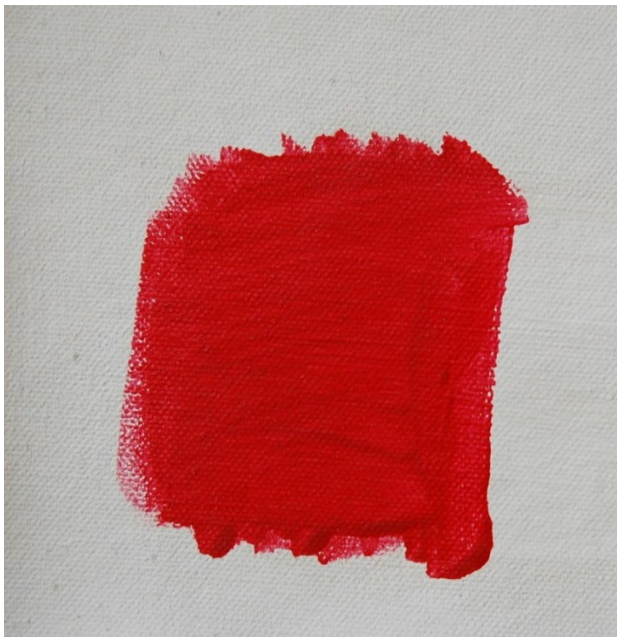Red acrylic paint, magenta thermochromic
pigment on canvas
65mm x 75mm

Figure 55.
Daniel Crowe
Red Magenta Experiment (Heated), 2012
Red acrylic paint, magenta thermochromic
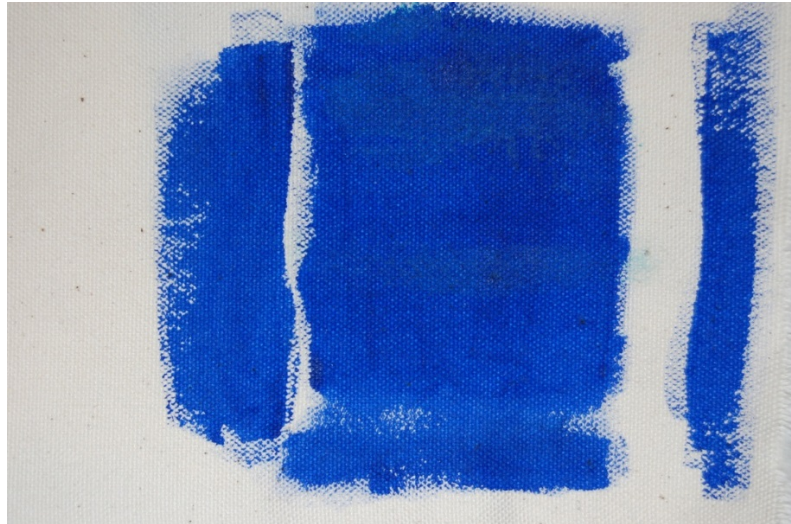pigment on canvas
65mm x 75mm

Figure 56.
Daniel Crowe
Blue Blue Experiment (Unheated), 2012
Blue acrylic paint, blue thermochromic
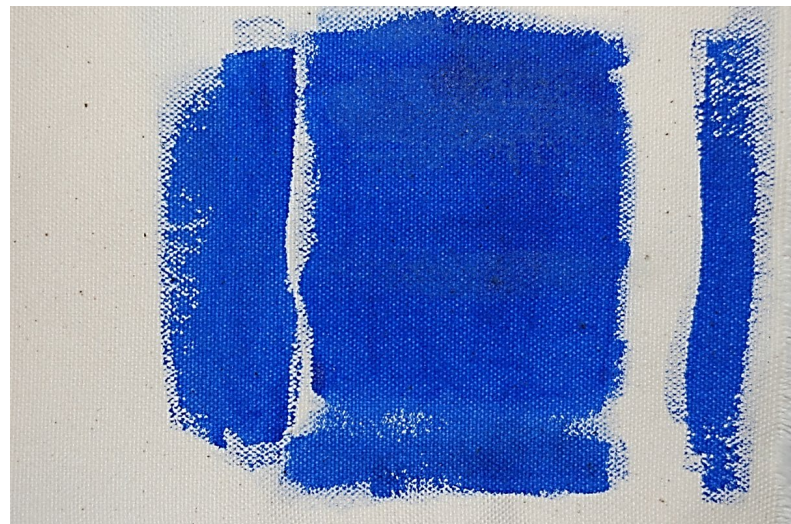pigment on canvas
110mm x 120mm

Figure 57.
Daniel Crowe
Blue Blue Experiment (Heated), 2012
Blue acrylic paint, blue thermochromic
pigment on canvas
110mm x 120mm

Figure 58.
Daniel Crowe
Yellow Magenta Experiment (Unheated), 2012
Yellow acrylic paint, magenta thermochromic pigment on canvas
90mm x 115mm

Figure 59.
Daniel Crowe
Yellow Magenta Experiment (Heated), 2012
Yellow acrylic paint, magenta thermochromic pigment on canvas
90mm x 115mm

Figure 60.
Daniel Crowe
Yellow Red Blue Orange Magenta Experiment (Unheated), 2012
Yellow, red acrylic paint, blue, orange, magenta thermochromic pigment on canvas
120mm x 115mm

Figure 61.
Daniel Crowe
Yellow Red Blue Orange Magenta Experiment (Heated), 2012
Yellow, red acrylic paint, blue, orange, magenta thermochromic pigment on canvas
120mm x 115mm

Figure 62.
Daniel Crowe
Blue Red Magenta Blue
Green Experiment (Unheated), 2012
Blue acrylic paint, magenta, blue,
green thermochromic pigment on canvas
85mm x 110mm

Figure 63.
Daniel Crowe
Blue Red Magenta Blue
Green Experiment (Heated), 2012
Blue acrylic paint, magenta, blue,
green thermochromic pigment on canvas
85mm x 110mm

Figure 64.
Daniel Crowe
Blue Magenta Blue Black Green
Experiment (Heated), 2012
Blue acrylic paint, magenta, blue, black,
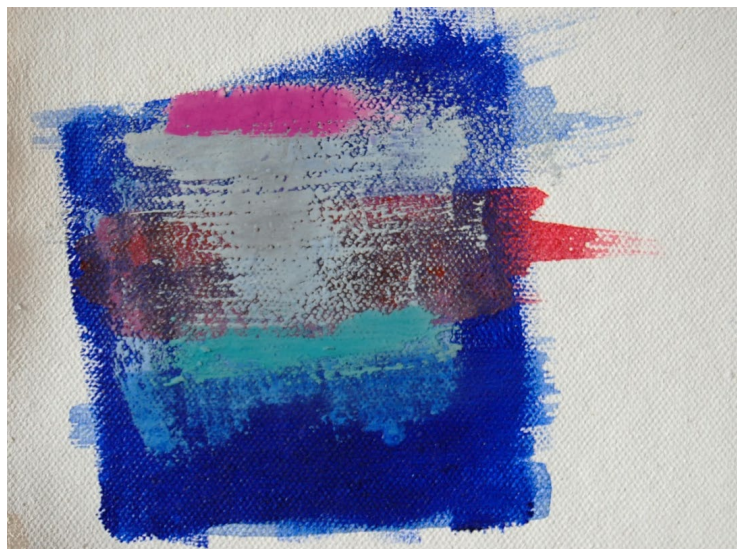green thermochromic pigment on canvas
95mm x 110mm

Figure 65.
Daniel Crowe
Blue Magenta Blue Black Green
Experiment (Heated), 2012
Blue acrylic paint, magenta, blue, black,
green thermochromic pigment on canvas
95mm x 110mm

Figure 66.
Daniel Crowe
*Yellow Red Magenta Blue
Experiment (Unheated),* 2012
Yellow, red acrylic, magenta, blue
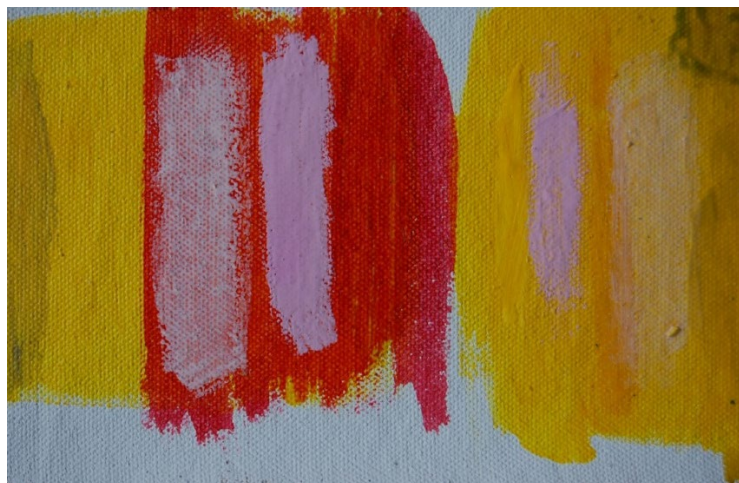thermochromic pigment on canvas
140mm x 80mm

Figure 67.
Daniel Crowe
*Yellow Red Magenta Blue
Experiment (Heated),* 2012
Yellow, red acrylic, magenta, blue
thermochromic pigment on canvas
140mm x 80mm

Figure 68.
Daniel Crowe
Blue Orange Experiment
(Unheated), 2012
Blue, orange thermochromic pigment with acrylic
base and chameleon nano flakes on canvas
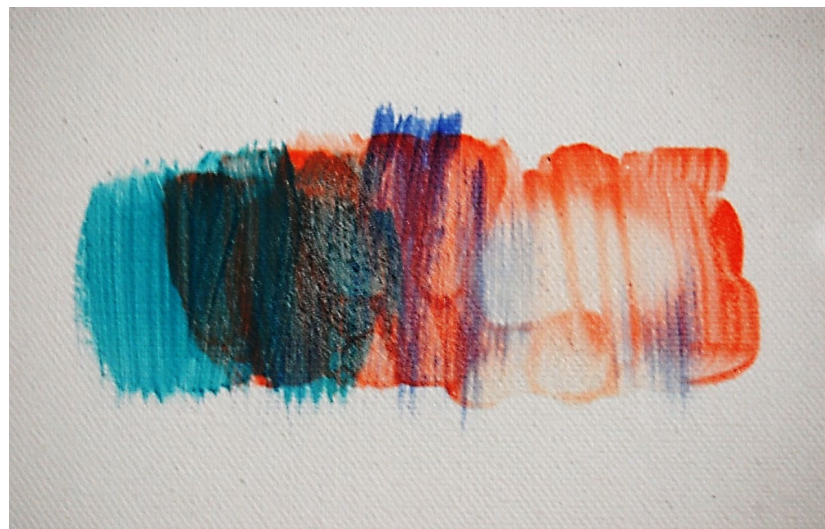300mm x 400mm

Figure 69.
Daniel Crowe
Blue Orange Experiment
(Heated), 2012
Blue, orange thermochromic pigment with acrylic
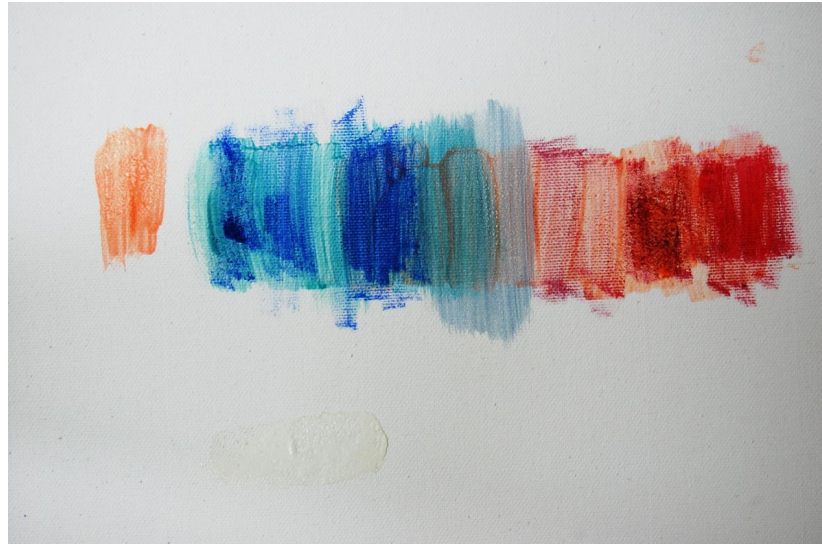base and chameleon nano flakes on canvas
300mm x 400mm

Figure 70.
Daniel Crowe
Blue Red Blue Orange
Experiment (Unheated), 2012
Blue, red acrylic paint, blue, orange
thermochromic pigment with acrylic base
and chameleon nano flakes on canvas
300mm x 400mm

Figure 71.
Daniel Crowe
Blue Red Blue Orange
Experiment (Heated), 2012
Blue, red acrylic paint, blue, orange
thermochromic pigment with acrylic base
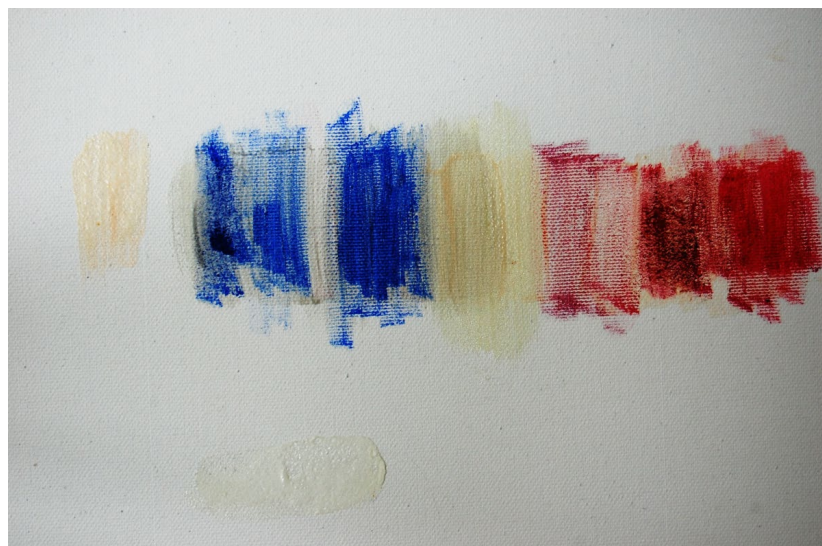and chameleon nano flakes on canvas
300mm x 400mm

Appendix 1.3: Illustrations: Self-illuminating Frame Paintings

Figure 72.
Daniel Crowe
Prototype Installation Painting
Frame with Red LED
Installation painting prototype
frame, lighting, electrics

Figure 73.
Daniel Crowe
Red Oval, 2014
Acrylic paint on canvas, yellow LED
500mm x 500mm

Figure 74.
Daniel Crowe
Red Oval, 2014
Acrylic paint on canvas, yellow LED
500mm x 500mm

Figure 75.
Daniel Crowe
Blue Circle, 2014
Acrylic paint on canvas, red LED, green, LED
500mm x 500mm
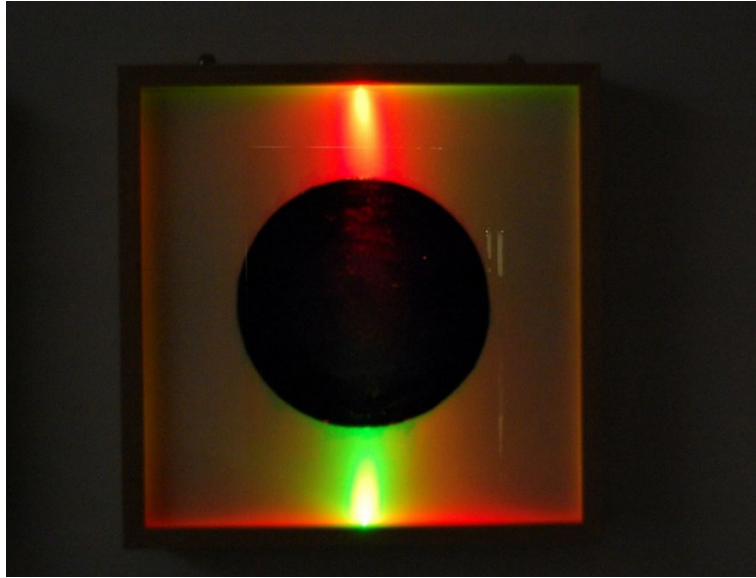
Figure 76.
Daniel Crowe
Blue Circle, 2014
Acrylic paint on canvas, red LED, green, LED
500mm x 500mm
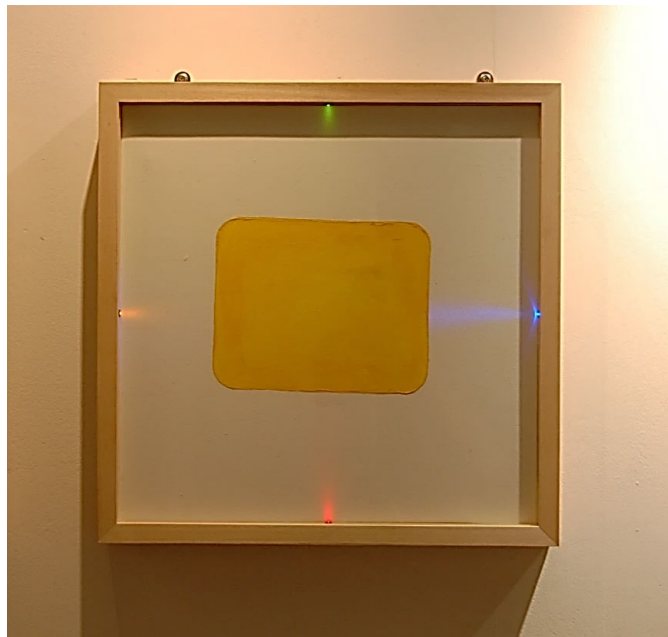
Figure 77.
Daniel Crowe
Rounded Edges, 2014
Acrylic paint on canvas, yellow LED
500mm x 500mm
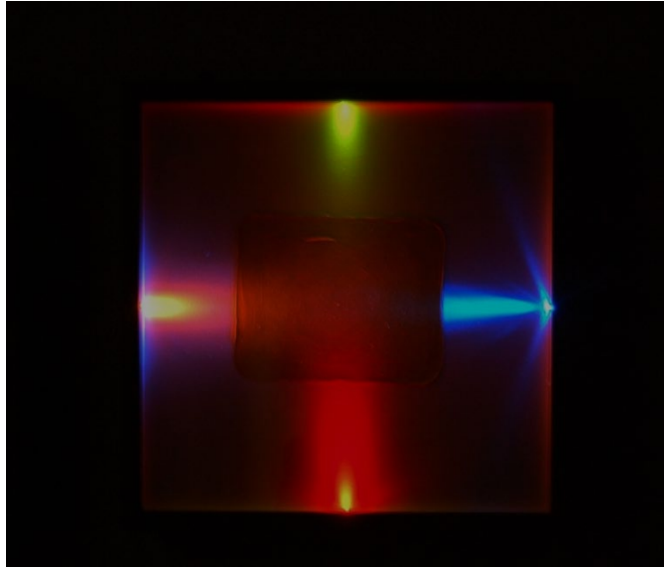
Figure 78.
Daniel Crowe
Rounded Edges, 2014
Acrylic paint on canvas, red LED,
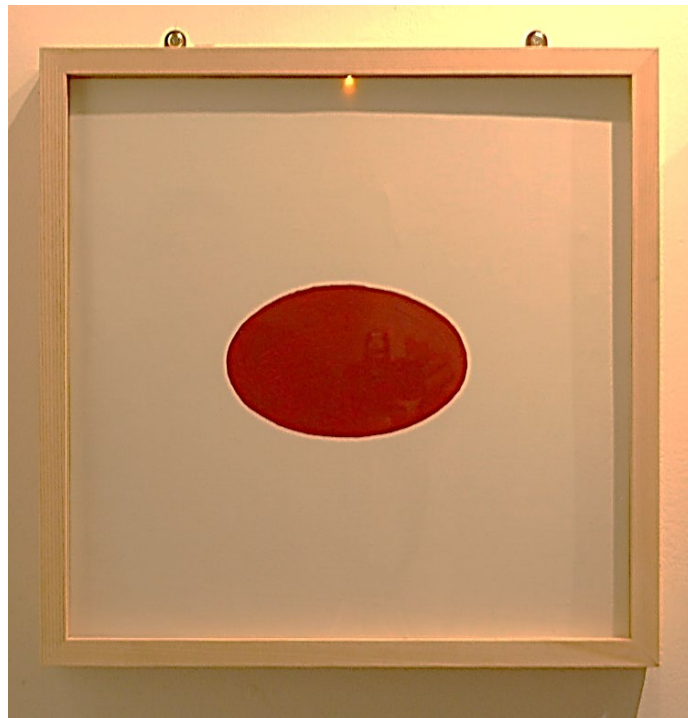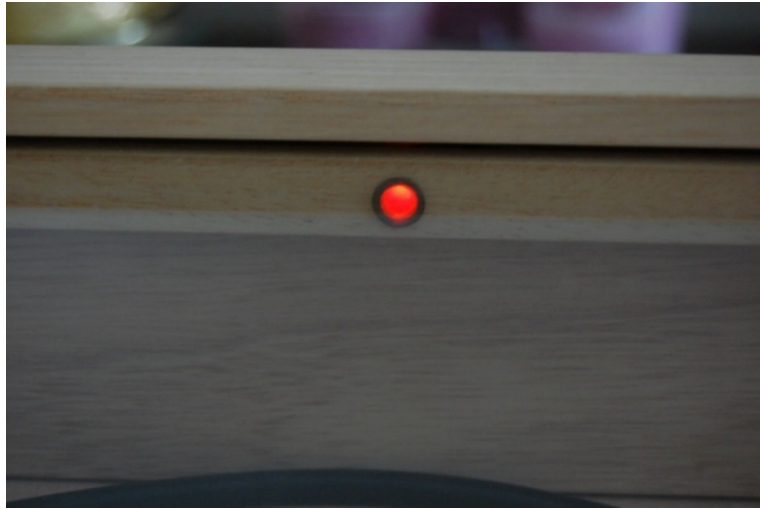blue LED, green, LED, yellow LED
500mm x 500mm
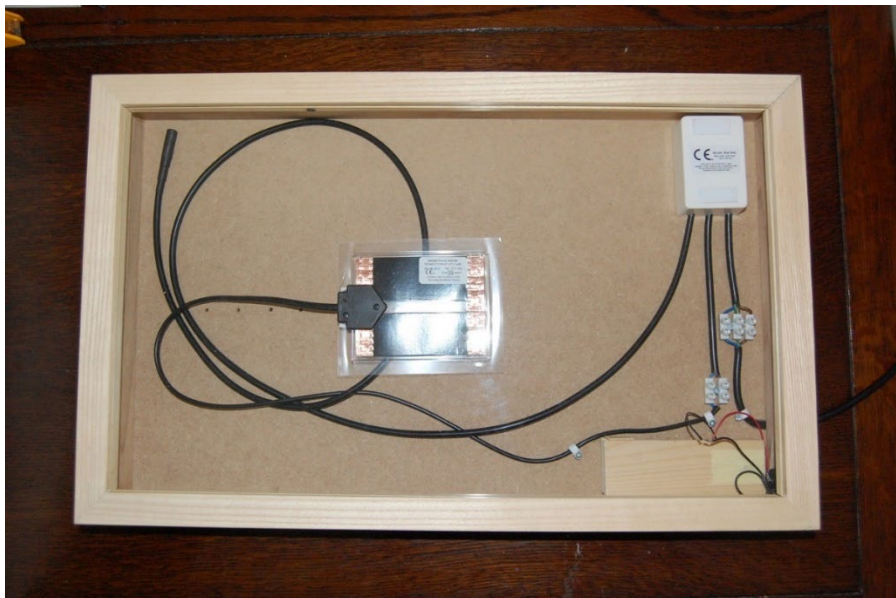
Figure 79.
Daniel Crowe
*Prototype Installation Painting Frame
with Electrical Wiring*
Installation Painting prototype frame,
 lighting, electrics
300mm x 500mm

Appendix 1.4: Illustrations: Installation/Painting Exhibition

Figure 80.
Daniel Crowe
Installation Painting No.1, 2014
Yellow acrylic paint, magenta and red thermochromic
pigment on canvas (unheated), red LED, green LED,
yellow LED, reptilian heat mat
300mm x 500mm

Figure 81.
Daniel Crowe
Installation Painting No.1, 2014
Yellow acrylic paint, magenta and red thermochromic
pigment on canvas (heated), red LED, green LED,
yellow LED, reptilian heat mat
300mm x 500mm
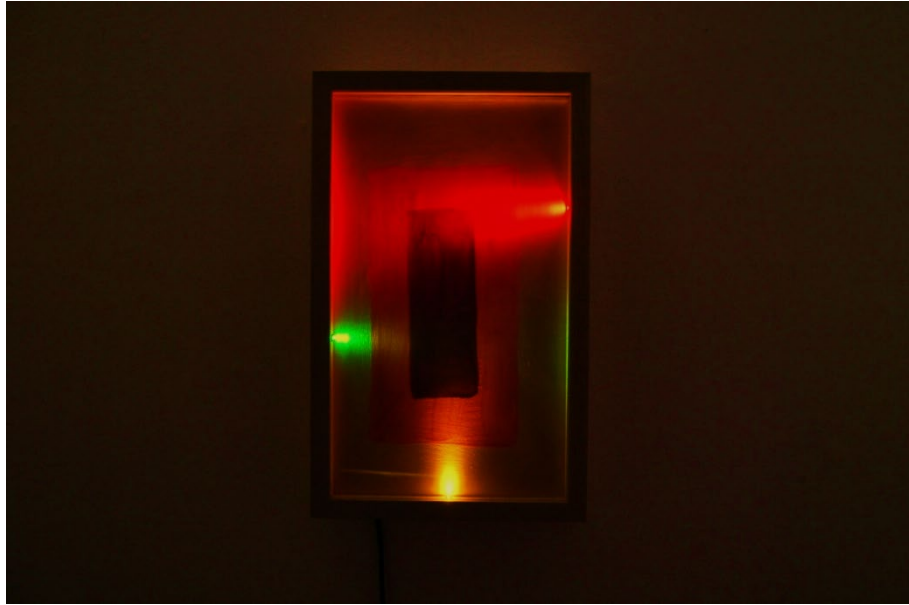
Figure 82.
Daniel Crowe
Installation Painting No.1, 2014
Yellow acrylic paint, magenta and red thermochromic
pigment on canvas (heated), red LED, green LED,
 yellow LED, reptilian heat mat
300mm x 500mm

Figure 83.
Daniel Crowe
Installation Painting No.2, 2014
Blue acrylic paint, blue and black thermochromic
pigment on canvas (unheated), blue LED red LED,
green LED, yellow LED, reptilian heat mat
1000mm x 1000mm

Figure 84.
Daniel Crowe
Installation Painting No.2, 2014
Blue acrylic paint, blue and black thermochromic
pigment on canvas (heated), blue LED red LED,
green LED, yellow LED, reptilian heat mat
1000mm x 1000mm

Figure 85.
Daniel Crowe
Installation Painting No.2, 2014
Blue acrylic paint, blue and black thermochromic
pigment on canvas (heated), blue LED red LED,
green LED, yellow LED, reptilian heat mat
1000mm x 1000mm

Figure 86.
Daniel Crowe
Installation Painting No.2, (detail) 2014
Blue acrylic paint, blue and black thermochromic
pigment on canvas (heated), blue LED red LED,
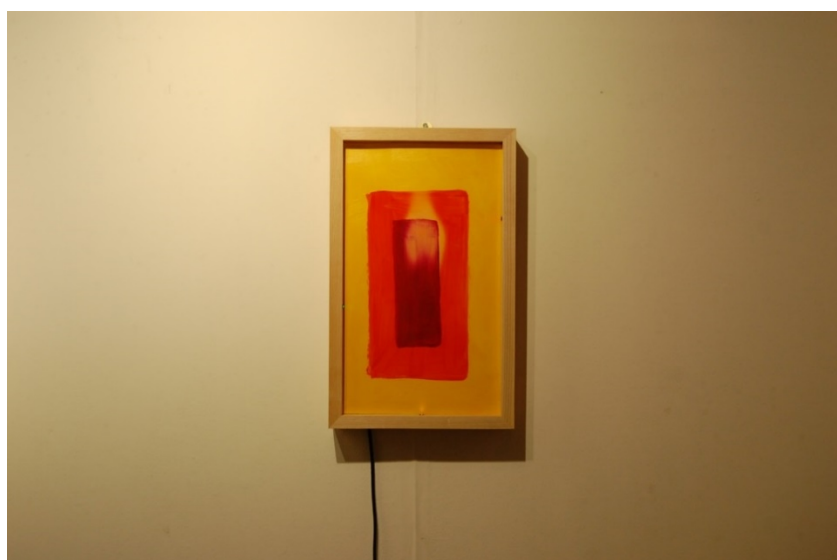green LED, yellow LED, reptilian heat mat
1000mm x 1000mm
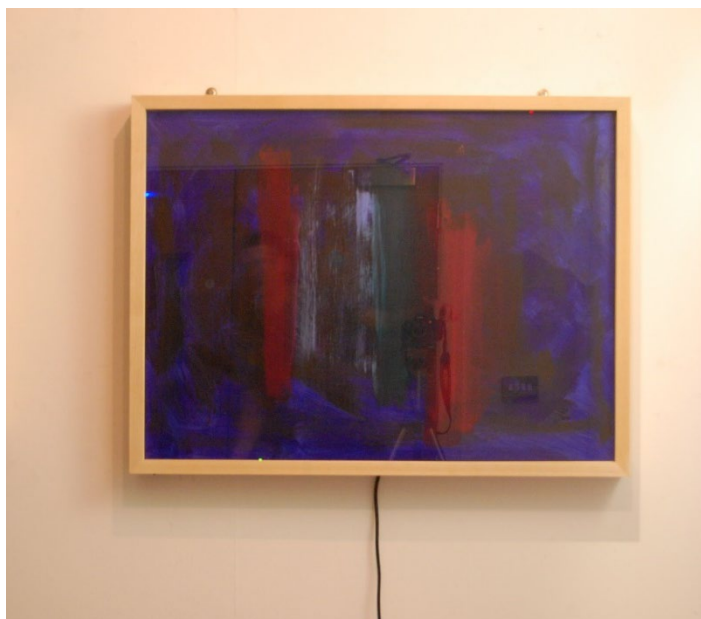
Figure 87.
Daniel Crowe
Installation Painting No.3, 2014
Blue acrylic paint, blue, black, green and magenta
thermochromic pigment on canvas (unheated), blue
LED red LED, green LED, reptilian heat mat
600mm x 800mm
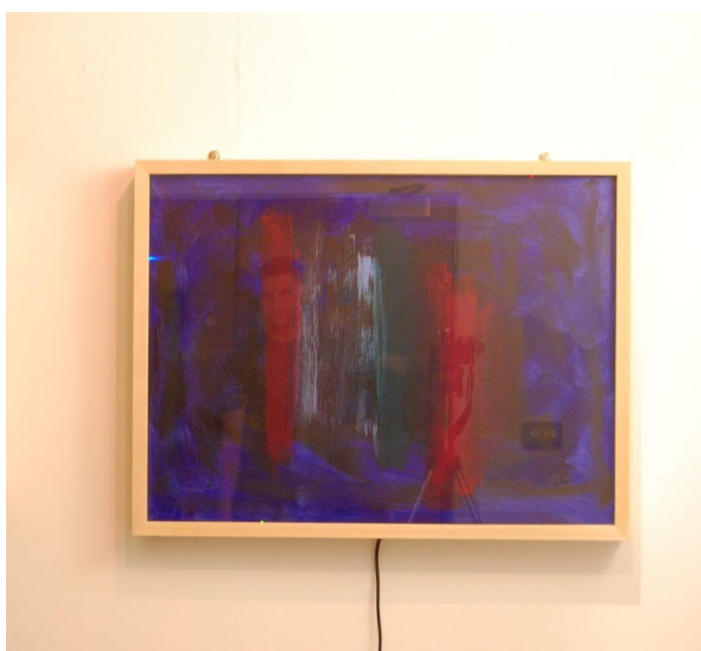
Figure 88.
Daniel Crowe
Installation Painting No.3, 2014
Blue acrylic paint, blue, black, green and magenta
thermochromic pigment on canvas (heated), blue
LED red LED, green LED, reptilian heat mat
600mm x 800mm
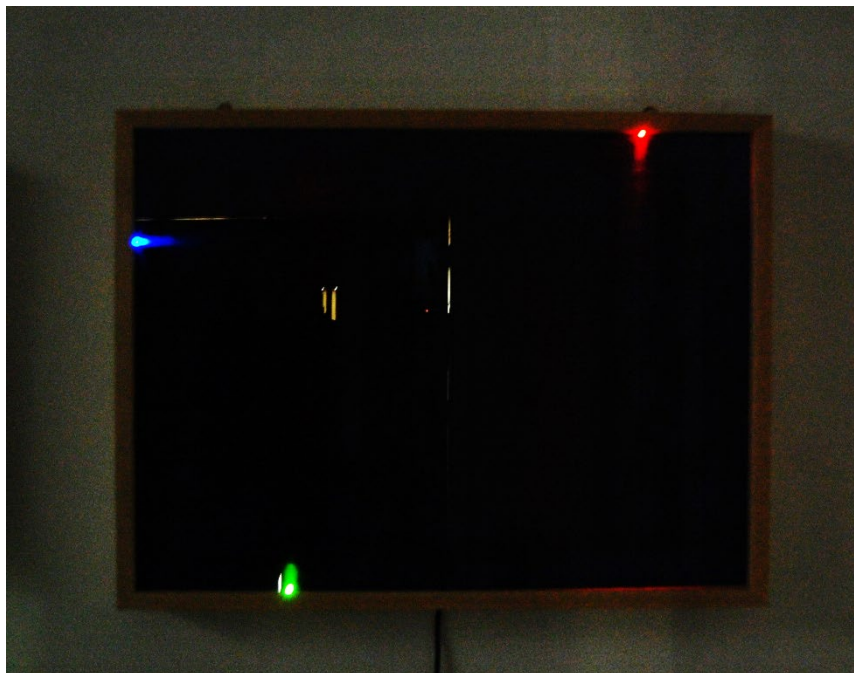
Figure 89.
Daniel Crowe
Installation Painting No.3, 2014
Blue acrylic paint, blue, black, green and magenta
thermochromic pigment on canvas (heated), blue
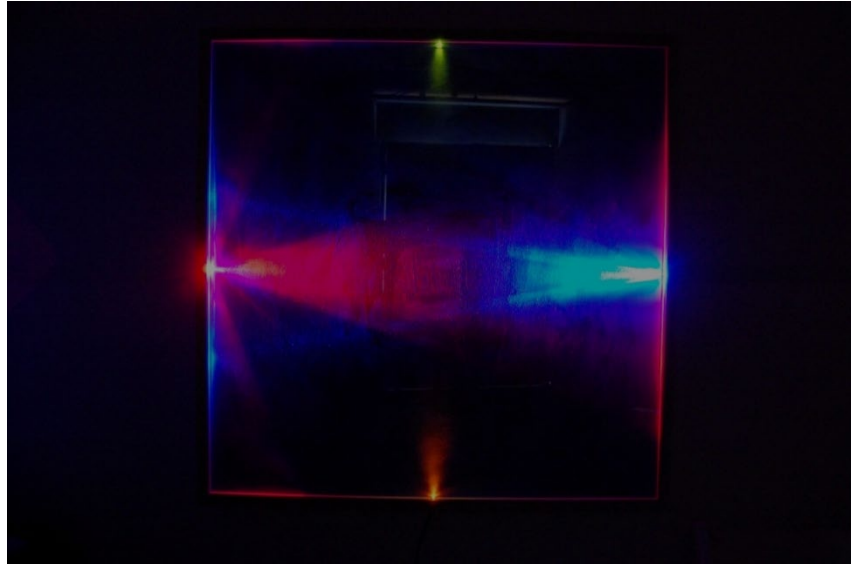LED red LED, green LED, reptilian heat mat
600mm x 800mm

Appendix 2: Technical Information

Appendix 2.1: Light Emitting-diode (LED)

The following technical information relates to the LEDs inserted into the self-illuminating frames used for the Installation/Painting as part of the practice-led research. All LEDs were purchased from RS Components.

Kingbright L-53HD, Solid State Lamp 660 nm Red LED, 5mm (T-1 3/4) Round Through Hole

Specifications

Attribute	Value
LED Colours	Red
Package Type	5mm (T-1 3/4)
Mounting Type	Through Hole
Number of LEDs	1
Forward Voltage	2.25 V
Luminous Intensity	5 mcd
Number of Pins	2
Viewing Angle	60 °
Lens Shape	Round
Dominant Wavelength	660 nm
Dimensions	5 x 8.6mm
Lens Colour	Red
LED Material	GaP
Series	Solid State Lamp

Kingbright L-53GD, Solid State Lamp 568 nm Green LED, 5mm (T-1 3/4) Round Through Hole

Specifications

Attribute	Value
LED Colours	Green
Package Type	5mm (T-1 3/4)
Mounting Type	Through Hole
Number of LEDs	1
Forward Voltage	2 V
Luminous Intensity	20 mcd
Number of Pins	2
Viewing Angle	60 °
Lens Shape	Round
Dominant Wavelength	568 nm
Dimensions	5 x 8.6mm
LED Material	GaP
Series	Solid State Lamp
Lens Colour	Green

Kingbright L-53GD, Solid State Lamp 568 nm Green LED, 5mm (T-1 3/4) Round Through Hole

Nichia NSPW500DS, 500D White LED, 5mm (T-1 3/4) Round Through Hole
Specifications

Attribute	Value
LED Colours	White
Package Type	5mm (T-1 3/4)
Mounting Type	Through Hole
Number of LEDs	1
Forward Voltage	3.2 V
Luminous Intensity	27 cd
Number of Pins	2
Viewing Angle	20 °
Lens Shape	Round
Dimensions	5 x 8.6mm
Series	500D
Lens Colour	Clear

Nichia NSPW500DS, 500D White LED, 5mm (T-1 3/4) Round Through Hole

Kingbright L-53YD-12V, Solid State Lamp 588 nm Yellow LED, 5mm (T-1 3/4) Round Through Hole

Specifications

Attribute	Value
LED Colours	Yellow
Package Type	5mm (T-1 3/4)
Mounting Type	Through Hole
Number of LEDs	1
Forward Voltage	8.5 V
Luminous Intensity	20 mcd
Number of Pins	2
Viewing Angle	60 °
Lens Shape	Round
Dominant Wavelength	588 nm
Dimensions	5mm
Series	Solid State Lamp
Lens Colour	Yellow
LED Material	GaAsP

Kingbright L-53MBD, Solid State Lamp 455 nm Blue LED, 5mm (T-1 3/4) Round
Through Hole
Specifications

Attribute	Value
LED Colours	Blue
Package Type	5mm (T-1 3/4)
Mounting Type	Through Hole
Number of LEDs	1
Forward Voltage	4 V
Luminous Intensity	60 mcd
Number of Pins	2
Viewing Angle	60 °
Lens Shape	Round
Dominant Wavelength	455 nm
Dimensions	5 x 8.6mm
LED Material	GaN
Lens Colour	Blue
Series	Solid State Lamp

Appendix 2.2: Paint and Primer

The paints and primers used in all painterly experiments and Installation/Paintings set out in this research were sourced from Wallace Seymour Fine Art Products (formerly Pip Seymour Fine Art Products).

Professional Acrylic Gesso

Titanium white calcium carbonate priming ground. Absorbent contains more chalk than Standard Acrylic Primer. Apply 1-2 coats over dried coats of Standard Acrylic Size and/or Standard Acrylic Primer, to make high key white absorbent painting ground. Flexible. Apply two coats, thinned 10-30% with cold water.

Acrylic Colours - Extra Fine

High quality pigments, dispersed into a light and age resistant flexible acrylic polymer.

Cadmium Yellow Hue
PY 74/PY 83 **
Series 1

Cadmium Red Hue
PR 112 **
Series 1

Ultramarine Blue
PB 29 ***
Series 1

Titanium White
PW 6
Series 1

Appendix 2.3: Smart Materials

Acrylic Base

White acrylic base material suitable for use with thermochromic and photochromic paints, etc.

This Acrylic base is a white acrylic paint suitable for diluting the pigments / paints uniformly allowing them to be applied to materials using traditional techniques.

Chameleon Nano Flakes

This material consists of nano-size silicon flakes each covered with a titanium compound. The flakes possess amazing light scattering properties if mixed with clear varnishes or polymers.
An object thus coated – e.g., a complete car – will change colour completely according to the viewing angle. The material can be mixed into practically any clear medium to produce optical 'fireworks' and colour changing characteristics.

Thermochromic Pigments

Thermochromic materials are based on liquid crystal technology. At specific temperatures (27°C) the liquid crystals re-orientate to produce an apparent change of colour. The liquid crystal material itself is micro-encapsulated i.e. contained within microscopic spherical capsules typically just 10 microns in diameter.

The thermochromic pigment in the Smart Colours system is made up as a liquid paste compatible with any acrylic medium.

At normal room temperature the pigment appears coloured, but at 27°C the colour disappears, for example, if black thermochromic pigment is applied to a white surface, the surface turns from black to white at the change-over temperature. When the temperature falls, the pigment colouring re-appears.

Colours available from the Smart Colour system are black, golden orange, blue, magenta and brilliant green.

Appendix 2.4: Addresses

LEDs

RS Components Ltd.
Birchington Road
Corby
Northants
NN17 9RS
UK

Luminus Devices Inc
1145 Sonora Ct
Sunnyvale, CA 94086
United States

Opto Diode Corporation
1260 Calle Suerte
Camarillo, CA 93012
USA

Bridgelux, Inc.
46430 Fremont Boulevard
Fremont, CA 94538
USA

Paint

Wallace Seymour Fine Art Products Ltd.
Unit 1 B Cragg Hill Industrial Estate
Cragg Hill Road
Horton in Ribblesdale
Settle
North Yorkshire
BD24 0HN
UK

Smart Materials

Mindsets (UK) Limited
Shire Hill
Saffron Walden
Essex
CB11 3AQ
United Kingdom

Thermochromic Pigment

Teaching Resources
Middlesex University
Trent Park
Bramley Road
Oakwood
London
N14 4YZ
UK

LCRHallcrest
1911 Pickwick Lane
Glenview
IL, 60026
USA

CTI
1096 Elkton Dr.
Colorado Springs
CO, 80907
USA

Picture Frame

R. Jackson and Sons
20 Slater Street
Liverpool
Merseyside
L1 4BS
UK

Appendix 3: Installation/Painting Manifesto

Installation/Painting Manifesto 2012

Manifesto – *Installation/Painting*

In light of the current materialistic malaise in contemporary art, *Installation/Painting* aims to re-ignite the inner life of man, woman and child.

The manifesto opposes contemporary painting and installation art which has become a vehicle for 'artists' to reveal the psychological issues that exist within themselves and society today. The problem with this type of art is that social evolution stalled decades ago. Contemporary painting is a regurgitation of old ideas formed on self-expression. The manifesto proposes installation art has taken away the importance of video art as an art in its own right as installation art has been overcome by the use of documentary video. A home video documenting a holiday is now considered installation art. It is this devaluation of contemporary painting and installation art which *Installation/Painting* is against. When did art stop becoming a movement for the social and cultural development of humankind? What is today's culture? It can be argued the culture of today is based on DNA and mutation. We have been living in the technological age for over a century and this has led to a dependence on its value for human evolution. This has allowed the 'artist' to become self-centred and artistic practice to become stale for its audience.

Installation/Painting stands up for painting and the artist. It is not interested in technology producing art through software; this is not an artistic endeavour but a technological endeavour. Technology aids the removal of human contact in the production of art, as technology is conceptual and not physical. Production of art should be achieved through direct human experience with the materials to hand, not human instruction of technology, where technology does the work of the artist. The use of presets within software, where the software tells the computer how to function does not use physical human manipulation, as would be the case with paint on canvas. Examples such as Painter and Photoshop, plus the additional use of electronic tablets are used to produce paint-like brush strokes; this is not worthy to be called art in relation to the history of art. Technology is self destructive; it is making communication obsolete, for example, cursive writing due to the use of keyboards.

Installation/Painting is against art made by assistants. So called 'art' by assistants is not art, it cannot be art, for the assistant carries out only instruction. There is no creation, no imagination, and no physical emotional engagement. The assistant is making an idea achieved by another, a so called 'artist', yet, this is not an artist, it is an ideaist. If the assistant was not instructed by an ideaist but an apprentice involved in learning a skill, craft and a life from an artist, then rejoice. Sadly this is the case no more.

The so called 'artist' of today, who use assistants, are not physically or emotionally engaged with the production of their work, therefore it cannot be called art. *Installation/Painting* is in opposition to the materialistic ideology of art production for display and wealth, and has no concern with material self-worth through the production of art. Today's materialistic throwaway society views objects first with

disregard for colour. But why is this, when we perceive colour before objects? People are throwing away objects with disregard for colour. Do they not know art is based on colour and form?

Installation/Painting introduces the self-illuminated frame as a tool for the non-objective painter.

Installation/Painting develops rheological capabilities of paint.

Installation/Painting is art and painting in their truest form.

Installation/Painting is a new consciousness of our time, thus bringing a new aesthetic to painting through internal sensation.

Light reactive paint and heat sensitive glass must be a major consideration for contemporary painting.

The notion of matter within *Installation/Painting* is explored through the use of smart technologies and the new possibilities they can bring to help further the development of a new visual aesthetic for painting.

New technologies cannot be dismissed in today's production of art and more specifically painting. That is not to say the use of technology to 'do it for you' instead of the old adage 'do it yourself' becomes renderless.

Installation/Painting disposes of lighting anomalies within the gallery environment.

Installation/Painting uses the sociability of colour through light and paint within the self-illuminated frame to aid communication of sensation.

Installation/Painting believes in the free communication of inner sensation within man, woman and child.

Installation/Painting is associated with spirituality and disinterested in the materialistic.

Installation/Painting acknowledges matter contains particles from the past.

Installation/Painting uses Mindfulness to act as a conduit between the self-illuminated frame, its painted surface and the audience. Mindfulness brings a new awareness to the inner-self via *Installation/Painting*. This internal awareness in turn awakes society.

I am issuing this manifesto because *Installation/Painting* wishes to challenge society's awareness of the self through communication with an inner-self. *Installation/Painting* introduces the self-illuminated frame to the history of painting, a frame specifically developed for painting and the discarding of gallery lighting.

I endeavour to persuade you today for the need of a new art movement – sterile evolution of mankind etc...

I call for a new revolution of painting in the name of *Installation/Painting.*

Installation/Painting Manifesto 2014:

Installation/Painting Manifesto

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The manifesto opposes contemporary painting and installation art which has become a vehicle for 'artists' to reveal the psychological issues that exist within themselves and society today. The problem with this type of art is that social evolution stalled decades ago. Contemporary painting is a regurgitation of old ideas formed on self-expression. The manifesto proposes installation art has taken away the importance of video art as an art in its own right as installation art has been overcome by the use of documentary video. A home video documenting a holiday is now considered installation art. It is this devaluation of contemporary painting and installation art which *Installation/Painting* is against. When did art stop becoming a movement for the social and cultural development of humankind? What is today's culture? It can be argued the culture of today is based on DNA and mutation. We have been living in the technological age for over a century and this has led to a dependence on its value for human evolution. This has allowed the 'artist' to become self-centred and artistic practice to become stale for its audience.

We have been living in the technological age for over a century and this has led to a dependence on its value for human evolution. *Installation/Painting* does not wish to escape the technological age but demands to question its modern day uses and humanities reliance upon it for future growth of humanity. Today's culture based on DNA and mutation using technology to become known and look good is what *Installation/Painting* is against. Not the sole use of technology to further mans 'inner' journey. It is this 'inner' journey, sensation which is only going to benefit the evolution of humankind.

Installation/Painting stands up for painting and the artist. It is not interested in using electronic media to produce art as a technological endeavour through software but to produce art as an artistic endeavour fusing technological advancements in light, colour and paint. The use of software programmes aids the removal of human contact in the production of art, as technology is conceptual and not physical. Production of art should be achieved through direct human experience with the materials to hand, not human instruction of technology, where technology does the work of the artist. The use of pre-sets within software, where the software commands the computers functions does not use physical human manipulation, as would be the case with paint on canvas. Examples of software such as Painter and Photoshop, plus the additional use of electronic tablets are used to produce paint-like brush strokes; this is not worthy to be called art in relation to the history of art. A virtual paintbrush can never replace a real paintbrush, just as a camera (digital or analogue) cannot replace the eye. Technology is self-destructive; it is making physical communication to become obsolete, for example, cursive writing due to the use keyboards and the virtual world.

It seems today the printed word is greater than the written word but which has more permanence of value?

Installation/Painting is against art made by assistants. So called 'art' by assistants is not art, it cannot be art, for the assistant carries out only instruction. There is no creation, no imagination, and no physical emotional engagement. The assistant is making an idea achieved by another, a so called 'artist', yet, this is not an artist either, it is an ideaist. If the assistant was not instructed by an ideaist but an apprentice involved in learning a skill, craft and a life from an artist, then rejoice. Sadly this is the case no more. It is the equivalent of a software programme doing the work of the artist as stated above.

The so called 'artist' of today, who use assistants, are not physically or emotionally engaged with the production of their work, therefore it cannot be called art. *Installation/Painting* is in opposition to the materialistic ideology of art production for display and wealth, and has no concern with material self-worth through the production of art. Today's materialistic throwaway society views objects first with disregard for colour. But why is this, when we perceive colour before objects? People are throwing away objects with disregard for colour. Do they not know art is based on colour and form?

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Appendix 4: Questionnaire Responses

Statistical Analysis of *Installation/Painting* Questionnaires

The questionnaire was available to all who viewed the *Installation/Painting* research exhibition at Arena Studios and Gallery (Liverpool). In total 22 participants completed questionnaires from a total of 38 people who attended the exhibition over the duration of the show. The audience was a mixture of genders, which consisted of artists, art educators and public, whose age range was 18-58. The resultant information was collated from the questionnaires:

1. Upon entering the exhibition space did your emotions or feeling change in any way and if so in what way?

■ Yes ■ No

2. Do you feel the 'conversation' between the paint, light and viewer is complementary to one and other?

■ Yes ■ No

3. Did you have any 'inner' spiritual experiences when in the exhibition and if so was there a prompt for this?

Yes · No · No answer

4. Do you think a self-illuminating frame to illuminate paintings over traditional gallery lighting works as a concept and if so why?

Yes · No · No answer

5. Can the frame work as a tool for non-objective paintings or should they be frameless?

Yes   No   Undecided   What is non-objective painting

6. What are your thoughts on observing the re-active nature of heat re-active paint?

Good   Did not observe   No realisation of heat re-active paint being used   No comment

7. Have you had any positive or negative thoughts on viewing *Installation/Painting*?

Positive   Negative   No comment

8. Finally, please give your thoughts on the Manifesto?

Good   Contradictory/negative   No comment

Verbatim analysis of participant comments taken from the exhibition questionnaires with artist response
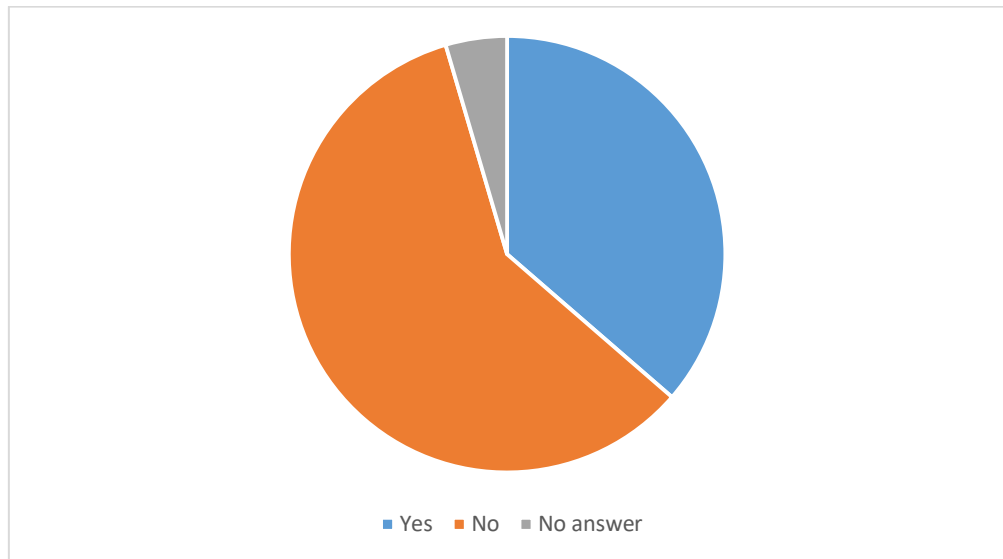
1. Upon entering the exhibition space did your emotions or feeling change in any way and if so in what way?

'The darkness created a scary sort of atmosphere'
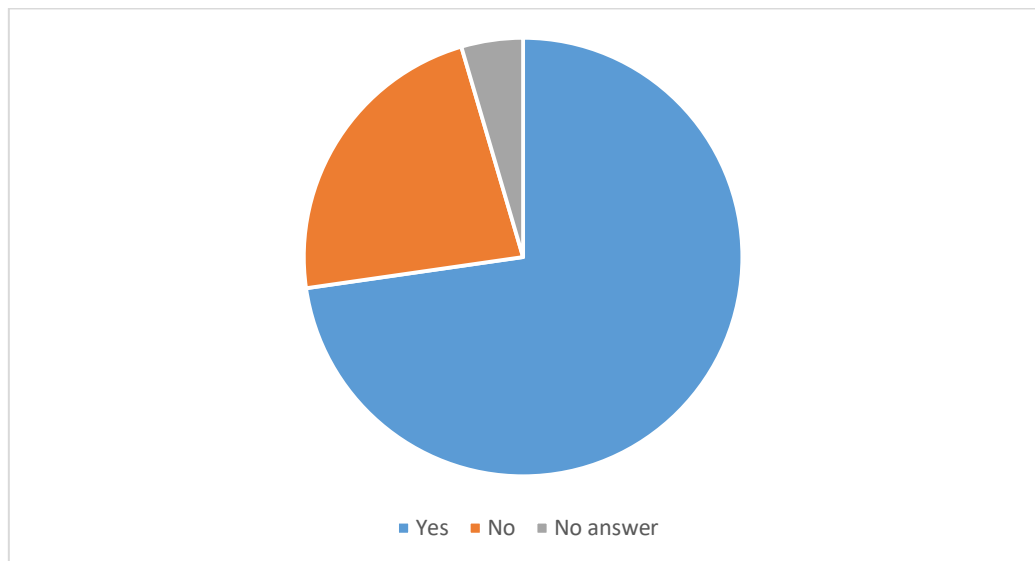
'Unnerving because it was dark'

'Mellowing sense of calm coupled with intrigue and awareness'. This comment expresses the notion of awareness which is a fundamental aspect of *Installation/Paintings* ideology.

'I experienced a feeling of incompletion, the light seemed to take something away from the paintings yet, made the work more defined, intriguing'. The darkness was not to scare, shock or take something away from the audience. The dark is to aid the enhancement of the visual aesthetic for the audience.

'Intrepidation – due to entering such a dark area to display art. Eventually calm – due to the darkness'. The darkness had a calming effect on this participant which I find interesting as exhibition space was small. The comment made regarding displaying art in a dark area is common for the audience but, I have been to many exhibits and installations in darkened spaces, for example, Douglas Gordon's *Dark Star* from his 2002 Hayward Gallery show. *Dark Star* is a pentagram shaped space lit only by fluorescent light strips on the floor. Upon entering the dark space of *Dark Star* my senses instantly became disoriented. This was an excellent installation by Gordon.'

'I feel that the darkened room environment helped the sensory information omitted be seen in a clearer light as there were no external dissonances'. This participant comments on the sensory information being omitted works in the dark gallery space and is successful as there were no external influences i.e. gallery lighting. This participant validates the space being dark as it aids the light in the paintings to impact positively upon the viewer experience.

'Calm, relaxed, thoughtful'. I interpret this participant's notion of thoughtfulness as an awareness thus connoting a focusing of the mind with the paintings.

'Intimidated initially as plunged into darkness – once acclimatised – feeling of peace, calm and tranquillity'. Once more another participant who felt the intimidated due to the low levels of light within the exhibition space. Maybe regardless of there being exhibitions with dark spaces not many participants have experienced these, hence the impact and idea of exhibiting works in low level light is still regarded as a relatively new experience for many gallery audiences.

'I was surprised and confused by the lack of light and had concerns for Health and Safety'. I find this remark difficult to comment upon, as on grounds of Health and Safety there were minor risks with little consequence in the gallery space to be assessed. Are concerns for Health and Safety an emotion or feeling?

2. Do you feel the 'conversation' between the paint, light and viewer is complementary to one and other?

'The lights gave the paint different personalities'. This is exactly what *Installation/Painting* sets out to do.

'There is a very specific atmosphere to the whole exhibition'. This I feel is due to the low lighting levels within the gallery space.

'Yes. The darkened room encourages the viewer to engage and look again to see more'. This acknowledges the time elements and the slowing process *Installation/Painting* wishes to have upon the audience.

'Yes, the small levels of light define the shapes in the paintings and bring the viewer closer to the painting'. Many of the audience commented in their response how the painting brought the viewer closer to the painting. This was unintentional and it could be said this comment would not be as prominent if the new technologies being used were consistent in quality; for example, the strength of colour and light of the LEDs and the consistency and colour of the heat re-active paint.

'Yes. They blend seamlessly and I had the view of the light being the frame and different colours delivering emotion'. In this answer the participant received emotion from the combination of light, frame and colour. I would argue this is a powerful observation due to the combination present in the paintings.

'The initial effect of being thrown into the reduced the effect – however – initially no – eventually – conversation wise – I think your paintings might have had better effect without frames'. It seems this participant struggled with the darkness. The participant has suggested the conversation may work better if the painting were frameless but, does not go on further to suggest why. The conversation is between the light frame and colour as experienced by the participant's answer from above.

'Paint and light yes. As a viewer it ranged. Even second and third time around the communication changed'. This is a very interesting and exciting comment to receive as it says the more you engage with *Installation/Painting's* the more one gains from their viewing.

'Yes it links well to the manifesto but, question how the paint and light converse with the viewer'. Here the participant does not see the intrinsic relationship between the light, frame and colour associated with *Installation/Painting*. I question what the participant was observing in the exhibition?

'With the lights, they re-create with me opposite colours on the other side'. I consider this to be a comment on the effect of the light in relation to the scale of the frame, more so than answering the question regarding the conversation but, it could

be that it was the reflective nature of the light and frame in relation to the colour which the participant is referring too?

'I think it depends on the viewer. Because it is dark it is not immediately obvious that paint has been used, except brushstrokes can be seen, however I have come to the conclusion that they are balanced'. This participant observed and commented upon the noticeable brushstrokes within the paintings, which I have stated in the manifesto is there to show the hand of the artist. This participant also says the relationship between the paint, light and the viewer are balanced giving the conversation validity.

'Yes – soft edges / 3-D qualities to the light'. Interesting observation from this participant in regard to the soft light giving a 3-D visual effect. The reason for this 3-D effect is from the mixing of different coloured LEDs and how the light beams fall on the textures provided by the brushstroke through the application of paint.

'Yes, but would have liked more light to explore other elements and textures within the painting'. This participant wished for more light but I feel this would have lessened the impact of the conversation between the light and viewer as the coloured LEDs strength would be weakened due to the mixing of other white artificial light.

'The room needed to be pitch black and the glass non-reflective in order for the viewer to be immersed. Coloured lights detracted from the painted surface, brought with them connotations of Christmas tree lights and were too obvious, reducing any sense of colour in the painted surface'. I must concur with this participants comments as *Installation/Painting*s are proposed to be viewed separately in blacked out environments. This was not the case for the show at Arena Studios and Gallery as the exhibition space was small in size. The technology involved in LED production is limited to date as the technology is still relatively new. This is shown in the exhibition as some lights emit stronger light than others thus giving an uneven balance to some of the *Installation/Painting*s aesthetic and aids the unclear view the audience has of the painted surface.

'I feel as it is a progressive process, at first it was just a constant switch between me looking at the light and the paint. The light helped draw your eye towards the middle focal point'. *Installation/Painting* is to be a progressive process for the audience in the sense of the time required for the audience's eyes to adjust to the light levels in the gallery space, for the heat re-active paint to react and for the audience to take on board the aspect of mindfulness which *Installation/Painting* aims towards instilling in the viewer.

3. Did you have any 'inner' spiritual experiences when in the exhibition and if so was there a prompt for this?

'No but it feels like a quiet space you're not supposed to speak in, a bit like a meditation space'. This is the atmosphere I wished to create for the hanging of *Installation/Paintings*.

'Brought out my inner child with the colours. Inner spiritual? Felt like I was drawn to them and the parallel nature of the tones of colour'. Interesting to see this participant found a parallel within the colour tones. It is pleasing to know the subtle tones within the *Installation/Painting* are noticeable to the audience and act as a point of reference.

'Yes!! Quite powerful when looking at the two in the light following the dark room. It was a very reflective and in the moment experience. It felt my pulse rate altered'. This participant has received the full experience *Installation/Painting* was hoping for in its conception. The participant was both aware and reflective in their experience with reference to an altered pulse. Not that I can compare Stendhal syndrome experienced in the Sistine Chapel and *Installation/Painting* in Arena's small gallery space!

'Yes, I generally have inner spiritual experiences when given the opportunity to sit quietly and study something, especially with the room being dark'. With the work exhibited in the dark some participants are linking this to the notion of the spiritual. I question whether the dark is skewing the idea of the spiritual in this question/exhibition? I also question the idea the participants have of the spiritual and how this relates to art practices.

'The darker environment allowed me to 'space out' into the room and paintings, it was nice'. I must question the validity of 'space out' in relation to spiritual ideals.

'Light: we as people have a faculty to light.' My interpretation of this comment is that we as human beings use the capacity of light for not only functional purposes but, also understand that it can affect our emotions and wellbeing in a spiritual way.

'No, I don't consider myself to be a particularly 'spiritual' person and the exhibition did not change that'. It is this type of participant that *Installation/Painting* wishes to engage with the most. For how can one not feel spiritual? Could it be the religious connotations that exist with the idea of the spiritual or is it that people have never questioned themselves from the sensation of the internal? These question need to put to an audience and will work in the production of the next series of *Installation/Painting*s.

'No. Felt it wasn't conducive to a spiritual experience'. This is the only participant to comment negatively concerning the exhibition space being conducive to the spiritual experience. Other participants acknowledged as to not being spiritual thinkers or spiritual in themselves but did not comment upon the space as this participant has. I must question participants understanding of terms such as spiritual in the future to try and involve people who are not spiritual alongside participants who think they are spiritual but do not fully comprehend the ideology.

'I felt a little uneasy in the dark, but also made me feel more connected to the work'. Is this response due to human conditioning, in that light in a dark space will have a positive impact upon the viewer's sensations? This is another aspect to be explored in a second series of painting after the completion of this thesis.

'No – I felt it was quite relaxing – particularly in the dark area – if soft music was playing it would send me to sleep.' I need to explore the addition of music in later works but carefully, as by introducing music *Installation/Painting* may become an installation proper. Would this take away from the paintings or could I maybe have sound on headphones which is specific to the individual *Installation/Painting*?

4.   Do you think a self-illuminating frame to illuminate paintings over traditional gallery lighting works as a concept and if so why?

'I think it depends on the paintings – because these weren't busy the lights complimented the image'. This comment suggests the success of the non-objective qualities of *Installation/Painting*'s visual aesthetic.

'I feel like it works for this exhibition but it's not always appropriate'. Suggests the success of the self-illuminating frame.

'Yes – it brings out a different tonal quality in the work'. This comments upon one of the aesthetic qualities *Installation/Painting* brings to the regard of tonality in painting.

'The light in the frames exposes specific parts of the paint which I think is more effective'. Again, the participant is not answering the question but, is further evidencing the positive impact of the self-illuminating frame.

'Yes, the self-illumination became the frame and cleverly tricked the senses in a sense of security'. It was not intentional for *Installation/Painting* to trick the senses as this participant says but, I did not think of the idea to trick and disturb the perception of the audience as another strand which *Installation/Painting* can experiment with to further its visual aesthetic.

'Self-illuminating doesn't necessarily require frames'. Again the participant has not expanded upon there answer as how to create a similar effect as the self-illuminating frame without the frame.

'Different impact, effect and communication'. I assume this is a positive comment and it is saying the self-illuminating frame can be seen as an idea to illuminate paintings in galleries in the future.

'Yes, it provides a different feeling to be in an art space and lighting to be considered and not neutral – it provides interesting perspective on what you may have seen before/since if you were to view them in this new context'. This participant provides

evidence that having considered lighting within the gallery space has a positive impact upon the audience experience in comparison to that of the usual neutral lighting in gallery spaces.

'Is the frame self-illuminating or is the frame illuminating the work and therefore is it a self-illuminating artwork, or painting? It is certainly different from traditional gallery lighting. It changes the experience'. This participant questions the definition of the self-illuminating frame and if it really is that or just a frame illuminating a painting. ????

'Yes/no. Depends on how the viewer is involved.' With how *Installation/Painting*s have been created it is hoped that the viewer is involved through the use of light and heat re-active paint.

'As a concept yes – the light emanates from the painting and shares an intimacy with it'. The participant recognises the intimate relationship between the frame and the light emanating from the painting. It is unclear if this participant is saying the intimacy is with the viewer or just the frame, light and painting.

'Yes, they work as a concept, but I feel should be used to enhance the painting, not be the focus of a piece'. This participant acknowledged earlier in the questionnaire that the conversation between the light, frame and viewer was successful, but here says the light are the focus. I must question what this participant was observing in the exhibition as the contradiction in the evaluation renders the answer unusable within this thesis.

'No – illuminates only sections of the painting + the eye is drawn to the lights'. The concept of the self-illuminating frame was to only partially illuminate sections of the paint within *Installation/Painting*s hence the positioning of the LEDs within the frames. The reason for this was to further engage the audience in a participatory manner.

'No – I felt the use of different coloured lights prevented any subtlety of perception. Rothko painting are extremely effective in regular gallery lighting'. I can appreciate the comment regarding the power of the some of the LEDs and how they prevented any subtlety of perception as the technology of the light does not yet exist. With regard to the comment on viewing Rothko's painting in regular gallery lighting I feel somewhat sorry for the participant. Rothko paintings have, but should not be viewed in regular gallery lighting as Rothko himself wished for his paintings to be viewed in low-level light:

'They are marvelous paintings, for which no reproduction prepares you, and which are best seen in certain conditions, wonderfully described by Bryan Robertson, an early English supporter:

'Rothko asked me to switch all the lights off, everywhere [in the Whitechapel Gallery]; and suddenly, Rothko's colour made its own light: the effect, once the retina

had adjusted itself, was unforgettable, smouldering and blazing and glowing softly from the walls — colour in darkness'[1].

'I think it is a curious concept. It helps you disconnect from your surroundings but can also maybe make others stand out more from the work'. The self-illuminating frame has aided this participant in disconnecting from their surroundings. This is intentional.

5. Can the frame work as a tool for non-objective paintings or should they be frameless? Please explain your answer.

'I appreciate the frames as they finish off the paintings, however as 'non-objective' I think they would have made more sense frameless. The lights also act as a frame'. Interesting comment regarding the relationship between the non-objective and framelessness.

'The frame work in the first room are essential to the whole piece, it wouldn't be as effective without the lit frames'. Functionality of the frames essential to lighting the painting.

'With contemporary/minimalist art the frame can speak for itself/alter our perception of the work'. This answer highlights the self-illuminating frame aids the transformation of perception within the audience. Unfortunately this participant did not elaborate further upon this point of altering perception.

'I think they would work frameless. They seem to be confined by the frame and without a frame would look like a paused image (explosion of paint) giving the paint movement'. This is an interesting observation but, the research would have to find a solution of lights the paintings without the use of the frame, possibly the starting point for stage two in the development of *Installation/Painting*?

No. The lights are the frame in the darkness. It adds structure and keeps it all together. It does slightly change the personality of the piece with the size and the shape'. I find this answer is contradictory as it states no but, says the frame gives the painting structure?

'Would be better without frames. Frames work with the blue/black – along the white wall – yeah, very traditional – but aesthetically it draws your attention immediately. When walking through the corridor – you know – the frame draws the eye – and because the frame isn't too indulgent – you still focus on the art – the whole point of art – look at the art!'. This participant is the only one to comment upon the developmental work in the corridor. It is surprising to observe that this participant appreciates the frames in relation to more non-objective works than that of the self-illuminating frame of the *Installation/Painting*s. I do not agree with the participant's opinion of the self-illuminating frame being the art work itself and that it is indulgent. The

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[1] http://www.spectator.co.uk/books/books-feature/9458552/a-strain-of-mysticism-is-discernible-in-the-floating-colour-fields-of-mark-rothkos-glowing-canvases/

frames surrounding the pure red and blue canvases in the corridor suggest a traditional relationship with the frame and when viewed against the plain colours seem more indulgent than that of the self-illuminating frame.

'Frame as a tool, adds narrative or remove the need for one. Changed the conversation. Memory linked to mood linked to emotion'. I find the idea of the frame to add a narrative, one of intrigue. This idea of the narrative is one to think of in the future development of the self-illuminated frame. The classic trophy frame of navel dignitaries is an example of the frame adding a narrative.

'Saying all forms and facets of exhibition should be considered for the viewer experience is problematic. Are you creating the work for yourself or is it intentionally for an audience? Therefore I would say yes to the question but it's difficult to be a definitive 'yes''. This poses some thought as initially all art is created by the artist for the intrinsic need to do so and does not require an audience for validation. Yet with the conception of *Installation/Painting* placed in the context of a thesis, the audience is a necessity for the validation of the ideas in which it is situated. It could be said artists do not need to exhibit their work for validation from an audience. This then raises the question of communication and not validation. Do artists need to exhibit their work in order to communicate their ideas to the world, yes they do, and this is what *Installation/Painting*s and manifesto set out to do. Be reactionary to the current state of our stale society.

'In this case it works as a tool to light the work in the desired way. The light could have been added without a frame somehow and I feel that would have worked equally well – maybe the frame tells you it is a painting?' This participant acknowledges that the frame can work in relation to a non-objective style of painting and specifically *Installation/Painting*. This provides evidence that the frame can be developed further although the participant does say the idea of *Installation/Painting* could work equally as well being frameless, again not expanding upon how a frameless work would be exhibited like comments from participants above.

'I like it because it gives the painting an objective upon viewing but the paintings are still non-objective'. I like the idea of an objective view of the non-objective. An idea to be pursued later with frameless *Installation/Painting*s?

'The frames capture the viewer – as the light does – keeps us focused and involved.' This participant further evidences the positive impact the frame has upon the viewer when observing *Installation/Painting*s.

'Frame works – adds an extra dimension and character + 'contains' the art work, focussing attention.' One of a minority of participants who felt the frame worked as a concept by adding an extra dimension and character to the work and involvement with the audience.

'Non-objective painting? What is this?' I must acknowledge that the audience is not always educated in the arts and should attempt to 'fill in the gaps' where possible to allow a greater understanding and context of the work on display. Alternatively, should I allow the audience to question, in the hope they will ask the question again and self-educate.

'The frame is part of the work. Even without a frame, these works are still rectangles on a wall'. If the paintings were frameless it is very questionable as to whether they would form a rectangle as the light would not be contained within the frame, thus allowing the light to travel and not forming the shape of a rectangle.

6.   What are your thoughts on observing the re-active nature of heat re-active paint?

'It questions how long one would spend viewing a piece'. This comment addresses the time element of *Installation/Painting* and the idea of society lacking patience today.

'I really like the idea, I like that it's quite subtle'. Audience notice the subtleness of the paintings.

'As it changed slowly, it felt like performance art that changed. The perspectives of light changed how it looked dependent on the re-active nature of the paint'. While I have experience in performance art, *Installation/Painting* did not set out for the audience to view the works as a performance. Although, due to Marina Abramovic's influence upon my artistic practice, the idea of a performance is present in the ritual and time it takes for the audience to observe the reactive nature of the heat re-active paint.

'Reminds me of a t-shirt I had in the late 80s early 90s – seriously not enough of it happens'. The technology used to produce heat re-active tee-shirts is similar to the heat –re-active paint as the dye constituents are similar.

'Interest, curiosity and question'. This participant acquired the time to witness the effects of the heat re-active paint and its relationship with the coloured LEDs.

'No response really – dependent on too many subjective factors'. I can only assume this participant did not give time to the process when observing the heat re-active qualities of *Installation/Painting*s.

'This was very interesting, because it erase the form giving new shapes'. This participant clearly spent time observing the heat re-active paints qualities when in the process of heating and how new shapes appear on the canvas.

'It is also calming'. This is the desired effect I was after along with a sense of awareness in the participant. This participant does not acknowledge the notion of awareness.

'I like the generative elements of the heat re-active paint as it changes over time and won't produce the same work twice'. I must correct the participant as the heat re-active paint does produce the same effect due to the controlled nature of the heat emitting from the reptilian heat mat which is secured into position.

'Sense of fascination + do our eyes deceive us.' The sense of fascination this participant had with regard to the heat re-active paint is one the artist hoped for when viewers observed the reaction of the heat re-active paint.

'It was imperceptible'. That is the whole point, almost undetectable to the viewer.

'It was timely and dragged on but was a fresh idea and I appreciate its quirkiness. The thought of changing and evolving art is a good idea'. Another comment stating the time required to acknowledge the change in the heat re-active paint. Is this due to technology today and the need for instant gratification? I appreciate this participant understood that I was introducing an innovative fresh idea to aid the evolution of art.

7.   Have you had any positive or negative thoughts on viewing *Installation/Painting*?

'Maybe all of it should have been dark/the same lighting as in the first room or all of it should have been light. It just seemed a bit miss-matched'. The paintings in the second room showed the conception and development of *Installation/Painting* and were created in light. Therefore it seemed appropriate to exhibit these works in light. These works developed the idea of the self-illuminating frame as it was these selected works which questioned if the frame was valid in its use.

'Positive – new gallery experience that I would like to see developed'. It is pleasing to know the audience realised the new technologies have to be further developed for *Installation/Painting* to become consistent in its aesthetic.

'The dark room gives a negative feel, but when observing the paintings, the feeling dissipates due to the bright lights and colour of each painting. The dark room is effective because the viewer is drawn to the light paintings'. It can be said that the initial shock of being placed in a dark gallery environment subsides in most of the audience when viewing the *Installation/Painting*'s and has subtle effects upon their senses. This is what *Installation/Painting* sets out to do, to disturb the audiences' inner sensation.

'Positive. The idea of there being something from nothing with the creation of the light boundary together and illusion of purity'. I feel the exhibition was a success for this particular participant as the idea of illusion and purity and felt. I can only hope the participant takes these ideas in their own life and radiates those outwards within society. This would complete the cycle in which *Installation/Painting* places itself as within the realms of the spiritual in art.

'Positive and still reflecting on why and what it says about me'. This participant had observed *Installation/Painting* in the purest sense. It has spoken to their inner-self and questioned the reasons for feeling the sensations which *Installation/Painting* invoked within. It is hoped this participant allows these sensations to transcend to the wider society and thus have a positive impact therein.

'Mostly positive but some personal, subjective negative opinions on art I have do apply still to *Installation/Painting*'. *Installation/Painting* has possibly broken down some barriers to this participant's general view on art.

'The paintings really got to me by the way that there is a sense of nothingness to the works'. I find this comment positive as it has the participant questioning the value of the painting and there felling towards it, nothingness.

'It hasn't changed my mind about painting being good as it is, but it has given me a new experience to consider'. I take the positives in that the participant has experienced a new understanding in viewing art due to the exhibition.

'Pleasantly surprised. The elements all work in harmony.' This comment acknowledges a sense of satisfaction and success for the artist and the idea underpinning *Installation/Painting* as this was the ultimate aim – unity.

'Positive thoughts especially mindfulness'. I am filled with optimism from this participant's comment as the additional dimension of mindfulness within *Installation/Painting* and its further impact upon society is seen in a positive light. With an audience such as this, I am also filled with hope that mindfulness can indeed have a positive impact upon society and aim for unity.

'Only one painting drew me in – the one on the gallery window doors. Disappointed that the mindfulness aspect was not there for me'. In relation to mindfulness, it is a practice and with mindful people the awareness should be present or at least not far away regardless of the environment. The idea of *Installation/Painting* was to inform the audience of mindfulness practice and to allow them to educate themselves in the practice if they have no experience, thus aiding unity within the greater society.

'The subtlety that was meant to be present was lost in the crude lighting and reflective glass, the works had the opposite of the desired effect being calculated rather than emotionally driven they lacked integrity'. The subtlety of calm within the viewer is one of the main qualities *Installation/Painting* is hoping to instil in its audience. As with most answers, participants did not expand upon the reasons given in the questionnaire. It is therefore debatable as to which specific subtlety this particular participant was aiming for. In response to the desired effect being calculated rather than emotionally driven, I feel this is a classic answer from an audience lacking a true understanding of art and very much reference Bell's idea of significant form. *Installation/Painting*s is calculated in respect to the fact that the artist wants to give something specific to the audience and for the audience to then pass this on to others in the wider society, i.e. mindfulness. *Installation/Painting* is calculated as it has been created with the specific purpose of calming the audience with notions mindfulness and for the audience to take this mindfulness attitude into the wider society and influence and sense of calmness upon others. In this sense the works of art do to have

integrity as they are not emotionally driven in the sense of suggesting an emotion which the audience may stumble across if they are lucky. It is this reason why currently in today's art world that 85%-90% of work produced is not valid to be called art in the truest sense. Just because a painting is not emotionally driven does that mean it lacks integrity? Not all emotional art or paintings have integrity just because they are emotionally driven either.

'It made me think about things growing, like flowers and earth. I know this is random but it made me think of this. Maybe think of a way to make it evolve quicker'. I find this the most interesting of comments by all participants. This participant was clearly engaged within the exhibition space and the *Installation/Painting's*. The works allowed this participant's thoughts to wonder freely, certainly taking the participant away from everyday thoughts. This is what the artist set out to achieve when developing the foundation for *Installation/Painting*. I am in agreement that the heat re-active paint process needs speeding up but, I need to be patient as the technology is expensive and new in its development.

8.   Finally, please give your thoughts on the Manifesto?

'Deep, gave a good background to the subject'

'The manifesto is very wordy, it sounds intelligent therefore I think it is a success'

'I agree – I think it is time for a new wave of ideas and I think the immersive environments such as this are the way forward – many local art collectors are using alternative platforms and showcasing their work as a "night" or a "live" exhibition and *Installation/Painting* to me reflects this idea'. The above comment acknowledges *Installation/Painting*'s use of light and gallery environment to exhibit a new art.

'I agree completely with the manifesto, being a fan of physical art work. The manifesto makes a clear and concise point and makes you understand how technology has blinded use to real, physical, emotional art'. This comment makes a specific point about the manifesto suggesting that our use of technology needs to be re-adjusted to take into account the physical nature in the created of art.

'What a series of installations. The idea of light and combining it with heat! Really well thought out and uses the ideas of disposable light and particles of light'. This participant appreciates the use of both disposable light and particles of light thus being aware of the science involved in the production and viewing of *Installation/Painting*.

'You commented upon an typeface in your manifesto – difficult to read if you are dyslexic! Yeah, so for – it – Reactionary I am glad a participant has viewed it in that sense too.

'I found it fairly difficult to read. I liked the idea of being more pure'. Yet another comment on the manifesto being difficult to read, I must consider this comment and maybe make the manifesto more statement based? This participant did say they liked the idea of art being more pure. This is not a new ideology in art but I must question how many people acknowledge the notion of purity in art. As discussed in the main thesis the writings of Kandinsky, Malevich and Mondrian have been brushed aside throughout the history of modern and contemporary art. This again gives the thesis validation in that I am raising the question of the spiritual and the pure in art today. I feel these notions of the spiritual and the pure alongside awareness are characteristics which society needs to address today as the continuous wars wagered by religion and greed compounded by capitalist ideology are not the paths towards unity within humanity.

'I really enjoyed the manifesto and really liked the idea of getting away from technology as I think as a race now more than ever we're disconnected from the world and not living in the moment'. I feel this participant understood the ideas underpinning *Installation/Painting* and the manifesto as not only does the participant say technology is disconnecting us from the world but, also that we are no living in the moment referring to the element of mindfulness.

'Better until the technology - tweak'. This comment says there is some contradiction within the written section of the manifesto concerning technology. The manifesto will undergo a re-draft to rectify this contradiction so as to have greater fluidity for the reader.

'Follows in the 'grand tradition' of artist manifestos – full of thought provoking statements prompting reflection and deeper consideration of the meaning of each work'. This participant truly understands the ideas artists past and present have tried to communicate through manifestos. I feel the experience of this particular participant reflects the use a manifesto can have upon its audience. No reference of the manifesto being too long, which in the traditional sense I feel it is not. Have the audience not seen the length of the Andre Breton's Surrealist manifesto of 1924?

'The manifesto has some good points, however it also seems to contain contradictions and generally be a little confused as to what it is trying to put across'. I can level the audience's comments upon the manifesto being contradictory as the contradictions aid the existence of the other statements within the manifesto. This is to aid the reactionary emotion of the audience.

'The computer is just another tool. If you believe the artists hand is essential for a work to be art, then obfuscating lighting unnecessary and becomes an affectation'. This participant has not understood the connection between technology and the computer. The manifesto only uses the computer as an example of technology and how this technology takes away traditional practices within art and design at the detriment to evolution of humanity. In response to the lights in the frame obscuring the paint and therefore making the works pretentious. I strongly deny this comment. I do not

mistake the ideas upon which *Installation/Painting*s are built is grandiose, but this is within the traditions of art movements wishing to bring about social change within society. I beg the question whether emotionally driven work alone could carry such notions of grandeur to bring about societal change as *Installation/Painting* hopes. No manifesto I have read uses the term emotion as an ideological statement to bring about change within art. If emotion is to be used as an ideology within movements of art then we would be faced with nothing but pretentious art, as we are today with artists forcing their psychology issues upon their audiences through their art practices.

'I think it is a good issue to raise about how art has lost its way but it can maybe get muddled and a tad contradictory with the issue of technology needing to be removed more from art but the piece is using technology in the installation'. I acknowledge the contradiction in the manifesto regarding technology and how it has been used within *Installation/Painting*, redraft of the manifesto is required before publication of the thesis. This participant does comment positively on how art has lost its way but again the participant does not expand upon this point further.

Artist and Audience Questionnaire

Artist David Horvath invites you to engage with the arrangements of tone and colour creating awareness in the emotional psyche and a deeper investigation into the effect colour has on one's emotional responses.

<div align="center">Artist and Audience Questionnaire</div>

1. Is the picture frame important today in framing art? Please explain your answer.

   Yes: because the intention of a frame is to subtly reverberate the essence of the image. It also has, on a more functional level, another purpose: this is to house the mount that, in turn, announces the image again and creates a more complete visual package that should denote quality.

2. Do you recognise picture frames' aesthetic value when producing or viewing artwork and what are these values? Please explain your answer.

   Yes: it is more to do with what other practitioners are doing: how are they presenting their work? I'm not sure if it is an artist thing, but I know I certainly do it. An analogy would be, for instance, 'who has the best shoes at a wedding'. The frame needs to complement the image, whether that be in simplicity or in some cases, vulgarity: kitsch on kitsch for instance.

3. Do you think the picture frame can enhance the artwork regardless of the frame being functional or aesthetical? Please explain your answer.

   Yes: we all know that function can dictate the aesthetic, and Bauhaus simplicity is often all it needs and everything else, largely speaking, is over-gilding the lily.

4. Can the picture frame work as a tool for non-objective paintings or should they be frameless? Please explain your answer.

   Generally speaking, truly abstract paintings should be frameless. I believe it's really important with Ab-Ex, action paintings in particular, that they have a raw power that should not dissipate into a frame.

5. Do you consider the context and value of light when producing or viewing artwork? Please explain your answer.

   Yes: frequently, in terms of gallery spaces, and yes, in terms of production and as the primary elemental force: the life giver.

6. Do you think conventional lighting of artwork in a gallery is an advantage or disadvantage for the work itself in terms of preservation and the viewer's aesthetic judgement? Please explain your answer.

Great paintings find great spaces and sympathetic keepers. Bad paintings deserve all they get.

7. Are you concerned with the spiritual in art? Please explain your answer.

I don't tend to view things spiritually, but rather in a more scientific, psycho-optic way. I think this is, perhaps, because the term *spiritual* has such dated connotations. This stated, however, I sometimes feel I may be in denial here as I concur with the notion that Mark Rothko's work *is* deeply spiritual and has a transcendental quality to it, thus: '[it has] the effect of a pulsing, spiritual life, of an imminent epiphany, [it] is a secret he did not share with others, and maybe only partly understood himself'. Therefore, I find myself in a quandary, for I am so often seduced by Rothko's masterpieces.

8. Does the spiritual in art have any value in today's art? Please explain your answer.

It depends on what you view as value and what you term as spiritual. I feel this is too broad and too vague a question to provide a satisfactory response.

Artist Michele Theberge uses mindfulness practice directly when drawing and painting so they can influence each other intimately.

Artist and Audience Questionnaire

1. Is the picture frame important today in framing art? Please explain your answer.

   I thinks that depends entirely on the work. Of all the contemporary artists I know personally or whose work I follow, it's hard to think of any that frame their works. I myself haven't wanted to use a frame for any of my work in many years. I do work on wood panels mostly with a deep edge – about 1 5/8" - 2" deep. I generally tape off the edges to provide a clean edge which creates a frame of sorts to set the work off from the wall.

   For works on paper, however, I often like to frame them to protect them.

2. Do you recognise picture frames aesthetic value when producing or viewing artwork and what are these values? Please explain your answer.

   I think a frame makes an enormous difference. In general I notice trends in framing that have more to do with tastes of the time or of the purchaser of the art or of the interior designer. For instance in the 50s and 60s, wide rough hewn frames of wormwood or other grained wood were popular. In the 80s a very simple sort to strip frame of plan wood or leafted with ocld or silver was often used. Many artists I knew back then would buy these thin strips of wood and fashion inexpensive frames by cutting and nailing these thin strips right to the painting. I did frame some of my student work that wawy. And of course we have all seen elaborately carved frames of the renaissance paintings in museums. Each era has it's taste. I did experiment with frames in the early days of my painting career but was never fully satisfied with the treatments I chose.

   An elaborate gold frame can give an elevated perceived stature to a painting in some people's eyes.

   I think the current taste for not framing paintings as seen in galleries and museums worldwide supports these contemporary values:
   1. modernist visual simplicity and minimalism along the lines of the 'white cube' as being the ideal contemporary viewing space
   2. transparency in terms of being able to view the artists hand, seeing drips or residues of the creative process along the side of the canvas or panel
   3. immediacy: not having any aesthetic boundary to mitigate the viewer's direct experience of the work

3. Do you think the picture frame can enhance the artwork regardless of the frame being functional or aesthetical? Please explain your answer.

Absolutely. Even though I prefer not to frame the works I create at this time, I think they can definitely enhance certain works.

4. Can the picture frame work as a tool for non-objective paintings or should they be frameless? Please explain your answer. Again, it depends entirely upon the work itself. Each work, or body of related works, should be considered individually as to what would show the work to best advantage. I don't think it has as much to do with the work being non-objective or representational. There are so many more qualities to the work that will dictate whether a painting is enhanced by framing: color, texture, composition, etc.

5. Do you consider the context and value of light when producing or viewing artwork? Please explain your answer.

Light plays an enormous role! It cannot be overstated how crucial it is to viewing work. My paintings are produced in a large studio flooded with natural light. I almost always work in day light. Yet paintings are not always viewed in these conditions and it can radically alter their perception. For instance, I am working with richly textured and colore backgrounds covered with thick layers of crystal clear acrylic over which I paint delicate white marks which cast shadows on to the ground below. If there is not a strong direct source of light on the painting this nuance can be completely lost.
In addition, I work with interference and iridescent colors which change color depending on the light being cast and the angle from which they are viewed.

To illustrate this here are two views of the same exact painting:
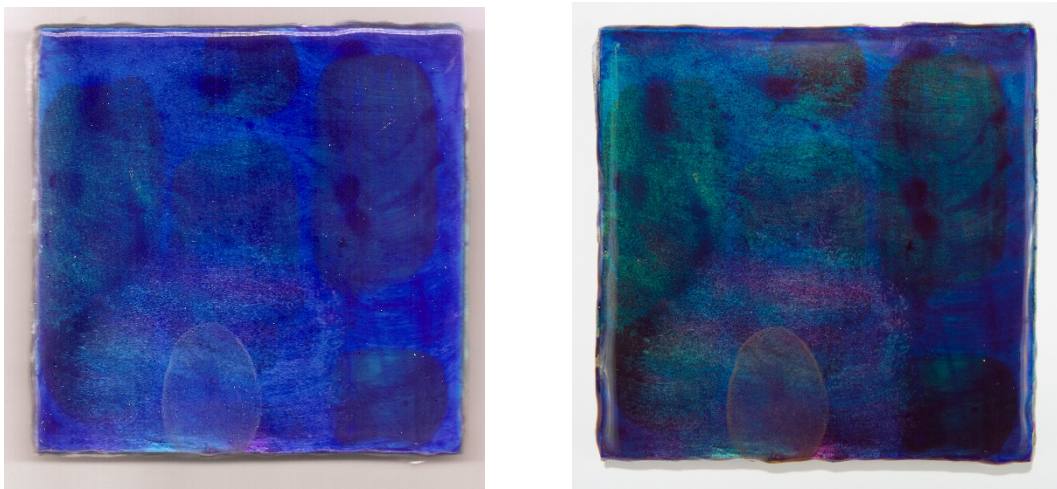
6. Do you think conventional lighting of artwork in a gallery is an advantage or disadvantage for the work itself in terms of preservation and the viewer's aesthetic judgement? Please explain your answer.

I see a lot of different lighting in galleries – fluorescent tubes, LED spots, incandescent track lighting, halogen spots. Some lighting is cool, some is

warm, some is more balanced. In my work I don't use fugitive pigments or inks or materials except in *very* rare cases where nothing else will do. And I varnish with a UV inhibiting varnish so the works stand very little chance of damage from standard daytime artificial or natural lighting.

I think having the right lighting for art is essential. An excellent painting can be completely obscured if not properly light. So much in color, nuance and detail can be lost.

7. Are you concerned with the spiritual in art? Please explain your answer.

   First, I will define spiritual for myself as I know that word can have so many meanings to each person. For me it is a concern with and acknowledgment of that non-visible world of consciousness that is eternal and ever changing and connects us all and is the source from which we all spring. The answer is yes.

   I will quote from my artist's statement to explain more fully.

Many people are longing to connect with that deeper, more still part of themselves. My works are an invitation to quiet contemplation leading to the inner world of subtle experience.

I use a wide range of media — including drawing, painting, installation and interactive projects — to explore the connections between the material and immaterial worlds and to share the expansive calm experienced in meditation. The lightness of the materials – paper, mylar, pins, fabric, water, glass, plastic, washy fluid paint lend an ethereal quality.

My drawing and meditation practices have become so intertwined that they influence each other indelibly. The immediacy of drawing helps me capture precious moments – the touch of the brush on the paper, the ratio of water to pigment, the chance happening of each mark as it is made.

8. Does the spiritual in art have any value in today's art? Please explain your answer.

   Since I have dedicated the large part of my life and art career to this notion of uplifting and enhancing other people's lives through bringing forth this quality in my work it would be impossible for me to say otherwise.

   In fact, I believe this value of the spiritual – qualities of peace, compassion, connectedness, love, grace, faith, joy which cannot be measured, bought or sold in our commercial Western culture are essential to rebalancing the elements of our modern life which cause us such deep concern and suffering: the destruction of our natural environment, the deep sense of depression and anxiety that plagues many, the violence, greed and aggression.

Gallerists Questionnaire

Reyhan King: ex Walker Gallery Director

<u>Gallerist Questionnaire</u>

1. Why do you think the frame is not represented in contemporary painting?

    The frame has in the past been about setting – frames for domestic settings, altarpiece church architecture acted as a frame for religious work and some secular, etc. With artists focusing on galleries designed for art the frame can be redundant.

    Note though that our Keith Coventry Spectrum Jesus 2010 very deliberately incorporates a frame. Some artists like Coventry are revisiting framing – whether as a technique for 'slowing down' the viewing experience or other.

2. How do you approach paintings with frames, whether used for functional or aesthetic purposes in the context of the gallery?

    We treat frames as historic objects.

3. Do you think framing contemporary painting would enhance the visual aesthetic and why?

    We tend to want to respect wishes of the artist although for us framing provides a useful practical opportunity to add protection (sometimes inc glazing) to the work.

4. What importance do you give to light in your gallery and does it enhance the visual aesthetics?

    It is very important. We don't always have the lighting we desire but of course good lighting enhances the aesthetics. Our refurbishment of Gallery Room 11 British Art 1880-1950 has included a new lighting system and reglazing to reduce glare on art works.

    The aesthetics has to be balanced with our duty as custodians to protect objects.

5. In what context does natural and artificial light impact upon exhibiting paintings in the gallery and this is positive or negative?

    Natural light might be aesthetically preferable and in the longer run I would like us to achieve natural light balanced with controlled artificial lighting. However, this requires sensors, shutter mechanisms etc. See the National gallery's new system for a good system of balance (Greg Perry, Operations Director).

6. Do you think conventional lighting of art works in a gallery is an advantage or disadvantage for both the work itself and the viewer and why?

Not sure whatyou mean by this.

Appendix 5: Correspondence

Olafur Eliasson
Studio Olafur Eliasson
Christinenstraße 18/19
Haus 2
10119 Berlin
Germany
studio@olafureliasson.net

On 29 Jun 2015, at 08:53, Studio Olafur Eliasson <studio@olafureliasson.net>
wrote:

Guten moergen William,

könntest Du übernehmen?
Danke und Grüße
Ola

Dear Dan,

Thanks so much for your email. My name is William, and I usually handle the
research requests that come into the studio.

Your questionnaire presents a number of interesting questions, but I'm unsure how
relevant they actually are for Olafur's practice. As you will see on our website,
Olafur produces works equally with (e.g., his watercolours and photo series) and
without (e.g., his colour experiments) frames. Interestingly, even his works involving
windows are ambiguous in their position toward frames: compare Twilight
window from this year with the much older work Window projection.

To your 5th and 6th questions, I would suggest looking at Olafur's collected
writings, which can all be found as downloadable pdfs on our website. In particular,
457 Words on Colour, *Light Conditions,* and *Museums Are Radical* should interest
your research. They can be found at the bottom right of this page.
http://olafureliasson.net/archive/publication/MDA113075/tyt-take-your-time-vol-4-
writings-20012012#slideshow

Lastly, in the digital app *Your exhibition guide*, there is an exercise titled 'Light &
Darkness' that speaks to your interests, specifically the choices museums making in
illuminating artworks. This can be downloaded for free from the App Store and
Google Play.
http://olafureliasson.net/archive/artwork/WEK108816/your-exhibition-
guide#slideshow

I hope this helps your research.

Best of luck from Studio Olafur Eliasson,
William Stewart

William Stewart
Research and Communications
Studio Olafur Eliasson
Christinenstraße 18/19, Haus 2

Appendix 6: Interviews and Future Possible Collaboration

The first interviewee was Professor Paul Haywood. The discussion revolved around the use of objects which could be transformed into matter. Prof. Haywood's studio explores processes in which to pulverise objects to produce matter as a substance to be used in the creation of art. It was at the very early stages of research which this interview took place and had a profound impact upon the direction *Installation/Painting* pursued its goals. Haywood stated it was impossible to melt or pulverise certain metals and objects, especially within artist studio resources. Haywood even said that it was impossible even in foundries as the temperature for particular metals could still not be reached.

Prof. Paul Haywood suggested contacting Tim Dunbar with regard to re-representation and James Robinson PLC/Reveracol a company that develops dyes for use in photochromic technologies. Haywood also recommended Panayota Tsotra whose work resolves around morphological studies within physical molecular sciences. Whilst these were appropriate suggestions, I felt the references were directed towards scientific investigation more so than artistic practice that the research is concerned with.

Another point of discussion centred on cogitative psychology and mindfulness therapies. This related to audience perspective and spatial relationship with two objects.

Dr. Christophe Grunenburg – director of Tate Liverpool.
The interview with Christophe Gruenberg centred on the use of light within the gallery space and the exhibition Colour Chart: Reinventing Colour, 1950 to Today (2009, Tate Liverpool) exhibition, curated by Grunenburg. We discussed the use of artificial light and how this affected viewing works of art. Grunenburg said "gallery lighting is problematic regardless of the various bulbs and current lighting systems available." This is poor not because of curators not caring but "due to a lack of funding."

Grunenburg also discussed the initial experiment of the research, Figure 4 to 7. Grunenburg said, "I have never seen anything like this before. How interesting".

Dr Peter - Mindfulness after the history of experience of visual as mindfulness to new – or so it seems – Knights of the Desert ...

Dr. Peter Malinowski Mindfulness is used to enhance the inner sensation of the audience prior to viewing *Installation/Painting*. This element of research needs further exploration and I am in contact with Dr. Peter Malinowski to discuss if the mindfulness preparation can be quantified before and when viewing *Installation/Painting*.

Danny Dyer – light artist

The Lemon Collective – Liverpool Biennial 2014

Dr. Frances Collins

Artists, scientists and writers who were contacted but did not respond were as follows:

Bruce Munro Studio. Artist Bruce Munro is interested in the shared human experience. I was interested in his works Snow Code and Between Worlds.

Dr Tamara Russell, practices mindfulness to optimize performance and improve mental and physical well-being. Russell has interests in neuro-science, martial arts, and mindfulness

Artist Rose Adams is an artist who produces paintings of flowers and birds which are stimulated by neuroscience and the inspiration of MRI scans.

Writer Sheree Fitch, explores imagination through word. I wonder if the same can be said of visual art?

Bill Culbert a New Zealand light artist.

Artist Angela Bulloch, is interested in systems that structure social behaviour.

Light artist Gunda Foerster who uses strip lighting to question perception

Projectionist Jenny Holzer.

Keith Sonnier light artist.

James Turrell space and light artist.

Robert Irwin space and light artist.

Thai artist Chumpol Taksapornchai who uses Buddhist philosophy and contemporary art to create mindful paintings.

Artist Charley Peters, who created backlit paintings, particularly Axiom (2012).

Glossary of Terms

Acrylic Base
Acrylic base is a clear medium used to mix thermochromic pigment in preparation for application to a ground for painting.

Aesthetic
The term aesthetic in *Installation/Painting* is 'concerned with beauty or the appreciation of beauty'[2] in relation to the colours of the painting itself and the combination of the self-illuminated frame.

Alchemy
'The medieval forerunner of chemistry, concerned with the transmutation of matter, in particular with attempts to convert base metals into gold or find a universal elixir'[3].
Karen-Claire Voss describes two types of alchemy: the spiritual and material. Voss gives a comprehensive account of defining three characteristics which differentiate between spiritual and material alchemy. These are 'the experience and concept of the subject/object relation, causality and time' (Voss, 1998).

Anthroposophy
Anthroposophy is 'a mystic strain of Christianity (Rosicrucianism) filtered through an interpretation of Goethe that emphasised personal agency (Finch, 2005, p.97).

Big Bounce
The Big Bounce is the period before the Big Bang which scientists have described as a time in which 'the Universe was still collapsing from a previous expansion. In this view, the Universe is a bit like a jackalope: bounding and rebounding' (Lee, 2014).

Biocentrism
Biocentrism is the theory of everything put forward by Dr. Lanza (Lanza, 2011).

Chameleon Nano Flakes
Chameleon nano flakes is a 'material consisting of nano-size silicon flakes each covered with a titanium compound. The flakes possess amazing light scattering properties if mixed with clear varnishes or polymers'[4].

Colour
Colour within *Installation/Painting* is dependent upon both paint and the inserted LED in the frame. The LED 'producing different sensations on the eye as a result of the way it reflects or emits light'[5] to the viewer. *Installation/Painting* is concerned with the impact of the LEDs hue (colour), saturation (intensity) and brightness (emitting light) in relation to the painted surface.

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[2] http://oxforddictionaries.com/definition/aesthetic
[3] http://www.oxforddictionaries.com/definition/english/alchemy
[4] http://www.mindsetsonline.co.uk/Catalogue/ProductDetail/chameleon-nano-flakes?productID=12151269-c555-493e-8a93-aafded92c38d&catalogueLevelItemID=b2877f89-50c7-46a9-9386-7bc966677588
[5] http://oxforddictionaries.com/definition/colour

Colortron
The Colortron is a light machine invented by Tom Jones in the 1970s.

Copenhagen Interpretation
This theory 'says that a quantum particle doesn't exist in one state or another, but in all of its possible states at once. It's only when we observe its state that a quantum particle is essentially forced to choose one probability, and that's the state that we observe' (Clark)This theory 'says that a quantum particle doesn't exist in one state or another, but in all of its possible states at once. It's only when we observe its state that a quantum particle is essentially forced to choose one probability, and that's the state that we observe' (Clark)

Dual-truth
Dual-truth was 'According to af Klint, the longing for unity that followed from this recognition of the duality of the world and the human condition – the predicament of a life lived in separation – was reflected in the evolution of the soul toward the deepest state of its being-in-relation, achieving of mutuality and harmonious oneness' (Zegher, 2005, p.26).

Emerald Tablet of Hermes
'It's a very short text, and considered to be one of the arch authorities of alchemy, the seed from which later development came. According to one legend, the text was originally carved by Hermes on tablets of emerald and placed in the King's Chamber of the Great Pyramid of Cheops. It has been traced back to the Islamic Jabirian corpus. *Jabir ibn Hayyan* (c 721-c815), is regarded as the father of European and Islamic Alchemy' (Stokes, 2001).

Essence
The term 'essence' is used within *Installation/Painting* to describe both the soul and spirit of substances when separated.

Equilibrium
'Equilibrium' as stated by Serusier: 'would be felt by anyone contemplating the work, since the shapes, angles and proportions were universally understood by sensitive people, no matter what culture or time period" (Tuchman, 1986, p.20)'.

Fourth Dimension
The fourth dimension is the "dimension of the infinite" as described by Apollinaire (Henderson, 1986, p.222).

Fresnel Equation
The Fresnel equation predicts the quantity of light which is reflected and refracted when light travels through an interface.

Gnosis
Gnosis is spiritual knowledge or mystic enlightenment.

Hyper-reality
Hyper-reality is a term Baudrillard used to describe living in simulation.

Infinite
The term infinite is taken from Plotinus and has influenced the theory of the fourth dimension. 'You can only apprehend the infinite by a faculty superior to reason, by entering a state in which you are your infinite self no longer – in which the divine essence is communicated to you. This is ecstasy. It is the liberation of your mind from its finite consciousness' (Henderson, 1986, p.221).

Ideomotor Response
Ideomotor response is 'the movements caused by slight unconscious muscle movements in the body, arm and hand.

Inner Light
Inner light is defined as a 'personal spiritual revelation; a source of enlightenment within oneself'[6]. The term inner light is associated with Quakerism[7] but *Installation/Painting* has no interest in religious beliefs. Enlightenment is associated with Buddhism and *Installation/Painting* takes the Buddhist practice of mindfulness to aid the audience's inner sensation when viewing the painting.

Internal Necessity
'…everything external necessarily conceals within itself the internal (which appears more or less strongly upon the surface), every, form has inner content. Form is, therefore, the expression of inner content.'
…the harmony of forms can only be based upon the purposeful touching of the human soul.
'This is the principle we have called the principle of internal necessity'.
'VI The Language of Forms and Colours, Kandinsky, W. *On the Spiritual in Art*, pp. 165.

Installation/Painting
Installation/Painting is a new concept in painting which explores the space between a self-illuminating frame and its audience. *Installation/Painting* is the creation of artworks between the disciplines of painting and installation art. It is interested in audience perception response and hopes to bringing awareness to the spiritual in art.

Intuition
'Intuition' is used to describe the feeling of having a soul (Musolino, 2015).

Kaplan's Information Processing Model of Environmental Appraisal
This model posits that the extent to which information is available in the scene is central to our appraisals. They believe that humans need to make sense of what they see and to become involved in it. The four dimensions of appraisal in their model are coherence, legibility, mystery and complexity. The first two relate to the presence of information, and the latter two concern the need to be an active interpreter of the information. Preference for scenes generally increases as these qualities increase; however, high levels of one quality can reduce levels of another.

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[6] http://oxforddictionaries.com/definition/inner+light
[7] Quakerism is the Society of Friends, a Christian movement devoted to peaceful principles and eschewing formal doctrine, sacraments and ordained minister. The Concise Oxford Dictionary, p977.

Kubelka-Munk Theory
The Kubelka-Munk theory is a model based on reflectance and relates to the absorption and scatter rates of light upon a painted surface in this instance.

Lake Pigment
Lake is a dyed paint via precipitation…dye becomes reduced down to almost white due to the unstable nature of lake pigments when exposed to light.

LED
LED is the acronym for light-emitting diode.

Light
Installation/Painting uses the definition of light in the form of illumination[8]. *Installation/Painting* is not interested in natural light but artificial light in the form of an LED. The LED is used to illuminate the painting independent of natural light and is inserted into the frame, thus the term self-illuminating frame. *Installation/Painting* investigates how the LED combines with the painted surface to produce a new relationship between the light, paint and frame.

Installation/Painting acknowledges light as an electromagnetic wavelength and how is visible to the human eye. The brain distinguishes different colours of light within a range of wavelengths measured in nanometres. The longest wavelength the brain can recognise is 740nm (red light) and the shortest wavelength is 390nm (violet light)[9]. White light is the equal mixture of visible wavelengths the human eye can comprehend.

Lumia
Lumia 'An art object transmitting light directly to the eye to produce images of changing colours in motion was originally called *Lumia* by T. Wilfred. Objects of this kind are now classified as examples of kinetic art. A successful Lumia, according to Malina, involves two distinct phases: (1) the construction of a 'system capable of producing an image with light movement' and (2) the creation of a 'satisfying aesthetic visual experience on the translucent surface'.' Quote taken from Bornstein, M.H. On Light and the Aesthetics of Color: Lumia Kinetic Art, *Leonardo*, Vol. 8, No. 3 (Summer, 1975), Pergamon Press. pp.203-204.

Lux
Lux is the known as the international unit of illuminance which is equal to one lumen per square metre. Lux is used as the measurement of light intensity as perceived by the human eye where by light reflects or passes through a surface.

Malevichian
Malevichian is a word exclusive to *Installation/Painting*. It means ideological resonance in relation to the concepts and theories of Malevich.

Many Worlds Interpretation

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[8] [*count noun*] a source of illumination, especially an electric lamp: *a light came on in his room.* (http://oxforddictionaries.com/definition/light?rskey=Sl8cNB&result=1).
[9] Ibid.

Many Worlds interpretation of quantum science which suggests many parallel universes.

Material Alchemy
'"Material alchemy" utilizes substances from the physical world and has for its goal some product or other (e.g., gold or knowledge)' (Voss, 1998).

Matter
The term matter is concerned with the 'physical substance in general, as distinct from mind and spirit, that which has mass and occupies space'.[10] *Installation/Painting* is not interested in matter which occupies space but the physical substance of an object. This physical object is pulverised into the substances of which it consists. It is this separated substance which is mixed with a binder used in the production of paint.

Mindfulness
Mindfulness practice is a form of meditation taken from Buddhist ideology and is concerned with awareness of sensation within the body and mind. Professor John Kabat-Zinn is the founder of the Stress Reduction Clinic and the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School and has written extensively on the subject.

Mondrian Platform Frame
"It consists of a strip element and a platform element. The strip is butted, post and lintel (not mitred), and protrudes about 1/8" to protect the painting. It is nailed to the stretcher. The platform element—four or so inches wide—is mitred and joined, then attached to the painting from the back by screws going into the stretcher.
The frame appears to be white, but it is actually off-white to contain the pure white of the painting. The function of the strip is to protect and delineate the picture; the function of the platform is to surround the picture with a completely neutral island to force the eye inward to the painting. This was necessary in the Twenties because most interiors were either panelled wood, dark colors, or decorative wallpapers".
Guthrie, M. Time Frame Interview: Robert Kulicke, Picture Frame Magazine. (Dec. 2003), p. 95.

Monism
Monism 'posits the unity of all thing, both spiritual and material' (Henderson, 1986, p.222).

Neurotheology
Neurotheology is a relatively new science in quantifying spirituality. Dr. Andrew Newberg (University of Pennsylvania) developed a 'method of scanning considered relatively novel. Since using a typical MRI would have been too distracting, he used a new technique called Single Photon Emission Computed Tomography (*SPECT*). In this method, researchers inject radioactively labeled material into the patient's arms, which then makes its way to the brain. This method allows researchers to follow the flow and pattern of the blood to the brain at specific time-points using special imaging technology. In essence, it takes a snapshot in time of a brain state'[11].

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[10] Concise Oxford Dictionary p.732
[11] http://www.inkpapermosaic.com/2011/01/neurotheology-bridging-the-divide-between-science-and-faith/

Non-objective

The term non-objective in this thesis is specific to painting. Non-objective painting is a form of abstract art in respect to painting being non representational of reality. Non-objective paintings are produced using only form, colour and line (usually geometric but this is not a uniform criterion) as these formal elements represent beauty. Non-objective *Installation/Painting* attempts to 'visualise the spiritual'[12] through purity and simplicity of paint. It is through the visualisation of the spiritual where painting holds the moral facet of *Installation/Painting*. It is this carrying of the moral which distinguishes non-objective art (painting) from concrete art (painting), for this aspect of the abstract art does not allow for 'symbolic implications'[13].

Operations (four)

'The works in the exhibition *L'Informe: Mode d'emploi* were grouped accordingly to four different vectors within which we discover, starting with Bataille, the mark of the formless. This division into four operations (which purposes of brevity will be termed "horizontality," "base materialism," "pulse," and "entropy") presupposes a type of classification, but this classification is porous (the "categories" are not airtight, and the exhibition's very first work – Robert Smithson's *Asphalt Rundown* [1969], a very similar work by the same artist, located at the very end of the exhibition). Moreover, the function of this "classification" is to declassify the larger unities that are the very stuff of art history: style, theme, chronology, and, finally, oeuvre as the total body of an artist's work' Formless, A User's Guide, Bois and Krauss, pp 21).

Perception

Perception within *Installation/Painting* is defined as the intuition of consciousness and is concerned with both the 'ability to see'[14] and an 'awareness of something through the senses'[15] (sensation).

Pure

Installation/Painting takes the term pure from Robert Irwin who describes it as: 'The term "pure" is not being used as a value judgement or as some kind of mystification. It is simply intended as a descriptive word to indicate such things as the open potential of our perception, or the sheer complexity of the world, which must for all intents and purposes be viewed as infinite' (Irwin, 1993, p.34).

Rheology

'Rheology is the science that deals with the flow and deformation of matter, primarily materials whose characteristics lie between those of crystalline solids are true liquids.'
Scott Blair, G. W. Rheology and Painting, <u>Leonardo</u>, Vol. 2, No. 1. pp. 51. Pergamon Press, 1969.

Self-illuminated Frame

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[12] http://www.tate.org.uk/collections/glossary/definition.jsp?entryId=621
[13] http://www.tate.org.uk/collections/glossary/definition.jsp?entryId=74
[14] http://oxforddictionaries.com/definition/perception
[15] Ibid

The self-illuminated frame is a new development in which coloured LEDs are placed within the frames structure to illuminate and interact with the painted surface.

Sense Experience
'…Hegel, if you read it very carefully, reaches a curious point. He goes from sense experience, okay, very particular sense experience, to pure ideational spiritual experience, and he argues that the climax of spiritual activity—let's use that word—is the spirit knowing itself and coming and becoming itself. And then suddenly, having said that, he flips right back into sense experience, and he says the spirit knows itself most through sense experiences. So we have the idea of spiritualized sensing, so to say, implicit in Hegel, the whole thing starts over again, and I think Kandinsky is trying to address that moment.' Kuspit, D. **Reconsidering the Spiritual in Art, Blackbird, Volume 2. Number 1. Spring 2003**, Part 1.

Spiritual Alchemy
'"Spiritual" alchemy was understood as a form of illumination, a means of transmutation, a method for experiencing levels of reality that are not ordinarily accessible, since they exist beyond the level of everyday reality' (Voss, 1998).

Spiritual Impulse
Spiritual impulse of a term Kuspit used to argue that 'Kandinsky is bringing together the spiritual idea of art with the aesthetic idea of art, or let's say the spiritual impulse, and trying to unite them'. Taken from Kuspit, D**.** Reconsidering the Spiritual in Art, Part 1. 2003.

Spirituality
Installation/Painting is not concerned with religious connotations attached to spirituality. *Installation/Painting* uses the word spirituality in relation to the 'human spirit or soul as opposed to material or physical things'[16]. Spirituality within *Installation/Painting* is found in the sensation of viewing the paintings with a heightened sensation due to mindfulness practice. Mindfulness helps the viewer to become 'not concerned with material values or pursuits'.[17] *Installation/Painting* is to use the meditative qualities of mindfulness practice to help the view gain a heightened sensation within the body.

Stendhal Syndrome
Stendhal syndrome is a concept put forward by Henri-Marie Beyle which is also known as the Florence syndrome. It is caused in humans when viewing beautiful works of art, the heart rate increases and can trigger fainting.

Tableaux
The genre of tableaux within art is traditionally: 'A silent and motionless group of people arranged to represent a scene or incident'[18]. O'Doherty associates the term in relation the gallery space itself being the tableau. The gallery space becomes the art, for example, an office space.

Taoism

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[16] http://oxforddictionaries.com/definition/spiritual#m_en_gb0801390.011
[17] Ibid.
[18] http://www.oxforddictionaries.com/definition/english/tableau-vivant?q=tableau+vivant

Taoism is the Chinses philosophy/religion that is concerned with living in harmony.

Theosophy
Theosophy 'taught that humankind is the passive recipient of a preordained transcendence [through] expanding appropriation of Eastern religions' (Finch, 2005, p.97).

Thermochromic Pigment
Thermochromic pigment is 'based on liquid crystal technology. At specific temperatures [in this case 27°C] the liquid crystals re-originate to produce an apparent change of colour. The liquid crystal material itself is micro-encapsulated – i.e. contained within the microscopic spherical capsules typically just 10 microns in diameter. Billions of these capsules are mixed with a suitable base to make thermochromic printing ink. The thermochromic pigment in the *Smart Colours* system is made up as a liquid paste compatible with any acrylic media'[19].

Three Mystical Sources (Kandinsky)
'Internal necessity arises from three mystical sources. It is composed of three mystical necessities:
1. every artist, as creator, must express what is peculiar to himself (element of personality)
2. every artist, as a child of his time, must express what is peculiar to his own time (element of style, in its inner value, compounded of the language of the time and the language of the race, as long as the race exists as such)
3. every artist, as servant of art, must express what is peculiar to art in general (element of the pure and eternally artistic, which pervades every individual, every people, every age, and which is to be seen in the works of every artist, of every nation, and of every period and which, being the principle element of art, knows time nor space).'

Chapter VI The language of forms and colours, taken from On the Spiritual in Art (Kandinsky, 1912) (Kandinsky, 1912, p.173).

Three Stages of Consciousness (Carpenter)
Henderson discusses Carpenter's *The Art of Creation* (Carpenter, 1904) and three stages of consciousness which: 'According to Carpenter, self-consciousness is characterised by the sense of separation of self from objects in the world and by knowledge based only on intellect. Only in the third, cosmic stage does the illusion of separation of subject and object, "of 'self' and 'matter,'" disappear, as knowledge based on emotion replaces thought' (Henderson, 1986, p.223).

Transmutation
Transmutation is the word Karen-Claire Voss to 'mean metamorphosis, and entails a form of gnosis' (Voss, 1998) within spiritual alchemy.

Typographies
According to Dubuffet *Typographies* are: '"What seduced me right from the start was the idea of composing pictures by the simple means of juxtaposition of textures in which no delimited object or contour appears and which recreates the impression

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[19] http://www.mindsetsonline.co.uk/Downloads/SMARTCOLO.PDF

one gets from contemplating the soil of a vast expanse that can be extended indefinitely."' (Glimcher, 1987, p.12).

Texturologies
According to Dubuffet *Texturologies* are: 'created by the splattering and dripping of a fine all-over painted texture…these works strive to be the equivalent in paint of the earth itself; fragments of a continuous whole that evokes infinity. The painterly micro-texture of these works without formal direction – top and bottom, right and left – is also an analogue for the essentials of vision and perception' (Glimcher, 1987, pp.12-13).

Wright-Wassal
Wright-Wassal reflectance spectrophotometer detected changes at the surface of the painting due to the slight yellowing or matting of the vanish layer,

Zaum
A Zaum state is a void which comes about through contemplation and is open to the 'search within himself for the world and the discovery of his own image' (Douglas, 1986, p.190). Zaum is a concept from Malevich and his Suprematist movement.

Zorved (see=know)
Zorved (see-know) signifies a physiological change from the former ways of seeing and entails a completely different way of representing what is seen. Matiushin 1923 manifesto.