

Emotion in the Digital Age: Bergson's Creative Emotion and Metaphysical Methods for Digital Video Production.

Submitted by **Heather Marie Minchin**, to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Film by Practice, 2013.

This thesis is available to the Library for use on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted for the award of a degree by this or any other University.

.....Heather Minchin

Abstract

This PhD explores Bergsonian notions of duration and the unrepresentable characteristics of creative emotion. Contemplating emotion through Bergson's duration assists an understanding of the measure of emotion's quantitative multiplicity, the complexity of its qualitative multiplicity and its creative potential. The application of these ideas to the Deleuzian cinematic concepts of the movement-image and time-image, allows the exploration of digital and analogue cinematic techniques alongside the characteristics of representable and unrepresentable emotion.

The analysis of emotion traverses various historical and contemporary subjects that include areas such as philosophy, science, art and digital sound and moving-image technology.

Three video pieces created for this thesis illustrate and elucidate the theoretical argument. The first work deals with movement, duration and change, the second with coexistent time, memory and perception and the third with intuition the *élan vital* and creative emotion. Each film is intended to allow the viewer/listener to enter their own creative emotion.

Thus the research reevaluates and elevates the further potentials of emotion, beyond its mere representation in order to discover how its very nature, suggests new approaches to the creation of art work that is itself, able to reveal the nature and process of creative emotion.

Acknowledgements

I would like to thank the University of Exeter for my doctoral bursary.

My sincere thanks go to my academic supervisor Prof. Susan Hayward for finding me and persisting with me, until the very end. At last I had encountered someone who understood art, film, creativity and Bergsonian and Deleuzian philosophy.

Sincere thanks also go to my practice supervisor, Prof. Don Boyd for his support and encouragement as a mentor and for sharing his insightful knowledge of film, video, sound and art creation.

The thesis is dedicated to the memory of my parents Dorothy Mary Minchin (nee Reynolds) and Geoffrey Edward Minchin, who allowed me to see the world from the other way around. It is also for; Eileen Sneath, whose support has been unwavering, 'the devil's advocate', Arthur Sneath, who taught me the art of debate, my sister Elaine Cooper and my brother Steven Minchin.

Most of all I would like to thank my long suffering partner, for her endless twists, turns and creative support, throughout a journey of unrepresentable emotion.

TABLE OF CONTENTS

| | |
|--|------------|
| Title page | 1 |
| Abstract | 2 |
| Acknowledgements | 3 |
| Table of contents | 4 |
| List of illustrations | 5 - 11 |
| <u>Introduction</u> | 12 |
| Bergson, Creative Emotion, Duration and Film and Video Motion. | |
| <u>Chapter One</u> | 30 |
| In My Breath I Drew: Bergson's Method Of Movement | |
| <u>Chapter Two</u> | 44 |
| Portrait Of Myself: Bergson's Method of Memory and Perception | |
| <u>Chapter Three</u> | 78 |
| Method Of Orange: Bergson's Method Of Intuition | |
| Conclusion | 113 |
| Appendices | 117 |
| Bibliography | 144 |
| Video\Filmography | 153 |

List of Illustrations

List of Illustrations:

Figure 1.

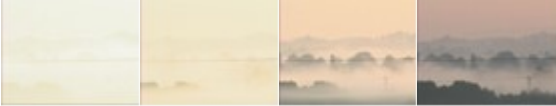
p. 25



Muybridge stills (1878) <http://silentlondon.co.uk/2010/11/30/1985652051/> [Accessed 25-05-2013]

Figure 2.

p. 27



Stills from *In my Breath I Drew*

Figure 3.

p. 29



Stills from *Portrait of Myself*

Figure 4.

p. 29



Stills From *Method of Orange*

Figure 5.

p.31



Picasso - Centaur (1949)

<http://t1.gstatic.com/images?q=tbn:ANd9GcRDjzLZmxopdwDIBMqRlyEW8Pd8ze9ghXN5fiG1yKxoFISuCY3-yhLITbT> [Accessed 24 September 2012]

Figure 6.

p.39



Nan Hoover – Impressions (1978) http://t2.gstatic.com/images?q=tbn:ANd9GcT9nR-Ca1XoriCP2VaBCGqexSgggbzVN_OtOO6M35azJ0Z1sMmFQoFUaSuz [Accessed 24 September 2012]

Figure 7.
Stills from *In my Breath I Drew*

p.42

Figure 8.

p.45



Henri Bergson (1941) <http://filmint.nu/wp-content/uploads/2011/05/henri-bergson.jpg> [Accessed 24 September 2012]

Figure 9.
Stills from *Portrait of Myself*

p.46

Figure 10.

p.62



Alice B. Toklas, Basket and Gertrude Stein (1944) ('liberation of Gertrude Stein' photograph by Carl Mydans) <http://www.art.co.uk/products/p14800865-sa-i3065903/posters.htm> [Accessed 24 September 2012]

Figure 11.

p.63



Gertrude Stein (painted by Picasso 1906 onwards)
<http://www.museyon.com/blog/2010/04/28/news-picasso-exhibition-opens-at-the-met/> [Accessed 24 September 2012]

Figure 12 a.
Bergson's Cone (2002, *Matter and Memory*: 152, Fig 4.)

p.67

Figure 12 b.

The Visible Universe, still from *Portrait of Myself* in Bergson's cone diagram

p.69

Figures 13 - 17

Stills from *Portrait of Myself*

p.p.73-77

Figure 18.



Gilles Deleuze

http://t1.gstatic.com/images?q=tbn:ANd9GcQ14cCa49Y7MoV4C5vABpyhwI3Em_CN89DhSMHwTmqDRGxIkE1q5cwcl2f4 [Accessed 24 September 2012]

p.79

Figure 19.

Stills from *Method of Orange*

p.81

Figure 20.



Stills from Andy Warhol's *Chelsea Girls* (1966)

http://www.n3krozoft.com/_xibcf67373.TMP/tv/outer%2Binner_space.html [Accessed 24 September 2012]

p.92

Figure 21.



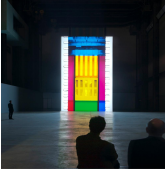
Still from Nam June Paik's, *Electronic Highway* (1974-93 etc.)

http://t1.gstatic.com/images?q=tbn:ANd9GcRrSZYZtgCuZjE00_QTyV2tl-ebDheSzk1E8CMmKXF20p7vI7ke8p26cw [Accessed 24 September 2012]

p.93

Figure 22.

p.96



Tacita Dean (2011) : Film by Tacita Dean in Tate Modern, London

<http://www.guardian.co.uk/artanddesign/2011/oct/10/tacita-dean-film-review> [Accessed 24 September 2012]

Figure 23.

p.97



Ros Nashashibi's, *Happenings* (2005)

http://images.nymag.com/homedesign/features/06_hdhappenings_250.jpg [Accessed 24 September 2012]

Figure 24.

p.97



Still from David Hockney video installation (2012) **Royal Academy of Art** 2010, Woldgate Woods, 11.30 am and 9.30 am", Film still from 18 screen video, Courtesy of the artist © David Hockney.

http://www.toasttravels.co.uk/2012/02/21/hockney-films-revelations/hockneywoldgatewoodswi_680web/ [Accessed 2 May 2013]

Figure 25.

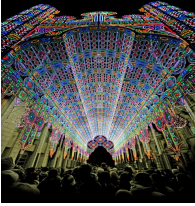
p.98



Char Davies's, *Osmose* (1996) <http://userwww.sfsu.edu/infoarts/links/artsciencelecture/vr.art.htm> [Accessed 24 September 2012]

Figure 26.

p.99



Natalie Jermijenko's, *The Cathedral of light* (2012) <http://www.neatorama.com/2012/01/31/the-cathedral-of-light/> [Accessed 24 September 2012]

Figure 27.

p.101

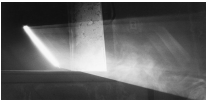


James Turrell's, *Afrum I (White)* (1967)

http://emuseum2.guggenheim.org/media/previews/92.4175_ph_web.jpg [Accessed 24 September 2012]

Figure 28.

p.101



Anthony McCall's, *Room with Altered View* (1973)

http://payload.cargocollective.com/1/1/63512/802458/Museo-Magazine-Anthony-McCall-Room-with-Altered-Window-1973_800.jpg [Accessed 24 September 2012]

Figure 29.

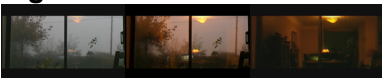
p.103



Stills from *Moments in a Journey of Speech*

Figure 30.

p.104



Stills from *Hour between light and dark*

Figures 31- 33.

pp.108-111

Stills from, *Method of Orange*

Figure 34.

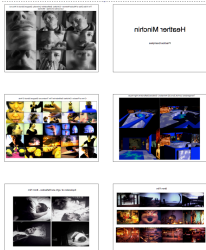
p.112



Gilles Deleuze <http://filosofianews.blogspot.co.uk/2011/07/gilles-deleuze-los-codigos-el.html>
[Accessed 24 September 2012]

Figures 35 – 37.

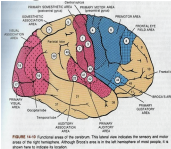
pp.118-120



Examples of my practice

Figure 38.

p.134



Map of brain areas Figure 39. (Tortora, Anagnostakos, 1987: 321).

Figure 39.

p.136

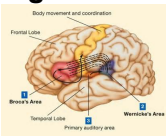


Diagram of language areas: Broca's and Wernicke's areas
<http://web.uvic.ca/~lalonde/psyc335/notes/lecture08.html> [Accessed 25-05-2013]

Figure 40.

p.137

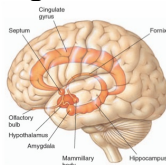


Diagram showing areas of the Limbic System
<http://mikeclaffey.com/psyc2/notes-cog-motivation-emotion.html> [Accessed 25-05-2013]

Introduction

Introduction:

Bergson, Creative Emotion, Duration and the Motion of Video and Film.

My own creative work has spanned several mediums which include wood and stone carving, in particular the process of stone carving led to my interest in movement and the duration of the production of an artwork. Importantly an intuitive approach, which seemed to rely on an indefinable emotive force, informs my creation of film, video, sculpture, sound, text and performance work. My interest in movement and duration and the change of light over the production of creative work prompted my exploration of 8mm film, 16mm film, VHS video, Standard and High Definition Video, as well as computer animation and 3D technology¹. Sound manipulation and the spatial movement of sound on headphones, radio broadcast and in situ, has also extended the remit of my creative production over duration. More recently my work has included time-lapse techniques, shots of extended length and sound and image recorded with mobile phone technology. The use of this technology assisted my conception and curation of Barrister/Artist B.Temple's exhibition, which experimented with digital production and enlarged printout techniques. Sections of the theoretical research for this thesis, also directly influenced the theme and hang of her show Representing Refugees².

My PhD by Practice consists of three time-based artworks, which I use to explore Bergsonian philosophy, duration and the unrepresentable characteristics of creative emotion. Digital and analogue filmmaking techniques, inform my research methodology and the production of audiovisual work. My main questions are: What happens to emotion when we place it in duration? How do Bergsonian models of movement and duration assist an exploration of unrepresentable emotion through the Deleuzian cinematic concepts of the movement-image and time-image? How can we apply Deleuzian thought to the techniques of analogue and digital cinema

¹ See Appendix 1 for work examples.

² See Appendix 2 for examples of work and catalogue for B.Temple – Representing Refugees Exhibition, Matrix Chambers.

production and our understanding of creative emotion? How can I reveal through the production and discussion of these techniques, the potential of emotion, to affect new ideas and methodologies, in moving-image and sound creation?

Deleuzian concepts of the 'movement-image' and 'time-image' in cinema develop from 'four commentaries on Bergson's notions of movement, image, recognition and time' (Deleuze, 2002: 9). This thesis investigates the movement-image to understand the production of external images, and the time-image to understand how we could create, with perception and memory, coexistent images of time. I endeavour to explore what making the Deleuzian notion of coexistent past, present and future time visible might mean, and how this same experience of time and duration, can be portrayed in my practice. I also consider whether my work is capable of allowing the viewer/listener to enter their own creative emotion. In so doing, I explore the further potentials of emotion, beyond its mere representation to discover how its movement and continually changing nature, can suggest new approaches to the creation of audiovisual work.

In *Time and Free Will*, Bergson discusses our experience of the changing nature of sympathy to explain how emotion moves and changes in a similar way to pure duration. Duration for Bergson involves two types, one where time functions as an automatic succession of quantitative units, these homogenous juxtaposed moments exist externally to the self. The other type of duration is its pure form and enables us to enter into the depths of ourselves; its characteristics are qualitative, heterogeneous and inseparable. This pure duration is the accumulated and continuously progressive form of time, which moves beyond digital measure and the time of ticking clocks, to retain through our experience of memory and emotion, new experiences in the present.

Representable emotion helps us to express and articulate our unrepresentable pleasure, pain and creativity, in the material world. Unrepresentable emotion helps us to intuitively create with everything that we are indefinably about and becoming. The unrepresentable and creative force of emotion forms the foundation of my research,

which I investigate in relation to my film practice and my production methodology. Bergsonian and Deleuzian philosophy provide the grounding for my articulation of the intent of my films, as well as to the importance of emotion, for artistic production and the creation of the new.

Emotion when contemplated through Bergson's duration can assist our understanding of either the measure of its quantitative multiplicity, or the complexity of its qualitative multiplicity and its creative potential. Self-sufficient emotions (creative emotions) are capable of affecting thought and generating new ideas (Deleuze, 2002: 110). If we apply these ideas to the Deleuzian cinematic concepts of the movement-image and time-image, we can explore digital and analogue cinematic techniques alongside the characteristics of representable and unrepresentable emotion. If we accept, as Deleuze suggests, that cinema offers a way of analyzing the meaning of images and the functioning of thought, it follows that because the cinematic experience engages with the emotional response of the audience, it could also provide a medium through which we can explore image, sound, emotion and movement.

Modern movement developed from Copernicus's introduction of a heliocentric system, which questioned our perception of time, motion and space. Science, philosophy and art were compelled to revise their methodological and theoretical approach to our external and internal experiences of life. Earth's journey around the sun began our adventure into a profoundly different world. This undermined our privileged universal status and our vision of a heaven above, and a hell below.

Galileo was incarcerated for supporting these ideas, although further established not only was the sun at the centre of the universe, but it too was in motion and rotation. He sought the reasons for the causes and effects he observed in nature, developing laws for motion and descent by calculating the entire trajectory of falling bodies, with water-clocks. As Bergson elucidates,

Galileo thought there was no essential moment, no privileged instant. To study the falling body is to consider it as it matters not what moment in its course. The true science of gravity is that which will determine, for any moment of time whatever, the position of the body in space. (1998: 331)

The material universe for Descartes functioned like a machine controlled by laws of matter in motion. He speculated on nature's first causes and formed analytical geometry, to define motion with lines and curves. His laws of mechanics extended to the human body, which generated heat and movement (Eaton,1927:363). The body, brain and nervous system could be divided and measured with geometrical depth, breadth and length. The soul however, remained an indivisible thinking substance with 'no place in the quantifiable world of physics' (Gregory, 1988:189).

For Descartes, our eyes, interpreted light reflected from external objects as sensations, which united into images in the brain's pineal gland. This acted upon the soul by allowing it to see, which excited the passions and induced bodily actions such as flight or fight, as a response to desire, fear or courage. All new events were passions, formed by a cause and its effect and these passions split into those of the body that is related to external action, and those of the soul, which stirred deep inside the pineal gland. The soul, desperate for self-control of the passionate, chaotic, emotional and reactionary body, utilised mathematics, measurement and reason. Which is why for Descartes, it was important to distinguish between our passions and the potential of our inner emotions. He states,

inward emotions touch us most nearly, and in consequence have much more power over us than passions from which they differ, and which are met in conjunction with them, it is certain that, provided our soul is always possessed of something to content itself with inwardly, none of the troubles that come from elsewhere have any power to harm it, but rather serve to increase its joy, inasmuch as, seeing that it cannot be harmed by them, it is made sensible of its perfection. (cited in R.M. Eaton, 1927:394-395)

Here we glimpse the power of inner emotion, for philosophy, and its potential to generate joy and satisfy the soul. Instead of simply being a part of observable bodily action, and our emotional reactions to representable sensations in space. We find an immeasurable, unrepresentable synthesis of evolving and complex emotion.

All motion, for Descartes, was relative to other objects in motion without fixed references in space. He implied a theory of relativity where nothing was at rest (Homer.W.Smith, 1959: 113). He was however, swayed by scientific fact and summarised his physical principles as, 'give me matter and motion and I will make a world'. (R. M. Eaton, 1927:vi) For Descartes,

the heavens are a machine, vast swirling vortices of particles separated out from an original undifferentiated matter; the human brain and body are machines, delicately adjusted to the flow of the blood in the animal spirits, like the fountains of a French formal garden. (cited in R. M. Eaton, 1927: vi)

Newton formed universal laws of celestial mechanics that enabled modern science to measure time and movement. For Newton, time, space and movement were mathematically divisible and measurable, by the placement and addition of objects in space. His theories of gravitation established universal constants of absolute time and rest, to which the position of all events could be referred (Fraser, 1990:114). Any event could be located, at any instant in space and time, and by adding the successive moments of an event together, summed up into a totalising whole. Modern philosophy constructed similar totalities by adding successive units of conscious events together. Consciousness was as measurable as the scientifically observable universe. The consequence as Bergson explains, is unrepresentable internal states are confused with external symbols and objects in space. This stills our inner potential for movement, change and the creation of the new.

Unlike Newton, Kant considered space and time not as absolutes but as 'a priori' forms required for reasoning and knowledge. Although accredited for unhinging time from its subordination to the measure of movement in space, Bergson shows, Kant confused time with space, stilling our potential to change and create the new. Kant proposed space and time were not conditions for the existence of things. Instead, both offered the possibility for the manifestation and synthesis of external and internal things, within our knowledge and understanding, Space, time and mathematics were a priori subjective forms of human sensibility, which were given by the manifold of sense to the mind. For Kant, sensations existed in space, and space and sensations could be measured by geometric configuration. The mind and consciousness on the other hand, existed in time, which could be accounted for by the repetition and addition of mathematical units. Space and geometry enabled our combination of co-existent sensations, while time and arithmetic facilitated our account of their succession in thought.

Spatial sensations such as colour, fragrance, taste and sound were received in temporal succession and intellectually processed into concepts of substance and cause. This implemented a change within us, from how we felt about received sensations, to how we thought about them (Erdmann, 1924: 378-379). Our subjective sensations became unified by the mind through the addition of their moments in time. Conscious concepts were formed by unifying passively received external sensations, into a time-succession, which combined to form our knowledge. Judgments of experience arose out of sense perception, which thought spontaneously united into a conscious event (Erdmann, 1924: 378-379). Accordingly, time was made from homogenous juxtaposed moments, so successive sensations could be counted one after the other to form a synthesis in consciousness. Thus, time and consciousness functioned like the repetition of mathematical units in space. As Bergson states,

If time, as the reflective consciousness represents it, is a medium in which our conscious states form a discrete series so as to admit of being counted, and if on the other hand our conception of number ends in spreading out in space everything which can be directly counted, it is to be presumed that time, understood in the sense of a medium in which we make distinctions and count, is nothing but space. (2001:91)

In other words Kant's mathematical principles confused time with space, mixing our Ego and internal states with symbolically representational matter in space. He 'ascribed to the causal relation the same meaning and the same function in the inner as in the outer world' (Bergson, 2001:232). As a consequence, he disregarded our continuously changing natures. Instead, perceiving conscious and psychic states as if they were mechanically formed by cause and effect in space (Bergson, 2001:232). This results in our conscious and internal states reoccurring in our inner depths, as if physical phenomena repeated in space. Consequently, our comprehension of our inner selves was prevented from experiencing movement and the potential for change within duration. As Deleuze states, 'what Bergson shows us is that if the past is not past at the same time that it is present, not only will it never be able to be constituted, but it could also never thereafter be reconstituted starting from a later present' (Deleuze, 2004: 29).

Modern philosophy like science, had constructed a totalizing concept of time. Everything new could be reinterpreted as something that already existed in nature, although had escaped previous discovery. This stifled the possibility of open and new creation, and our potential to continually progress. For Bergson, time is an invention that mathematically reduces everything to a calculated and representable whole. To counteract the problem of measurable ready-made time and space, and Kant's confusion of their characteristics, Bergson defines duration. His exploration of duration begins by identifying two types of multiplicity, one being quantitative and the other qualitative.

Quantitative multiplicity refers to representable material objects that can be individually measured and counted in space. Homogenous forms include mathematical symbols, human bodies, MRI brain areas, cars, stilled film frames etc. Individually, each representable thing could be counted and spatially juxtaposed. To assist our understanding of quantitative multiplicity, Bergson provides an analogy of a flock of sheep. If we ignore their individual differences, we could simply observe their common homogenous appearance and characteristics as sheep. Each sheep could then be spatially juxtaposed and represented as a symbolic number in space.

If we retain this image of flock of sheep, assuming all are identical but occupy different positions in space, we can imagine their simultaneous existence within the same image. We could also imagine a single sheep repeated fifty times, constituting a series of images of a single sheep added together by the mind in time, instead of in space. However, a repeated unit (or image of a sheep) over time in our conscious imagination requires symbolic representation. To picture repeated images of the same sheep in our imagination, both separately and in succession, requires more than an image of a single sheep. That is to say, Kant's repetition of the unit in time cannot 'form an image or idea of number without the accompanying intuition of space' (Bergson, 2001: 78). This makes it almost impossible to account for a priori knowledge, without forming symbolic representations. As Bergson points out,

as soon as we fix our attention on the particular features of objects or individuals, we can of course make an enumeration of them, but not a total, the idea of number implies the simple intuition of a multiplicity of parts or units, which are absolutely alike. (2001: 76)

Applying this concept of multiplicity, as we go deeper into consciousness, we find a multiplicity of complex states. If we add their moments together, their number would be identical to the number of moments we take to count them. However, in

order to do this we would need to still them into co-ordinates or numerically representable symbols in space. The consequence is we juxtapose conscious and psychic states and so the same states reoccur, in a similar way to physical phenomena repeated in space. Consciousness however, requires change over duration so we are continuously becoming.

If we applied the same idea to counting the pixels of a stilled digital film frame, we would be able to individually count each spatially juxtaposed pixel and define the total number of pixels in the image, say to a number of 500. Or we could imagine one single pixel and repeat its image, adding each imagined repeated pixel image together until reaching a number of 500 pixels. However, if we imagine one pixel repeated 500 times, we end up with a similar analogy to Kant's repetition of the unit in time, whereby a repeated pixel constitutes a succession of single units. When in fact, what we are observing, is the qualitative becoming of unbroken speeding light.

Qualitative multiplicity is true duration and can be applied to our inner experiences and conscious states which only become quantitative multiplicities, if symbolically represented in space for analysis (Bergson, 2001: 85-86). Whether applied to the motion of inner emotion and consciousness, (or cinemas flow of projected light) we are often too busy analyzing representation in space (the observable action of cinema or gesture of emotion) to grasp their changing characteristics over duration.

To illustrate unmeasured qualitative and heterogeneous multiplicity Bergson discusses the complexity of sympathy. The essence of sympathy is a feeling of 'qualitative progress', which develops from our pity for others as a 'transition from repugnancy to fear, from fear to sympathy, and from sympathy itself to humility' (Bergson, 2001: 18-19). The nature of internal emotion and conscious states are, as Bergson shows, are inexpressible because they are continuously changing qualitative multiplicities.

When we experience ourselves outside laws of causality by placing ourselves within our own duration we encounter characteristics that are qualitative,

heterogeneous and inseparable. Pure duration is the accumulated and continuously progressive form of time.

Below homogeneous duration, which is extensive symbol of true duration, a close psychological analysis distinguishes a duration whose heterogeneous moments permeate one another; below the numerical multiplicity of conscious states, a qualitative multiplicity; below the self with well-defined states, a self in which succeeding each other means melting into one another and forming an organic whole. (Bergson, 2001: 128)

Qualitative duration is continuous, differentiating and its motion indivisible (Bergson, 1992:164-165). This process of indivisible motion is fundamental to the production of my creative film work, which relies on continuous motion and images becoming. Bergson prioritizes movement over the image of the material thing that moves, because the moving object detracts us from the purity of its motion. Movement is in duration, continuous, differentiating, heterogeneous, indivisible and important for our experience of continuing change. Duration is neither linear nor chronological; instead each instant is a continual opening onto an indefinable future.

Consciousness for Bergson, like duration, requires continuing movement and change that is neither chronologically linear nor measurable. Instead, consciousness and duration are continually new within an open future. Pure duration is continuously progressive, containing the past and providing the centrepiece for Bergson's notion of memory. Memory conserves the past, while never experiencing the same re-cognition. In memory, each new and different moment is added to previous ones, as the next new moment occurs. If we refer to memory's moments as images, each image would be added to a previous image, as a new image arrives.

Images of conscious thought, as Bergson points out, are due to light illuminating matter. Matter and our observation of it, are images and so become one and the

same thing. If the interaction of light with objects is seen to provide our image of consciousness, and as Einstein proved light is in a state of constant motion and change, then likewise, our images of consciousness must function within a constant state of unrest, motion and change. Einstein challenged Newton's space and time as absolute independent frames of reference. When space and time are independent of each other, they are unable to account for changing velocities of light, which means they must be a composite entity. The four dimensions in which all events occur are called space-time continuum because the unique time of an event requires reference to the specific place it occurs.

For Bergson, every observed particle and object located in space and time, is a bloc of space-time that reveals unfixed figures of light, instead of the rigid lines of material objects. Our image of movement arises on a plane of immanence where unfixed light illuminates matter that forms our images. These movement-images display more than mere cause and effect because each instant is continually open onto an indefinite future. Light transmission occurs over an entire plane of immanence that extends in all directions. Whenever light is observed, it reveals a completely new and variable event that is in constant motion. Events for Bergson occur outside of a presumed and constructed whole as illuminated 'any-instants-whatsoever', which form our images of consciousness as we observe the external universe. As a result, our images of consciousness also occur outside of a constructed whole as any-instants-whatsoever.

This completely converts philosophy and achieves Bergson's aim, as Deleuze succinctly puts it 'to give modern science the metaphysics which corresponds to it' (1997: 7). Time is not a string of equidistant instants, when movement relates to any-moment-whatever, thinking can do the same, opening up to new possibilities for 'the remarkable and singular' to occur at any moment in thought (1997: 7). As Bergson observed,

Ancient science thinks it knows its object sufficiently when it has noted of it some privileged moments, whereas modern science considers the object at any moment whatever. (1998: 330)

Even Einstein admitted he was wrong not to understand that the universe was expanding and changing at every moment. When every new moment has the potential for the completely new to occur, our external images and as such our conscious images remain spontaneous and creative. Deleuze suggests this idea should also be extended to art and that 'cinema is an essential factor in this, and that it has a role to play in the birth and formation of this new thought' (1997: 7).

Even though film-time is not a string of equidistant and interchangeable instants, to think of its time in this modern way allows new images and ideas to emerge at any instant. As Deleuze explains, 'at every instant, the movement is no more, but precisely because it is not made up of instants, because instants are only its real or virtual cessations, its product and the shadow of its product' (2004: 24). To illustrate modern scientific motion Deleuze refers to Muybridge's photographic stills of a galloping horse. These equidistant snapshots relate the whole canter of the horse to 'any-point-whatever', which reveal extraordinary moments as 'the horse has one foot on the ground, then three, two, one' (Deleuze 1997: 5). Each specific frozen image of the horse's movement through space can be observed as one unique moment in time. 'These instants... (are) formally impossible as the addition of privileged poses or photographic long-exposures into movement. The horse provides 'movement not as moments of actualisation of a transcendent form', but as snapshots of the horse's movement, throughout its entire gallop (Deleuze, 1997: 6).

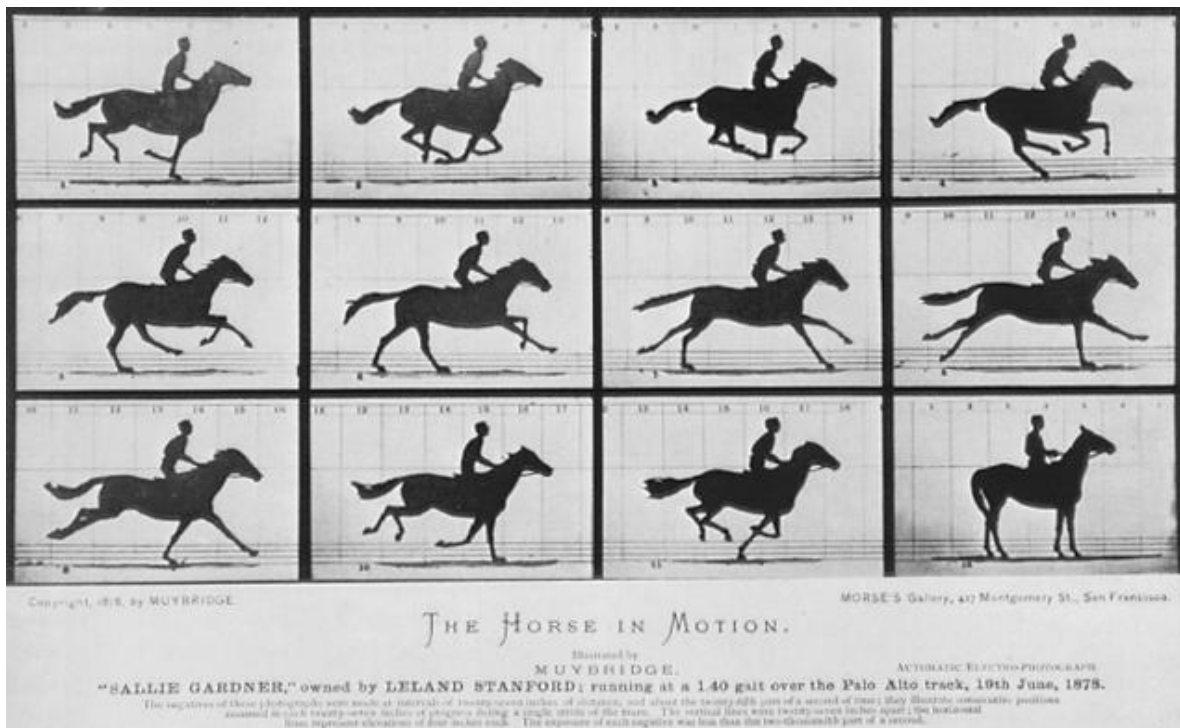


Figure1. Muybridge stills (1878)

Deleuze defines film movement that fits to Bergson's notion of any instant-what-so-ever; cinema according to Deleuze is 'not merely the photo, but the snapshot' (1997: 5). The photographic long exposure is not a characteristic of cinema. Instead, cinema produces equidistant snapshots on film, which Edison and Dickson attached to a mechanism that moved the images. In this sense cinema appears to reproduce movement as a selection of snapshots, which function as any-instant-whatever that create an impression of continuity. Film movement however, surpasses motion analysis by presenting the shot as an intermediate image in movement. As Deleuze states, 'the shot is the movement-image, in so far as it relates movement to a whole which changes, it is a mobile section of duration' (1997: 22).

The things we observe in film never become materially fixed objects. Film, 'is a set of movement-images; a collection of lines or figures of light; a series of space-time' (Deleuze, 1997:61). Cinematic movement, like all movement, is an irreducible

action that would lose its property as movement, if segmented into specific immobile sections and calculated in space. As Deleuze explains, in relation to moving objects and their expression,

one might conceive of a series of means of translation (train, car, aeroplane...) and in parallel, a series of means of expression (diagram, photo, cinema). The camera would then appear as an exchanger or, rather, as a generalised equivalent of the movements of translation. (1997: 4-5)

Usually movement is interpreted as objects changing position in space, however 'true movement' is indivisible because the object that moves and the time and space it travels through all change qualitatively as a whole. Movement exists in two ways: 1) as either a part /object in motion or 2) it expresses itself, as movement which is the duration of the whole. To show how our waiting expresses 'duration as mental, spiritual reality', Bergson asks us to imagine a sugar cube dissolving in a glass of water (Deleuze 1997: 8-9). This reveals how movement of the content of the glass, as well as the whole universe that surrounds it, all change qualitatively as the open whole. As a result, duration is qualitative changed and becomes divided up in objects, which moving objects relate to the changing whole, which in turn movement expresses.

Bergson discovers qualities are themselves pure vibrations, which change at the same time as the elements move. The movement of pure atoms 'testify to a reciprocal action of all parts of the substance' that expresses 'modifications, disturbances, changes of energy in the whole' (Deleuze 1997: 8-9). Real movement is a singular unrepeatable action that occurs in the present, separate to the space travelled through, which always exists in the past. Real movement is only possible when the whole is open, unexpected, and not given, as an eternal order of poses or instants in time.

The wholly superficial displacements of masses and molecules studied in physics and chemistry becomes, by relation to that inner vital movement

(which is transformation and not translation) what the position of a moving object is to the movement of that object in space. (Deleuze 1997:9)

Duration allows us to comprehend our heterogeneous multiplicity and qualitative potential, as well as emotion's unrepresentable relationship to the movement and change of film. Real movement is a mobile section of duration and film, whether digital or analogue technology, remains a moving-image that endures and changes within the whole and over the whole of duration, each and every new time it is shown. The duration of the whole, as Deleuze explains,

creates itself in another dimension without parts – like that which carries along the set of one qualitative state to another, like the pure ceaseless becoming which passes through these states. It is in this sense that it is spiritual or mental. (1997: 10)

Our experience in duration is unrepresentable because as soon as we attempt to represent it, we find ourselves in the flux of a new present, which is ever becoming. Emotion has a physically representable side, as in the expression or gestures of a filmic character. It also has a side, which is our inner experience of complex changing states of emotion throughout the experience of a film. Whether the film's characteristics are narrative or experimental is irrelevant, because it is simply our experience of film movement, which helps us to grasp movement as the expression of change, as well as the potential of unrepresentable emotion, as it progresses forwards and creates the new. Deleuze, paraphrasing Bergson, states

If the living being is a whole and, therefore comparable to the whole of the universe, this is not because it is a microcosm as closed as the whole is assumed to be, but on the contrary, because it is open upon a world, and the world, the universe, is itself the Open. (1997:10)

The above exegesis on Bergson's concept of duration provides a methodology for my practice. Each video is committed to an open process of creativity and each

shot, is complicit with the continuously changing world that surrounds it. On the other hand, the capabilities of the video equipment and technology utilised, help to define the recording and endpoint of each filmed piece. The creation of my practical work is premised upon the journey of internal emotion towards its expression, through moving image and an open process of making. This ensures my practice remains congruent with the open whole, which is continuously changing.

Below I provide titles with sample stills for each practical investigation and chapter of my PhD dissertation- with a brief list of the main theoretical research undertaken:

Chapter One: *In My Breath I Drew*: Bergson's Method Of Movement

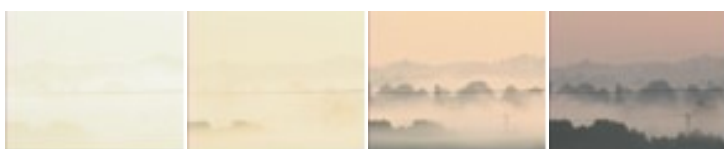


Figure 2. Stills from *In my Breath I Drew*

This digital video captures the movement of an image throughout its duration of becoming. In post-production the video was reversed and its speed increased reducing its length of sixty minutes to six minutes, making our understanding of its change over duration more accessible. My video also highlights the subtle nuance and immanence of the moving-image and my experience of creative emotion during the moving-images making. This intuitive process is unable to predict a specific outcome. Importantly this challenges our understanding of a measurable and knowable end, in favour of a durational image that reveals continuous change and becoming. Here the research reflects on altered views within philosophical and scientific thought, which have resulted from changing perceptions of light and movement. These views have challenged my understanding of time, space, consciousness, duration, emotion and artistic creation.

Chapter Two: *Portrait Of Myself*. Bergson's Method of Memory and Perception



Figure 3. Stills from *Portrait of Myself*

Here a tracking shot looks back on its own image over its duration, to consider Bergson's theories of memory and perception, and their potential to inform methods of video production. This addresses the coexistence of three forms of past, present and future time becoming. I also consider whether moving-image artwork is capable of allowing the viewer/listener to enter their own creative emotion, as they generate new creative ideas beyond those presented by the on-screen image and sound. I contemplate how the perceiver of artwork begins a journey from their own pure and self-sufficient emotions into the realms of their own creative durational process, thus painting an internal portrait of their self-becoming.

Chapter Three: *Method Of Orange*: Bergson's Method Of Intuition



Figure 4. Still from *Method of Orange*

The two videos created for this section show the duration of fading light at sunset. In post-production one video image was duplicated four times and mirrored and reflected – this method could only replicate the original perceived image as if naturally reflected and mirrored on a surface of water. Finally, two new video sections were created, by matching the four images/frames back together again. One shot moves from intuition towards intelligence, while the other falls back into itself. The perceiver synthesises the two tendencies of intuition and intelligence, through their creative emotion into their becoming.

Chapter One

In My Breath I Drew: Bergson's Method of Movement

CHAPTER 1:
In My Breath I Drew: Bergson's Method of Movement

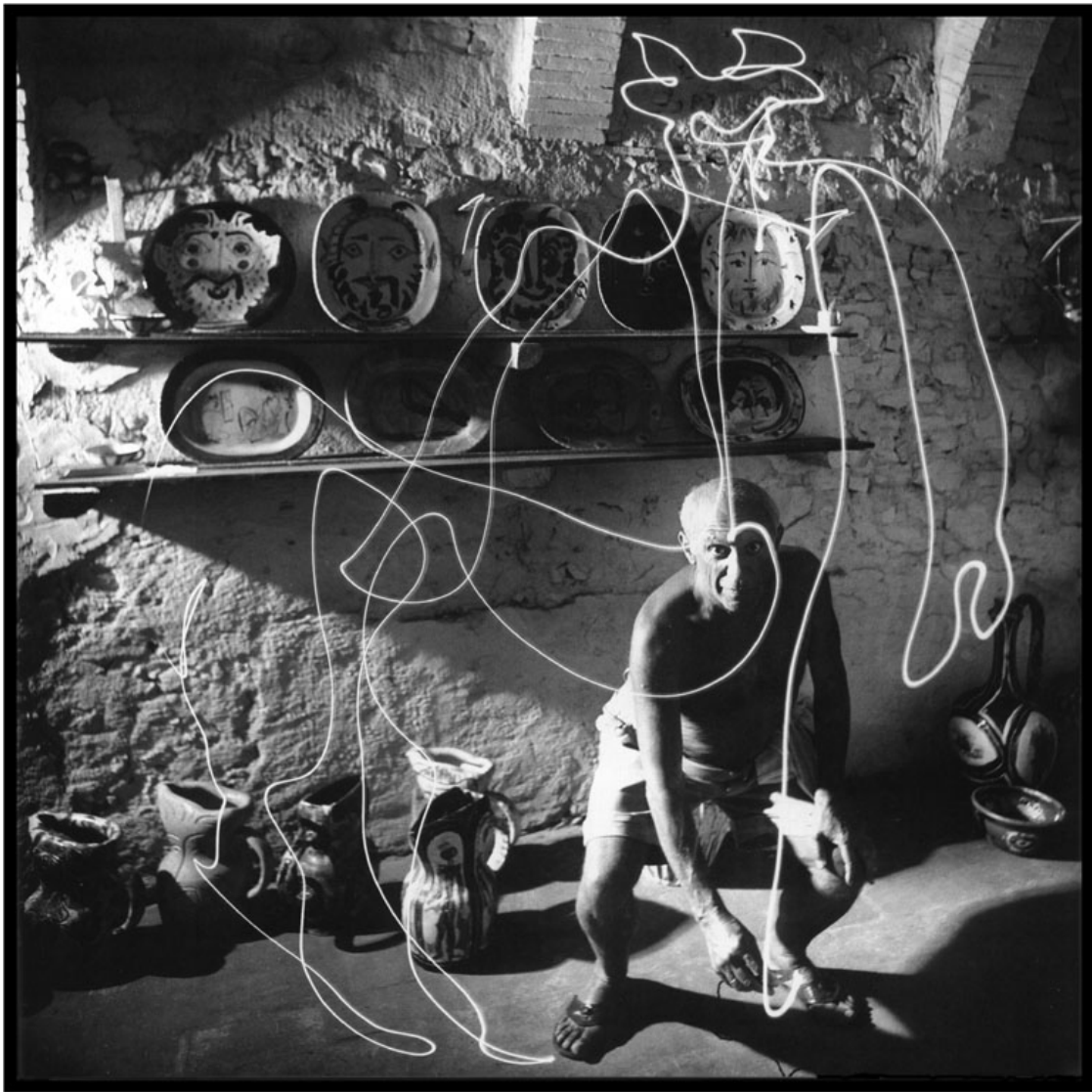


Figure 5.
Picasso drawing *Centaur* (1949)

The movement and change of film and video is their light, and like the movement of unrepresentable creative emotion, this is implicit with the duration of a process of creativity, the materialization of an image, and the activity of a video/filmmaker becoming. Picasso claimed, 'it would be very interesting to preserve

photographically, not the stages, but the metamorphoses of a picture' (cited in Harrison, Wood, 2004: 508). It is this idea of the change of an image over duration that I endeavour to capture, in my video *In My Breath I Drew*. This metamorphosis and duration of the making of a picture, leads to my investigation of creativity with digital video technology, and the significance of unrepresentable emotion, to this process.

Ravaisson's philosophy³, as Bergson elucidates 'springs from the idea that art is a figured metaphysics, that metaphysics is a reflection on art, and that it is the same intuition, variously applied, which makes the profound philosopher and the great artist' (Bergson, 1992: 231). Intuition, as Bergson explains has become increasingly devalued as science and philosophy favour intelligence, reason and analysis. Artists however, insert themselves 'within the object by a kind of sympathy [and] an effort of intuition', which breaks down 'the barrier that space puts up between' the artist and the art form (Bergson, 1998: 177).

This approach to philosophical enquiry informed the entirety of Bergson's thought, importantly for him, philosophy should fundamentally find ways to create the novel, and articulate the continuously new. He advises the philosopher to follow intuition, and the route taken by the artist when creating the new. Bergson's intuition reveals a philosophy of immanence, diversity, qualitative multiplicity, openness and duration, which extends beyond conscious analysis. This method of intuition relies on emotion and our ability to sympathise, moving beyond our subjective experience by extending and applying this method, to other people and things.

The artist for Picasso 'is a receptacle for emotions that come from all over the place...ideas and emotions will in the end be prisoners in his work. Whatever they do, they can't escape from the picture. They form an integral part of it, even when their presence is no longer discernable' (cited in Harrison, Wood, 2004: 509).

³ See M.E. Moore's review of C.Malabou's translation of Ravaisson's thesis, *Of Habit*, for an insight into his philosophy http://www.academia.edu/1999334/Review_of_Felix_Ravaisson_Of_Habit (Accessed May 25 2013).

Bergson proposes two different types of emotion, first those accompanied by muscular sensations connected to nerves and physical conditions caused by sensations such as sound and light, in the external world. Second, is underlying pure emotion, which remains a complex state of qualitative multiplicity that is self-sufficient (See Bergson, 2001: 7-8). Internal emotion is not to be confused with an emotional response to an external cause, or with sensation, sentimentality and sensationalism because these words rob self-sufficient emotion, of its creative potential. Self-sufficient emotion is capable of affecting thought, generating new ideas and enthusing the creation of the new.

Without external cause, this creative emotion is experienced prior to representation as a metaphysical force becoming; it also has the potential to inspire the materialisation of form in space. For example, when a musician experiencing the emotion of joy creates a symphony, the symphony becomes the representation of this experience, which we engage with through our sensation of its sound, in the material world. To harness the potential of creative emotion, Bergson suggests, we consider the interval that exists between social pressure and the resistance of our intelligence, as expressed through the ego, where the 'creative emotion' is produced. The progression of creative emotion openly forges us towards the future, while moving between the two divergent human tendencies of intelligence and intuition.

In *Bergsonism* (2002), Deleuze refers to Bergson's creative emotion. Importantly love, not as sentimentality, desire for a specific object, nor as the judgment of the beauty of things, but instead love as a moving progressive creative essence, which is graspable and expressible by all. Even though love might be a subjective experience, Deleuze points out, it is not necessarily an individualistic event. Emotion he states, becomes creative,

first, because it expresses the whole of creation, then because it creates the work in which it is expressed: finally, because it communicates a little of this creativity to spectators or hearers. (2002:110- 111)

Philosophers and artists have this creative emotion as a common force when creating the new. Philosophy's purpose, for Deleuze, is the creation of new concepts and creativity provides the place where art and philosophy converge. This leads to his investigation of contemporary art forms, including cinema, to offer an important development for artistic and philosophical methodology and production. Significantly for Deleuze cinema can assist our understanding of the power of thought and ways to create new concepts.

My use of digital video as a contemporary art medium moves my practice and theoretical research beyond Ravaisson's and Bergson's view of art forms. Video, nudges me towards the Deleuzian cinematic concepts of the movement-image and the time-image. These concepts assist our understanding of two types of motion one is in space (the movement-image) and the other in time (the time-image). In terms of cinema Deleuze tells us that creative images need 'to make perceptible, to make visible, relationships of time which cannot be seen in the represented' (1994, p. xii). Instead of cinema just showing movement and change in space with movement-images, Deleuze urges producers of cinema, to convey images that challenge our everyday understanding of chronological time. The time-image, offers 'a coexistence of distinct duration' where we experience various levels of our past and present, as the future becomes (Deleuze, 1994: xii). This allows us to recognise our potential to create the new, assisting our understanding that we are not just our past, but part of everything in a process of open and creative becoming. This opens us onto the outside of everything we previously knew.

What is in the present is what the image 'represents' but not the image itself, which, in cinema as in painting, is never to be confused with what it represents. The image itself is the system of the relationship between

elements, that is, a set of relationships of time from which the variable present only flows. It is in this sense, I think, that Tarkovsky challenges the distinction between montage and shot when he defines cinema by the 'pressure of time' in the shot. What is specific to the image, as soon as it is creative, is to make perceptible, to make visible, relationships of time which cannot be seen in the represented object and do not allow themselves to be reduced to the present. (Deleuze, 1994: xii)

My video *In My Breath I Drew* endeavours to explore what it is to make perceptible relationships of time in a moving image. As well as how, the image might suggest the movement, duration and progression of creative emotion. Artists have long been associated with the science of optics; in his text *Secret Knowledge* (2001), David Hockney explores the symbiotic relationship between the development of optical technology and painting. He explains how this led to enhanced painting techniques and inventions such as the camera lucida, camera obscura and eventually contemporary still and motion cameras. Hockney's research spans from 13th Century to the present day and he suggests that during the preliminary stages of the composition of a painting, light, mirror and lens would have assisted the projection of objects onto canvas, paper or wall, in order to assist accurate representation and replication. Artists could focus on improving drawing, painting and printing techniques, while advancing artistic technology.

Chamberlain points out that Leonardo da Vinci (1452-1519) 'devoted a passionate interest to the technics of instruments (he built himself a sort of telescope for the observation of the moon a century before Galileo)' (Chamberlain, 1914: 123). Da Vinci made detailed observations of light, sight, perspective, depth perception, anatomy, muscles and brain. Beneath several of Da Vinci's calculations, Chamberlain reads the words 'the sun does not move' and 'the earth is not in the centre of the sun's orbit, nor in the centre of the universe', and is also smaller than the sun (Chamberlain, 1914: 107). Although he considered the sun to be at rest,

Da Vinci, prior to Copernicus, believed the earth was in motion, motion was fundamental to his 'ideas of the cosmos as well as its relevance to the internal body and the circulation of the blood' (Chamberlain, 1914: 108).

Leonardo studied and enhanced painting techniques, such as chiaroscuro while studying perspective and areas of shadow and light. Leonardo's Sfumato painting techniques lit a plane of immanence, upon a darkened canvas, allowing Mona Lisa's mysterious smile to emerge into light. Painting evolved into more realistic images, bordering on the photographic, creating objects and characters that shimmered into life. Light captured by mirror, lens, pigment, paintbrush and the touch of the painter's hand, framed and composed the shot and the emotion of the scene.

Newton's anatomical studies formulated principles for human physiological optics with respect to lens contraction, eye convergence, head movement, and the apparent size of objects (Fraser, 1990: 113). Fraser suggested that Newton developed principles for improving spectacles, telescopes and microscopes and probably invented the iris diaphragm, as well as forming the theoretical aspects of useful aperture, magnifying power, focal length and spherical aberration. Newton proposed the rectilinear and instantaneous propagation of light by vibration and a theory whereby light functioned as a stream of particles (Homer W Smith, 1959: 113). He invented the first spectroscope that used prisms to analyse white light and the colours of the rainbow. Newton's scientific observations enhanced our understanding of light, colour and lens technology, which established the foundations for our understanding of photography and digital film technology. For example, colour separation in digital cameras requires a beam splitter prism that divides the image into red, green and blue components.

Techniques of depth of field and pull focus had already found their way into image construction and storytelling, before the birth of the still and motion camera. The long shot, medium shot and close up, had already been optically projected and composited together onto the artist's canvas. Forming images of realism and

perfection, using montage techniques to amalgamate images and enhance the power of the paintings narrative and symbolic message. Technically and creatively, these images informed the development of photography and cinema.

Emotion however, in relation to cinema, has tended to be understood and represented homogenously in space. This helps our understanding of character action and reaction and drives the film's narrative forward. However, if we only analyse emotion's representation in cinema, its further potentials remain unexplored in relation to creativity, movement, change and duration. In *Creative Evolution* Bergson considers what the duration of the creation of a work of art is and its undivided continuity and creation. He states, for the artist,

who creates a picture by drawing it from the depths of his soul, time is no longer an accessory; it is not an interval that may be lengthened or shortened without the content being altered. The duration of his work is part and parcel of his work. To contract or to dilate it would be to modify both the psychological evolution that fills it and the invention which is its goal. The time taken up by the invention, is one with the invention itself. It is the progress of a thought which is changing in the degree and measure that it is taking form. It is a vital process, something like the ripening of an idea. (Bergson, 1998, 340)

Moving-image, not simply because of its representation of content but also because of its continual process of change over the duration of its screening, can assist our understanding of emotion's changing nature. Film and video, like music, require our experience of the entire duration of their becoming as a specific video (film or piece of music). Otherwise, we would be unable to comprehend their changing nature. The fundamental characteristic of sound and moving-image is progression, which because of their movement and change, we are able to make sense of as time based mediums. The similarities between the motion of film,

video, sound and self-sufficient emotion, is not just observable and listenable characteristics and signs of movement within space, but also their continual immanence and becoming in duration and the open whole.

Initially however, as Deleuze shows, our perception of the projected cinematic image was confused and equated with its stilled celluloid frames. Similar to early modernist views of movement, moving images in film, were thought to be as mathematically measurable and mechanical as modernist movement and thought. As a result, film movement was stilled into the addition of framed moments, which falsely and abstractly conveyed film-time as mechanistic. When in fact cinema light and its movement-images, are in continuous motion and change as an image openly becoming.

Video technology, instead of dwelling on the stilled frames of early cinema, allowed early video artists to more easily convey their understanding of constant change and its relationship to their process of creative production. Embracing this new technological evolution, video artists applied their understanding of light, optics, sound and movement, to their creation of art. Video helped to express a process of creativity, through its longevity and the continuous change of the image and underlying technology. Relating processes of change to the production and representation of time in the observed artwork, Nan Hoover, as Martin points out used video, installation and performances to investigate;

the phenomena of light, movement and space: things that can only be suggested in painting. Video, however, is based on processing pulses of light in either analogue or digital signals; the transmitted video image... represents an energetically vital surface that is continually changing. Unlike the medium of film, no single, fixed shot exists in video. A so-called frame, a single shot in a pictorial sequence, can only be artificially created if one brings the video to standstill by using functions on the playback device. (2006:58)

Video for Nan Hoover, revealed a process of creativity, its longevity and continuously changing image of light related the processes of change, to the production and observation of artwork. As Hoover explained, 'Important here is the luminous character, i.e. the manifestation of light as volumes, as bodies....light as an independent body' (Sylvia Martin, 2006:58). Hoover further states, 'right from the beginning I was only interested in the continuity of the path from A to B: in a space-time continuum. For me video was comparable to the way in which one looks at a painting'. (Hoover cited in, Sylvia Martin, 2006:58)



Figure 6. Nan Hoover's, *Lightscape*

Video assists our comprehension of its moving intangible technological process and the light and sounds it captures and projects, which we perceive in a present always passing onto a future becoming. Video and digital technology (see Appendix: 2 for discussion of digital technology), like light, duration and our internal states, are impossible to directly represent as the flux of their process unfolds before our eyes through changing light and technology. Digital film is mobile at the time of its observation providing a movement-image, which is a mobile section of temporal duration. We do not perceive its digitalness as individual film frames added together, we observe its continuously moving-image and speeding light in space. Here it is interesting to note Deleuze's definition of a Cartoon,

When one attempts to define the cartoon film; if it belongs fully to the cinema, this is because the drawing no longer constitutes a pose or a

complete figure, but the description of a figure which is always in the process of being formed or dissolving through the movement of lines and points taken at any-instant-whatever's of their course...It does not give us a figure described in a unique moment, but the continuity of the movement which describes the figure. (1997: 5)

For Deleuze, cinema has the potential to show passive time in the on-screen image, as an image becoming. He refers to this cinematic concept as the 'time-image', which divides thought from any on-screen representation, enabling thought to engage with its own processes of movement, and experience its own change. This leaves an interval for thought outside of editing, action, and the narrative structure of the on-screen movement-image. Thus, allowing change to emerge within thought. Emphasising time instead of action highlights how we are not thinking. This in turn empowers thought, and stimulates new thoughts and concepts. Philosophy's purpose for Deleuze is to create new concepts that extend beyond the knowledge we have already acquired. This produces a question of resistance to what we previously knew. Cinema (art) and philosophy are capable of portraying the thought processes involved in the creation of concepts, and both should provide knowledge of the powers of thought, rather than delivering knowledge of things in general.

The obliteration of the whole or a totality expressible by images, as Rodowick suggests, is the most fundamental concept of the time-image as it provides 'an original will to art' that 'transforms the intelligible material of cinema itself' (1997:185). To understand the nature of the time-image more clearly, I return to Bergson's description of the duration and creation of an artwork. This comparison between the cinematic time-image and the time of an artwork, I believe, provides Deleuze with a method for the creation of open philosophical concepts, such as the time-image, with cinema. As Bergson explains,

Unforeseeable nothing... is everything in a work of art. And it is this nothing that takes time. Nought as matter, it creates itself as form. The sprouting

and flowering of this form are stretched out on an unshrinkable duration, which is one with their essence. So of the works of nature. Their novelty arises from an internal impetus which is progress or succession, which confers on succession a peculiar virtue or which owes to succession the whole of its virtue—which, at any rate, makes succession, or continuity of interpenetration in time, irreducible to a mere instantaneous juxtaposition in space. (1998: 341)

The *Oxford Dictionary of English* (2003) explains how the root of the word emotion is predicated on the Latin word ‘*emovere*’ which means to move outwards. Creative emotion drives us to create, it is initially non-figurative and self-generating and has the potential to create completely new ideas and transform these into perceptible forms. Inner emotions do not exist as ‘isolated inner states’ as Bergson explains at their ‘lowest level it is very like a turning of our states of consciousness towards the future’ (2001: 10). As these states are attracted towards the future our movements require less effort and our emotions, ‘ideas and sensations succeed one another with greater rapidity’ (Bergson, 2001: 10).

*In My Breath I Drew*⁴ reveals this motion outwards, as the journey of unrepresentable creative emotion and the time-image, towards the metamorphosis of a video image becoming. I switch the digital camera to record it captures the film image until its tape reaches its end. One hour of a film openly recording its own creation, an aspect ratio of 16:9, changing moving, becoming. Close up, medium or long shot are not the point here. I reverse the event and speed up the moving image in post production, digitally sixty minutes become six. The video-image begins as if you had breathed out into a plane of immanence. Breath, a thick opaque mist of white light caught on the cool morning air. White light, like white sound is tactile, it touches us, touching eyes and ears, creating feelings of vibrating sensations.

⁴ For the soundtrack to *In my Breath I Drew* see Appendix 3.



Figure 7. Stills from *In my Breath I drew*

This gaseous perception is filled with dispersing molecular photons, which reveal speeding light. White light shifting, differentiating as a thinly sketched horizontal line, gradually drifts in and out of view, midway across the screen. Light refracted and reflected upon water droplets, silhouetted shadows of depth, shading forms of degrees and intensities. Variable lines in flight, in any space and at any moment whatsoever, matter and light form shifting shapes of landscape, penciled from tumbling misty molecules. A plane of immanence, white light speeds in all directions, refracted and reflected, integrating, photons, protons, electrons, matter, eyes and brain. White light takes its time, while on a plane of immanence shadowy images emerge, drawing, painting, colouring. Amorphous forms, absent of crystalline structure, shapeless, vague, indefinable, hazy, movement.

Submerged, surrounded by images mingling their complex paths together. A bloc of space-time, a decentred misty light of gaseous perception flows onto and fluctuates from the screen. Light projected onto digital photosights, charged couple devices, volts and pixels create a frame of reference, a shot to the open whole.

Gaseous molecules and digital pixels, fluctuating, shifting, dispersing, differentiating at individual and coexisting times, filmic perception-images of the material world appear. Together, drawing sketchy vibrating lines of light in flight, finding with quantitative and qualitative methods any-elements-whatever, which move and merge together, into the emerging colour of the landscape beyond.

The shot clears over the length of the film, revealing a frame of reference to the emerging landscape. The movement of the whole openly unfolds as the camera

brushes against light, its lens probing like the nib of a pen or the bristles of a paintbrush, recording painted continuous changes of fluid gaseous perception into form and colour. A process directly informed by our changing states, the changing nature of our external world, the changing nature of light, image and the open whole. The continuous painting of an image of the duration of our creative emotion, becoming.

Starting at the end, I press play and rewind, I watch sixty minutes compressed back into six minutes. Waiting, I follow the image back to its beginning, a block of space-time, any moment-what-ever, any space-what-ever emerges. By reversing the film, I watch its becoming, which is its beginning, and then I watch it back again. Each time is a new time becoming as we watch the video again. As Bergson explains, 'we are the artisans' of our own life and each of our moments is creation, 'just as the talent of the painter.... is modified under the very influence of the works he produces, so each of our states, at the moment of its issue, modifies our personality, being indeed the new form that we are just assuming', we are continually creating ourselves, as the 'creation of self by self' (1998:7).

To grasp a better understanding of how Bergson's coexistent time occurs, the next chapter will examine the importance of memory and perception to the three forms of past, present and future time.

Chapter Two

Portrait of Myself: Bergson's Method of Memory and Perception

CHAPTER 2:

Portrait of Myself: Bergson's Memory and Perception



Figure 8.

Henri Bergson

Perception and memory never really exist or function as separate entities, although as Bergson shows, we can differentiate between their individual definitions and individual potentials. My video making process, explores how the spectator/listener of film, uses perception and memory to move beyond the presented video image and enter their own duration and creative emotion, as their self portrait becoming. I will consider some of the influences on Gertrude Stein's creative production and the significance of Bergson's theories of perception and memory, for the visual perceiver and creator of new work. This research will then inform my reflection on the production and perception of my video *Portrait of Myself* and also briefly note the relevance of Deleuzian cinematic concepts of the movement-image and time-image for the image.

The following words convey Gertrude Stein's search for a means to express her philosophy and methodology through her creative work:

I must find out what is moving inside them that makes them, and I must find out how I by the thing moving excitedly in me can make a portrait of them.
(Gertrude Stein, quoted in Meyer, 2003: p117)

Her investigative working process led her to research subjects such as human biology, physiology, neurology, emotion, painting, sound, music, theatre, cinema and Bergsonian philosophy. I link Stein, Bergson and Deleuze's thought together through a discussion of their methods and creative theories and use these to help articulate my method of production for the video *Portrait of Myself*.

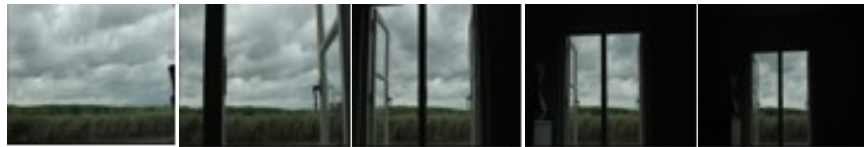


Figure 9. Stills from *Portrait of Myself* (8 min) Digital video - tracking shot with sound - Bergson: Memory and perception

Stein, Bergson and Deleuze's ideas will also assist my understanding of what moves inside myself as the maker and viewer of video, as well as for other spectators of video. I suggest that when the spectator of video steps into their role as the perceiver of the artwork, they encounter their own experience of memory, creative emotion, intuition and duration, which implicates them in their own self-portrait, beyond the on-screen image. Every viewer's visual perception of the on-screen image engages in a process that intermingles their perception of the video with their coexistent memories. Throughout this integrated discussion, I will argue that I do not need to find what moves inside the audience in order to make a portrait of them, because the audience finds creative emotion within themselves, which creates their own self-portrait and something completely new.

Stein's early influences included psychology, neuroscience and Munsterberg's film theory, which she encountered during her studies at Harvard and Yale as a medical student. Biological and scientific models of writing inspired her creative work and her academic research included the histology of the central nervous system, the embryonic brain and the functioning of neurons. She also investigated the Nucleus of Darkschewitsch, which is found in the mid-brain and is part of three oculomotor nuclei that are important for eye movement and changes in visual attention (Meyer, 2003: 75).

Her mentor William James introduced her to his doctrines of Radical Empiricism and emotion⁵. Radical Empiricism challenged Kantian divisions of subjective and objective knowledge and rejected the domination of sense data because it split 'knowledge from emotional investment' (Meyer, 2003: 11). James stressed the importance of process and conjunctive and disjunctive relations and published one of the first widely accepted theories of emotion, known as the James-Lange theory. These ideas influenced Stein's texts such as *The Making of Americans* (1925) that experiments with Radical Empiricism, scientific investigation, repetition, recollection, human portraits and Stein's perception of present time. As Stein explains in *The Making of Americans* she 'tried to make a history of the world' wanting to write 'the life of every individual who could possibly live on the earth', she developed a diagram of everybody she watched and tried to convey 'every variety of human experience... every type, every style and nuance' (Cited in Bartlett Hass, 1971:16).

While completing *The Making of Americans*, Stein began to write and speak the portraits of painters such as Matisse and Picasso. Painting challenged her thought, creativity and composition, shifting her influences away from scientific investigation and analysis towards modernist painting. Along with many artists of the time, Stein developed her creativity alongside Bergsonian philosophical thought. Bergson considered evolution to be a creative process that coincided with

⁵ See Appendix 4 for James' influence on A.Damasio re: Descartes, emotion and neuroscience.

artistic creation and unconscious states, such as memory, emotion, free will, and intuition, continuing the creation of the completely new.

Stein, and her brother Leo, invested in paintings by artists such as Cézanne, Matisse, Picasso and Picaba. Cézanne was fascinated by light, colour sensation and geometrical form and how he could give equal value, to every part of his canvas. Cézanne's work influenced Stein and Picasso. Stein experimented with words of equal value and Picasso began cubism, painting areas of equal value. Picasso painted Stein's portrait while she wrote and spoke his. Stein developed a new interest in her observation of perceived things and their visual description. As Walker describes,

Names of colours and adjectives describing the qualities of light are abundant in Stein's 'Portraits of Things'. Lines and outlines, surfaces, centres, lengths, widths, and measurements evoke the compositional resources and structures of paintings. (1984:137)

During this exploration of portraiture Stein realised she had overlooked the importance of visual perception and the impact of memory on her work. Her investigation of the 'continuous present' alongside human portraiture led to her realisation that the way she perceived things in the present, and remembered things and humans from the past, contradicted and compromised her ability to create the completely new. Stein explains,

I listened and talked but that was not all I did in knowing at any present time when I was stating anything what anything was. I was also looking, and that could not be entirely left out. The trouble with including looking...was that in regard to human beings looking inevitably carried in its train realizing movements and expression and as such forced me into recognizing resemblances, and so forced remembering and in forcing remembering caused confusion of present with past and future time. (Stein, 1997: v)

For Stein, painters created still lives 'to be certain that looking was not confusing itself with remembering. Remembering with then takes the form of suggesting in their painting in place of having actually created the thing in itself that they are painting' (Stein, 1997: vi). Stein's text *Tender Buttons* (1914) paints portraits of objects that are textually integrated with subjective states. Meyer explains that *Tender Buttons* was Stein's 'first conscious struggle with the problem of correlating sight, sound and sense' with 'the rhythm of the visible world' (Meyer, 2003:37). Stein explains she wrote 'portraits of rooms and food and everything because there I could avoid this difficulty of suggesting remembering more easily...than if I were to describe human beings' (Stein, 1997: vi). She experimented with writing until she found 'the movement of the human being' (Meyer, 2003: 202).

This led Stein to cinema, which offered her 'a new way of understanding sight and sound in relation to emotion and time,' (Meyer, 2003:203). For Stein, 'one sentence coming after another sentence makes a succession' and 'the paragraph needs to continue making a succession in order to convey the impression of movement and emotion' (Meyer, 2003: 271-275). Similar to each film frame, every sentence needed to be 'infinitesimally different from the one before' (cited in Meyer, 2003: 202). Haas provides the following insight into Stein's use of cinema,

Now the prose takes on a cinematic style. Each statement made is uniquely felt, uniquely formed in the present, and is succeeded by another, slightly different, like the successive frames of a film that build an image which seems to prolong itself in the present for a given period of time. (1971:49)

A sentence for Stein 'is not emotional a paragraph is' and sentences and paragraphs are similar to the functioning of sensations and emotions, just as 'emotional paragraphs' are 'made up of unemotional sentences' so 'emotions were composed of unemotional sensations' (Meyer, 2003: 281). Stein's aim though, instead of trying to define their disjunctive and conjunctive functions or their specific cause, was to explore how grammar could fuse sentences and paragraphs together. She also rejected the division of mental and emotional experience and

believed 'the human mind no more precedes or causes human activity than emotions determine their apparent symptoms' (Meyer, 2003: 116). Food, objects, rooms, sensations, feelings and emotions are words painted together as 'a new affirmation that human existence is intimately involved with the physicality of matter and of flesh' (Walker, 1984:139). Our body surface, is the boundary between our internal and external experiences and the only part of space, which is at the same time both felt and perceived. Importantly, object and subject, internal and external are closely entwined within Stein's text.

Meyer points out Stein's writing needs to be understood as 'a feeling for the organism' as something more than its parts, more than its past, more than its purely mechanical features, as an embodiment of that which makes the earth itself' (Meyer, 2003: 574). *Tender Buttons* creates portraits of object and subject in the continuous present becoming. Stein had realised she needed to resolve the problem of present perception, remembrance and the confusion of past, present and future time frames. When past remembrances had too strong a hold on her present perception of the thing she observed, it merely remained as repetitive imitation and as such, to the detriment of her creation of the novel and completely new.

PERCEPTION:

Visual perception for Bergson, is concerned with matter and the external material world, which includes our representable body. Memory on the other hand, relates to our internal, unobservable states and virtual experience, which informs our virtual images and their materialisation into observable forms. Our visual perception of matter, whether of objects, sculpture, paintings or projected video, assists our observation and production of external things in the representable present. While memory, is our preservation of past and present experiences, which inform our virtual subjective images, and our present perception and interaction, with real external objects.

Bergson's purpose is to show how when the individual differences of perception and memory are overlooked, we muddle their specific functions and potentials. As a result, perception becomes confused as an internal subjective vision, which leads us to separate the experience of our inner selves from that of the external world. Perception is often deemed to differ from memory only because of its greater intensity, due to the vibration of the nerves involved in processing sensations of sight and sound. As a result, perception has been misinterpreted as a sensation that manifests into an internal subjective vision, in a similar way to memory. The consequence is that objects of matter and our representation of them, as images, have been understood to exist in opposition to one another, instead of being involved in a continual process of becoming.

Bergson acknowledges his discussion in *Matter and Memory* (2002) appears dualistic because it asserts the individual natures of both perception and memory and as such, matter and spirit (Bergson, 2002: 9). His purpose though, is to resolve the Cartesian dualisms of body and mind. By differentiating between the individual natures of perception and memory, he identifies our misunderstanding of their individual functions, as well as our misconception of the object (in space) and subject (in time/duration) divide. He shows how, when we muddle perception with memory we confuse the existence of real material objects with our virtual subjective representation of them, which leaves us wondering whether external things truly exist. Matter however, as Bergson explains, is perceived exactly where the object of matter itself exists and should not be misconstrued as having the innate ability to generate representations within our self (Bergson, 2002: 10).

This problematic division between object and subject and the barrier between the artist and viewer's consciousness can be broken down, as Bergson reveals, by focusing on our ability to visually perceive the universe as an image. He develops a double system of images that relate to inorganic and organic images of matter. Both types of matter image can be affected by each other and all universal matter images that surround them. However, in the organic system the image 'receives the action of the other images on one of its facets and reacts to them on another

facet' (Deleuze 1997: 61). In other words unlike inorganic images of matter, organic images of matter are able to choose whether to respond or not, to other surrounding images.

There are two types of visual perception that Bergson defines, one related to our conscious perception in the present (as when watching my video) that with our individual memory images and sensations registers whether our initial visual perception requires an appropriate action or response. The other type of perception is pure perception, which is impersonal and untainted by individual experience and subjective memories. Pure perception shows that material things exist independently of our perception of them. Objects or screened moving images are not constructed from our furtive imaginations and do not exist within our internal subjective vision (as this place belongs to memory). For proof of this, we need only view our own body that we perceive as a visually representable object in the material world that is perceptible by other visually endowed living things. External things exist without our perception of them, although their perception requires a living organism such as ourselves, in order to be perceived. Which means both the image of the object and our perception of it, can be referred to as the same image/ thing. This breaks down our barriers between space and time. Our conscious observation of real objects does not construct their image. Instead conscious perception allows our subjective representation the time to choose, the section of the external image (or in this case my video) that is most relevant to our present circumstance.

Our visual representation of light and matter (or video-images) dilutes the detail of the actual object itself because we select only what interests us most. This image of an object/video, as Bergson shows, is less than the material thing but more than its representation. The representation differs from the original image of the object by degree, our individual perception creates a transition from the original image of the object itself, into its representation and existence within ourselves. The

transition from the object's image of itself into its being within our individual perception, subtracts information from this representation. Representation is a diminution of the image: the transition from image to pure perception is a selection.

Whether observing video, computer and film images, or any other object that exists in the external visible world, the image seen by a human (or another organic living image with visual capabilities) is exactly what Bergson refers to as perception. Perception, even though it is not the actual object or digital video image itself, provides us with a representation of real world visual information that helps us to isolate and focus on the specific external image that concerns us most. The body can then influence other images/objects and choose from amongst them the most appropriate action to take. We experience change due to our body's influence on external images, as well as their influence on our body.

Importantly, by elucidating the reality of the existence of images of real things, such as humans, houses, photographs or my digital video images and our image of them, Bergson challenges philosophical views that assume perception is speculative and that we construct our images of knowledge from sense data alone. Instead, he proposes our image of external things, in this case my video images, are not simply formed from sensations but by the actual existence of external things/images themselves. He identifies this confused notion of perception as the origin of our misunderstanding of the external world and the reason for any objective and subjective polemic. When perception is misinterpreted as a sensation that manifests into an internal subjective vision it functions like a photographic process whereby an organ of perception (the eye), captures the image and develops it in the brain. Perception then only seems to differ from our internal virtual images such as dream, imagination and memory images due to the greater intensity of nerve vibrations when processing light sensations. In this instance,

Everything happens as though your perceptions were a result of the internal motions of the brain and issued in some sort from the cortical centres. It could not actually come from them since the brain is an image like others,

enveloped in the mass of other images, and it would be absurd that the container should issue from the content. (Bergson, *Matter and Memory*, 2002: 41)

The brain is incapable of creating either a part or whole of our representation of external images of the universe. Film, video and computer graphic images are not formed within our brains, as they exist exactly where we perceive their projection, whether on a cinema or multimedia screen. Our brain and nerves are themselves made from matter that can be observed as images, as in MRI technology and pathological investigation. The brain is neither a separate entity to the material world nor an organ responsible for the representation of images of matter-images.

If we removed the images of the material world we would also eliminate the image of our brain and body and so we would cease to exist. On the other hand, if we erased the image of our brain and body from the universe, the universal image would continue without us. To consider the brain, sensation or body responsible for the entire image of the universe 'is a contradiction in terms, since the brain is, by hypothesis, a part of this image' (Bergson, *Matter and Memory*, 2002: 19). The brain and our sensori-motor activities help to process the things we visually perceive in the external world however; our brain does not construct visual images of external things. As Bergson states "the brain is an instrument of action and not of representation' and external forms such as my digital video work exists exactly where it is perceived, as an observable image in the material world (Bergson, *Matter and Memory*, 2002:74).

Perception is primarily concerned with action and not speculation, and brain centres are more aligned with motor reaction than with conscious perception. The brain conveys received movements to appropriate organs of reaction or extends this movement to the entire nervous system. The nervous system has developed in relation to our reflex actions, and the brain and spinal cord are merely different by degree and not in kind,

Between what is called the perceptive faculty of the brain and the reflex functions of the spinal cord. The cord transforms into movements the stimulation received, the brain prolongs into reactions which are merely nascent, but in the one case as in the other, the function of the nerve substance is to conduct, to co-ordinate, or to inhibit movements. (Bergson, *Matter and Memory*, 2002:24)

Our auditory and visual senses further extend our relationship to a larger variety of objects over a greater distance. This increases the amount of uncertainty and hesitation we experience and enhances the choices we make because our experiences are more diverse and profound than those, of other matter. Perception and action help us to respond to external images, which the brain communicates through motor-sensori responses (see Appendix 5 – for sample of brain areas related by neuroscience to our perception of emotion, sound and image). Perception provides the conditions required for action, and not sensation. Sensations are ‘essentially due to what is actually present’ during our present perception of external things and the reason why, we do not understand how external stimulus such as light, colour and pixels provide us with the images we see (Bergson, 1920: 141). As Bergson states, ‘no trace of the movements themselves can be actually perceived in the sensation which translates them’ (2001:34-35). This is because our body’s physiology is either wholly or partially in motion because of our nervous system, which functions and responds in the present without in-depth conscious analysis. Our nervous system when in its pure form, as Bergson points out, is the affective action of a sensible nerve, which exists between the external stimulant and the action we are about to carry out. Bergson states,

I pass in review my different affections: it seems to me that each of them contains, after its kind, an invitation to act, with at the same time leave to wait and even do nothing. I look closer and find movements begun, but not executed, the indication of a more or less useful decision, but not the constraint which precludes choice. I call up, I compare my recollections: I

remember that everywhere, in the organic world, I have thought I saw this same sensibility appear at the very same moment when nature, having conferred upon the living being the lower of mobility in space, gives warning to the species, by means of sensation, of the general dangers which threaten it, leaving to the individual precautions necessary for escaping from them. Lastly I interrogate my consciousness as to the part which it plays in affection: consciousness replies that it is present indeed, in the form of a feeling or sensation, at all the steps in which I believe I should take the initiative, and that fades and disappears as soon as my activity, by becoming automatic, shows that consciousness is no longer needed. Therefore, either all these appearances are deceptive, or the act in which the affective state issues is not one of those which might be rigorously deduced from antecedent phenomena, as a movement from a movement: and, hence, it really adds something new to the universe and so to its history (Matter and Memory, 2002: 17-18).

Deleuze refers to the process of isolating specific events or actions within the material world through perception, as framing. For example, on an illuminated plane of the universe, we can choose a specific section from the whole flow of movement-images of matter that surround us, by selectively focusing on a slice of the open whole. The same could be said of a cinematographer when selecting and framing a specific area of the entire image before them. It could also be said of the viewer of the cinematographer's video image, as they choose to focus on a specific area of the entire screened image. The movement-image as Deleuze defines it, is 'the acented set [ensemble] of variable elements which act on a centre, and which vary in relation to it' (Deleuze, 1997:217). When movement-images relate to a centre of indetermination they become perception-images that travel between 'universal variation, total, objective and diffused perception' and our present view, which is 'unicentred subjective perception' (Deleuze 1997: 64).

Bogue explains how a 'sensory-motor schema organizes and coordinates the perceptions, feelings, and actions of each living image' (2003:4). Our brain provides the 'gap between action and reaction' and our sensory perceptive surfaces further complicate action and reaction by allowing us to choose and isolate our encounter with other images of matter (Deleuze 1997: 62-3). Perception exists to one side of this gap or interval, while action exists on the other. We form an interval between received and executed movement-images as we process our sensations of their light. As we process this universal objective information, we are able to automatically respond to it and subjectively choose to ignore, contemplate, pause or change direction accordingly.

For Deleuze, human perception although not restricted to these, is an amalgamation of three main image types, which form the movement-image and its representation in cinema. Whether digital or analogue, cinema and video offer moving-images that we frame as moving visual slices of duration. Deleuze connects the basic cinematic forms of the frame, shot and montage to the open whole of *durée*, which is indirectly present in the open whole in each mobile slice. The frame, shot and montage offer three 'manifestations of time, three different ways in which the open whole of *durée* unfolds itself in movement-images' (Bogue, 2003:4). The cinematic movement-image incorporates the shot, frame and montage and replicates our perception of the world, and the on-screen character's perception of their film world. Deleuze, defines the three main, spatially determined shots, which exist between the film frame and montage as follows,

1. **Perception-Image:** 'set [ensemble] of variable elements which act and react on each other'.

2. **Affection-Image:** 'that which occupies the gap between an action and a reaction, that which absorbs an external action and reacts on the inside.'

3. **Action-Image:** 'reaction of the centre to the set [ensemble]' (1997: 217).

The perception-image relates to the long shot, the action-image to the medium shot and the affection-image to the close-up. The amalgamation of the three shots

constitutes montage, which combine to form an indirect image of time. Usually one type of montage dominates the others, resulting in three varieties of perceptive, affective and active montage.

Between receiving and executing movement we experience affection, which is our delayed reaction to received events. Bergson defines affection as a 'motor tendency in a sensible nerve' because affection's movement is a lived qualitative state (1991: 55–56). Affection also marks 'the coincidence of the subject and the object in pure quality', as Deleuze states, affection,

occupies the interval...without filling it in or filling it up. It surges in the centre of determination that is to say in the subject, between a perception which is troubling in certain respects and a hesitant action. It is a coincidence of subject and object, or the way in which the subject perceives itself, or rather experiences itself or feels itself 'from the inside. (1997: 65)

This occurs when we prioritize specific immobile organs, such as our nose, ears and eyes, which are actively receptive in the material world. And use the face to express our internal feelings and reactions, which Deleuze defines as the affection-image and relates to the close up of the face, which expresses nerve movement in relation to internal emotion that lies hidden in the body. As he states, 'movement ceases to be that of translation in order to become movement of expression, that is to say quality, simple tendency stirring up an immobile element' (1997: 66).

As living images we are 'an instrument of analysis in regard to the movement received, and an instrument of selection in regard to the movement executed' (Deleuze 1997: 62). When we are actively involved with other objects we encounter the action-image, perception as Deleuze states, is 'master of space in the exact measure in which action is master of time' (1997: 65).

We are an interval that can be articulated as space in relation to perception and time in relation to action. For Deleuze,

actions undergone are isolated by the frame and hence,...are forestalled, anticipated...on the other hand, executed reactions are no longer immediately with the action undergone. By virtue of the interval, these are delayed reactions, which have time to select their elements, to organise them or to integrate them into a new movement, which is impossible to conclude by simply prolonging the received excitation. Such reactions which present something unpredictable or new will be called action. (1997: 62)

However, our perceptual process alone never offers a complete picture of the external things we observe because it is tainted by our virtual illusions. Bergson explains that 'with the immediate and present data of our senses, we mingle a thousand details out of our past experience' (Matter and Memory, 2002: 33). To have any significance beyond our present circumstance, perception and sense perception need to be mixed alongside memory.

Memory

Importantly, perception needs to be understood as different in kind from memory, otherwise we end up considering matter, as if it were constructed from our imagination alone. Visual perception then, appears to merely function as a dream or hallucination, instead of assisting our comprehension of the real external world, which our real body exists in. As Bergson points out, if

our perception of a present object is something of that object itself, our representation of the absent object, as in Memory, must be a phenomenon of quite another order than Perception, since between presence and absence there are no degrees, no intermediate stages. (Bergson, Matter and Memory, 2002: 236)

Bergson reminds us that a rose will smell differently for you than for me because of our individual memories of all the roses we have personally experienced, throughout our lives (2001:161-162). This also implies, that 'when we pass from 'pure' Perception to Memory, we definitely abandon matter for spirit'.⁶ (Bergson, Matter and Memory, 2002: 235)

Bergson places memory, alongside our conscious and unconscious states. Consciousness, he claims, is 'the characteristic note of the present' in that it is our active lived experience in the present (Bergson, Matter and Memory 2002: 141). Consequently, anything unrelated to our present conscious action, becomes relevant to our unconscious memory. Memory forms two types one 'real' and the other 'pure' and both can be mixed together. Real memory is habitual and provides a focus for psychological studies, it relates to the repetition of information, automatic behaviour, sensori-motor mechanisms and bodily perception in our conscious present. Real memory is important for everyday life, however its function can also mask pure memory and its potential to spontaneously remember events. Pure memory recollects information at an unconscious level, retaining all the personal memories of the entirety of our existence. Unconscious memory is also able to manifest into our present experience through our conscious self. This activity results in a coexistent experience that mixes perception and recollection together, in a potentially creative way.

Bergson believes when we find the concept of the unconscious difficult to grasp, it is usually because 'we hold consciousness to be the essential property of psychical states, so that a psychical state cannot, it seems, cease to be conscious without ceasing to exist' (Bergson, Matter and Memory, 2002: 141). But this is like claiming

⁶ For Bergson, memory is 'the intersection of mind and matter' (Matter and Memory, 2002: xii.). Memory is not a state of the brain, although 'the brain continues the remembrance' and provides memory with 'a hold on the present by the materiality, which it confers upon it, but pure memory, is a spiritual manifestation,' (Matter and Memory, 2002: 320). Bergson further explains, 'Memory must be, in principle, a power absolutely independent of matter. If then, spirit is a reality, it is here, in the phenomenon of Memory that we may come into touch with it experimentally' (Matter and Memory, 2002:81).

material things no longer exist because we have diverted our eyes and stopped perceiving them, or that our past is erased, simply because we have stopped remembering it at our present conscious moment. Even if we are unable to remember a specific event at a specific time it does not prove all-previous events are forgotten. Even the destruction of memories due to brain injury, as Bergson explains, is simply a break of the continuous progress by which memories are actualized (2002: 126).

Memory is not a function of a particular brain area nor is it an archival store within the brain. As Bergson highlights, the localization of memory in the brain and brain mapping is far too mechanistic, he labels this notion the 'box theory'⁷. For him, seeking the whereabouts of stored memory within the brain, would be as pointless as us humans expecting to find the words spoken during our mobile phone conversations, to be found lingering in space. Memory is a process that mostly functions on an unconscious level, as the survival of our entire past, which is a new and continually growing phenomenon. Memory is not a return to our past as found in psychological regressive therapies or science fiction, instead, memory helps us to define difference and thus create the new.

Past remembrance for Stein, could not be part of her writing because to be creative it needed to describe a new present becoming. Stein's creative problem, as Meyer points out, 'was not to confuse imitation with creation' (Meyer, 2003: 116). Any mechanical sense of narrative structure, history, remembering, resembling and all past tense needed to be removed from her writing. Similar to Stein's problem, philosophy needs to find ways to create the completely new. Repetition has to be insistence of difference and not the repetition of the same.

Stein's writing shifts beyond traditional narrative structure 'towards its redefinition as an internal process', she states 'narrative isn't in your mind, but what is in

⁷ See A. Gunn
http://www.ibiblio.org/HTMLTexts/John_Alexander_Gunn/Bergson_And_His_Philosophy/chapter4.html Accessed 24 August 2012).

somebody else's' (Bartlett Haas, 1971:19). Stein expresses this idea in *The Autobiography of Alice. B.Toklas* (1933), a portrait that combines somebody else's point of view of their life, with Stein's perception and memory as both the writer and co-experiencer, of the autobiography.



Figure 10. Alice. B. Toklas, Basket and Gertrude Stein

The text results in our perception of coexistent memories in the present, which ultimately intermingles Stein's and Alice's self-portrait, as she creates her and her partner's adventures of their shared world. This integration of Stein and Alice.B.Toklas's memories, as well as the reader's experience of them in the present creates a new coexistent experience in memory and perception, for everyone concerned. Memory needs to be accepted for its coexistence with our present perception, which is always new and never the repetition of the same. As Bergson states, 'not even the artist, could have foreseen exactly what the portrait would be, for to predict it would have been to produce it before it was produced'. (Bergson, 1998: 6)

Stein's problem with language was its inability to visually capture the present as it passes and creates, because it is always the differentiation of everything we knew and perceived before. Stein initially believed 'the truth of human character resided in repetition and resemblance'. (Walker, 1984:136) Eventually, influenced by a new and continued interest in paintings, painters and their observation of things to be painted, she found when 'difference reigns supreme in the immediate sense-data of experience... there is no correct description of this 'reality' within the realm of language. (Walker, 1984:136) Instead, Stein chose language that emphasised the process character of nature and (similar to the process of watching an emerging video image) its moment-to-moment novelty. Her spoken and written portrait of Picasso, clearly demonstrates his moving, changing and emerging personality, alongside ours as we either read or listen to her speak his portrait⁸. Picasso himself spent ninety sittings and eight years painting Stein's portrait, which when criticized for not looking like her, he replied, 'that does not make any difference, she will'. (Meyer, 2003:157)



Figure11. Gertrude Stein (Painted by Picasso)

⁸ For sample of Stein's text and voice recording see <http://www.english.upenn.edu/%7Ejenglish/Courses/Spring02/104/steinpicasso.html> (Accessed 24 August 2012)

Picasso provides the following insight into his creative process, as well as its significance for continuous novel creativity, and the creativity of the perceiver of his work. He states,

A picture is not thought out and settled beforehand. While it is being done it changes as one's thoughts change. And when it is finished, it still goes on changing, according to the state of mind of whoever is looking at it. A picture lives a life like a living creature undergoing the changes imposed on us by our life from day to day. (cited in Harrison, Wood, 2004:508)

Artwork, when considered through Stein and Picasso's ideas, could be said to encourage the viewer/listener to enter their own creative emotion, enabling their generation of new ideas beyond those presented in the artwork.

My video, *Portrait of Myself*, is one of three tracking shots created for an art installation. Each video portrays the same environment, subject matter and shot type, although the shots were recorded at different times of day (e.g. afternoon, evening, sunny and cloudy day). This allowed me to consider how differing light might affect the viewers' perception and experience of self-portraiture. However, for the sake of clarity in the theoretical discussion, I focus on one shot (fig 9).

The soundtrack for the work also tracks backwards and was created when the video image was being digitally captured onto a computer. I recorded the audio feedback from the computer's speakers with a microphone. I then experimented with the intensity of the sound by moving the microphone nearer or further away from the speakers. For the installation, the sound would be played on stereo speakers. Left speakers would be placed next to the screened image and right speakers at the opposite end of the space to the screen. The sound would then pan from left to right speakers, at the same rate as the video image tracks backwards. This would allow the perceiver of the work to experience the movement of the sound from the front to the back of the space.

Portrait of Myself also takes note of Gertrude Stein's creative methodology; by portraying video images untainted by human presence it instead reveals the video image as a process of change and becoming. This more easily disrupts our temptation to separate recollection memory from our present perception of the video and new memory becoming. Another reason for removing the presence of an on-screen character from the video image, is to ensure that Deleuze's concept of the moving-image, is not simply aligned with an on-screen character and their action. *Portrait of Myself* avoids fuelling thought and emotion through the on-screen representation of character emotion, action and reaction, and removes our identification with a specific genres or narrative structure. Without these confusions, we can more easily (break down our motor-sensory experience of the image) apply the movement-image, to its significance for both the video maker's and the viewer's perception, and their coexistent experience of the video.

Portrait of Myself investigates self-portraiture through the viewer's observation of the video image. The enunciation of the video title by the viewer, implicates them in their own experience of self-portraiture, as they engage with the on-screen video image throughout its projection.

Instead of just observing an on-screen character, this ultimately places the viewer within a durational process, which mingles visual perception, with coexistent feelings, emotions and memories as a self-portrait becoming. Here it is interesting to note, in relation to self-portraiture, Deleuze's inquiry into whether it is possible to discover the 'dividing-in-two' of the subject in thought and in art, which he sums up as follows,

It is the *Cogito*: an empirical subject cannot be born into the world without simultaneously being reflected in a transcendental subject which thinks it and in which it thinks itself. And the *Cogito* of art: there is no subject which acts without another which watches it act, and which grasps it as acted, itself assuming the freedom of which it deprives the former. Thus two different egos [*moi*] one of which, conscious of its freedom, sets itself up as independent

spectator of a scene which the other would play in a mechanical fashion. But this dividing-in-two never goes to the limit. It is rather an oscillation of the person between two points of view on himself a hither-and-thither of the spirit. (1997:73)

Memory for Bergson is virtual and 'a power absolutely independent of matter. If then, spirit is a reality, it is here, in the phenomenon of Memory that we may come into touch with it experimentally' (Bergson, Matter and Memory, 2002:73). Memory is not a state of the brain, although 'the brain continues the remembrance' and provides memory with 'a hold on the present by the materiality, which it confers upon it, but pure memory, is a spiritual manifestation' (Bergson, Matter and Memory, 2002:240).

We usually connect our everyday memories with our present circumstance, however, if we only existed in the present, we would simply react to all immediate stimuli through impulsive behaviour. Conversely, if we remained in the past, our memories would surface into consciousness as if dream images, without benefit for the purpose of our present action in the material world. Through these two types of memory we discover the meeting place between our virtual images, as in the depth of our dreams, and our impulsive habitual memories, which are relevant to our actions in the material world. In other words our internal unrepresentable virtual memories are able to surface at-any-moment-whatsoever, onto a representable plane within our conscious present.

Bergson, compares memory's motion to two virtual rotational movements, one that extends outwards, while the other reverses the initial rotation into contraction. Similar to focusing a digital video camera, as we rotate and focus the camera lens, we find indefinable forms that gradually become singular images that extend into a frame, where all parts are in sharp and equal focus. When this action is reversed the opposite process occurs and we encounter once again, the complete abstraction of images. This rotation of the lens between extension and contraction, lends itself to Bergson's concept of the virtual, as he states, 'this movement from

interpenetration to fragmentation, from unity to multiplicity, (and even from multiplicity to juxtaposition) is always potential or virtual' (Lawlor, Leonard and Moulard, Valentine, 2012). Intellectual effort might initially begin as a vague and abstract idea of the thing conceived, however it finally moves from an abstract plane of thought and ideas, to a place of tangible images. Thinking is more than mere contemplation as we embrace the whole movement of memory from contemplation to action.

Although diagrams are incapable of representing memory and its virtual and unrepresentable potential and properties, Bergson uses the image of an inverted cone to explain how memory functions (see Figure 12a: below).

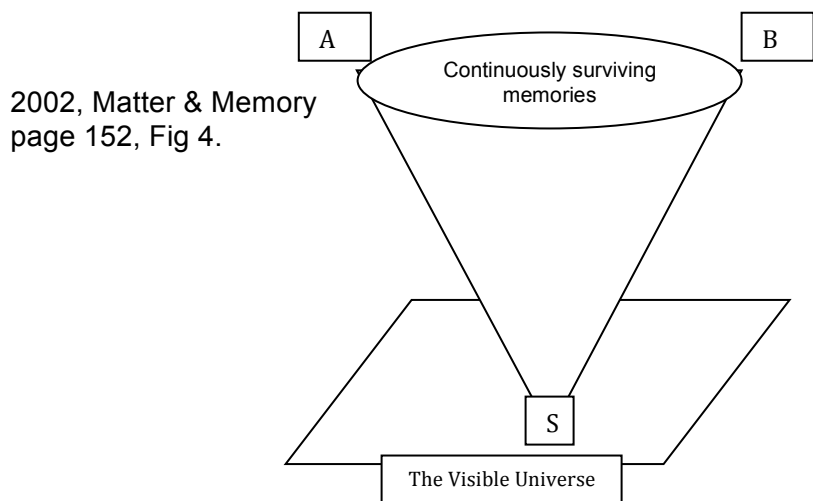


Figure: 12a

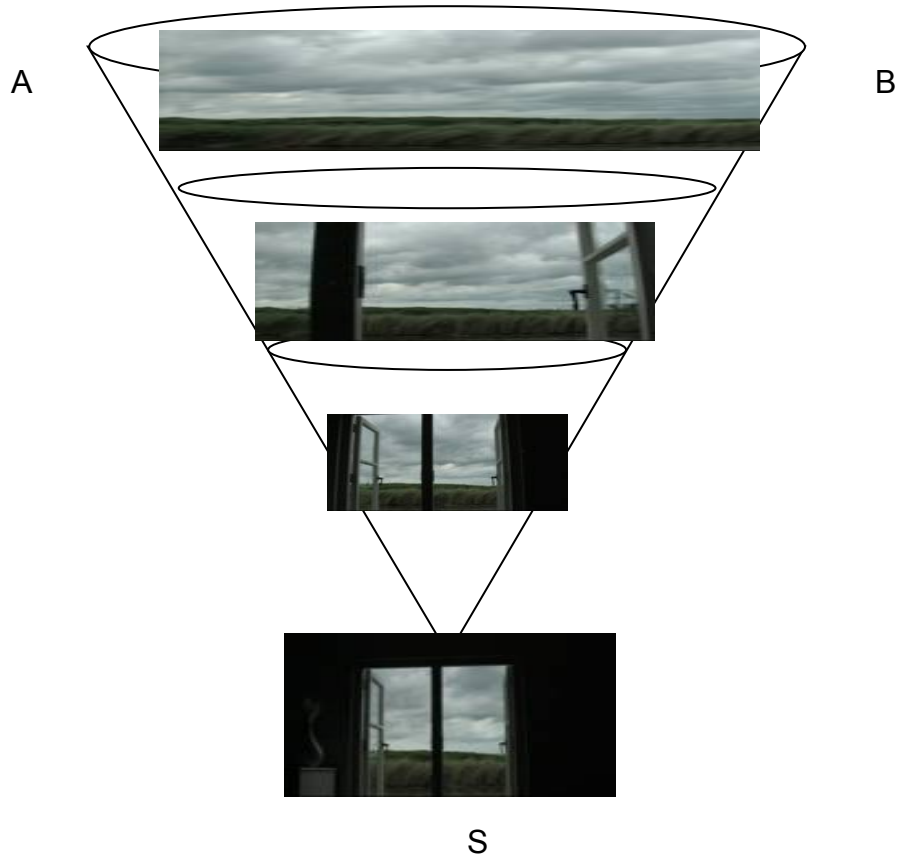
The cone represents the entirety of our past experience that mostly exists as unconscious memory, which surfaces onto a plane that represents our conscious present. There are different planes of memory with the largest part of the cone containing our past. Through a process of mobility we descend down from the cones base, which is the past, throughout different planes of memory and towards its pinnicale, which represents our present perception and action. As this motion

downwards occurs we discover an infinite amount of areas of the past that also relate to our proximity in the present. Descending memories can thus be considered to be mobile and progressive.

I will use his notion of the cone to explain how perception and memory might function, during both the production and consequent observation of *Portrait of Myself*. This combines the video image, the video maker, and the perceiver of the image, in a coexistent experience that transcends the divisions of time and space, and the Cartesian divide between matter and spirit. *Portrait of Myself* also considers how perception of the video image reveals its past, its passing, and its present becoming. An experience illuminated through Bergson's Cone diagram.

As a video maker, I utilise my previous memories and my spontaneous memories to assist my action with camera equipment and video technology in the representable world. On a plane of immanence movement-images surround me as real light illuminates real matter that I capture with video technology. I set the lens focal length for a large depth of field, allowing the shot to frame images of equal focal value. I select and frame a moving perception-image, a shot, which is a mobile slice of the open whole. Framing a landscape, clouds steadily progress across the sky and water reeds sweep back and forth in the image below. Static, the camera waits as a breeze rhythmically pulls and pushes a sway of reeds, a breath, moving in and out and in and out again. Steadily, holding my breath, I ease from one foot to the other, sliding, tracking the camera backwards.

Continuously surviving memories



The Visible Universe

Figure12b. Matter and Memory (Bergson,2002: 152)
Superimposed with stills from *Portrait of Myself*

The inverted cone's base [A and B] represents our continuously surviving unconscious memories. These memories can spontaneously arise, as when experiencing a dream or a new virtual image (Bergson, Matter and Memory 2002:152). The cone's pinnacle [S] is submerged within a horizontal plane that represents the visible universe. The root of memory progresses from pure and unconscious memory [A & B], were memories are a multiplicity of emotions and

choices, moving towards our present conscious state [S], where recollection memory and virtual images become relevant to our present waking moment, and our perception and action in the visible universe. While the largest part of the cone continues to contain our entire growing present and past, descending memories are mobile and progressive and emerge on different planes when of significance to our present circumstance. Progressive movement takes place between the two extremes of the cone, at the base pure memory is immobile contemplation, while at the cone's pinnacle (point S) perception and action can take place (Bergson, *Matter and Memory*, 2002: 161). Through a process of mobility we descend from the cone's base, which is of our past, to its pinnacle, which is our present perception. As this motion downward occurs we discover an infinite amount of areas of the past that relate to our proximity in the present.

The tracking shot in *Portrait of Myself* simply illustrates this movement as the initial shot of the external landscape is always retained within the frame, as the shot tracks backwards (descends downwards) and retains/reframes new images throughout its duration. The video offers a simple illustration of each new moment of the image, which is retained in a collective and coexistent way through our perception of the image's past, in the present, as it continuously survives in memory, and each new moment becomes. Tracking backwards we discover new images of equal value and focus, which coexist with the initial shot of the landscape. At the same time our multiplicity of memories can be mobile and progressive moving from pure and unconscious memory into our conscious present, ready for our immediate contemplation and action. This meeting place between impulsive action and the depth of dreams can at any-moment-whatsoever respond with automatic or spontaneous memories, which are specific to our present perception and circumstance. Memory aids our ability to choose, differentiate and experiment with all our virtual memories that coexist with our perceived images of matter. Deleuze considers how,

The idea of a contemporaneity of the present and the past has one final consequence: Not only does the past coexist with the present that has been,

but, as it preserves itself in itself (while the present passes), it is the whole, integral past: it is *all* our past, which coexists with each present.... The cone represents this complete state of coexistence, But such a state implies, finally, that in the past itself there appear all kinds of levels of profundity, marking all possible intervals in this coexistence...Each of these sections is itself *virtual* belonging to the being in itself of the past. Each of these sections or each of these levels includes not particular elements of the past, but always a totality of the past. It includes this totality at a more or less expanded or contracted level. This is the precise point at which contraction-Memory fits with recollection-Memory and, in a way, takes over from it. Hence this consequence: Bergsonian duration is, in the final analysis, defined less by succession than by coexistence. (1991: 59-60)

Looking back onto reeds, back past the still life of iron window handles, windows, window frames and to the side of the frame, the curves of a vase that reflects external light. The video image progressively proceeds, receding backwards, deeper into the interior room, into the present that proceeds, looking towards, framing coexistent clouds and reeds. Submerged amongst images, framed by a camera, pulsing inside with samples of light and electricity. Tracking offers an ease of movement that fits to the movement of grace.

Grace, as Bergson explains, allows us to grasp how 'the perception of ease in motion passes over into the pleasure of mastering the flow of time and of holding the future in the present' (2001: 12). The feeling of grace appears to pave the way for further movement, as we discover 'present attitudes in which future attitudes are pointed out' and experienced with ease (Bergson, 2001: 12). When the graceful movements of a dancer surrender to the rhythm of music, it enhances our experience of movement allowing us to feel almost in control. This induces a 'physical sympathy' as we enter 'into the feeling of grace' that offers an ease of mobility which suggests a motion towards ourselves' of a virtual and even nascent sympathy' (Bergson, 2001: 13).

The artist's aim for Bergson should be to share the emotion that led to the creation of their work, to achieve this the artist needs to provide the 'outward signs of' their emotions', which more easily transport the spectator/listener 'into the indefinable psychological state' first experienced by the artist (Bergson, 2001:18). As a result, the barriers placed by time and space between the artist's consciousness and the audience's, are removed, as Bergson states,

the richer in ideas and the more pregnant with sensations and emotions is the feeling within whose limits the artist has brought us, the deeper and the higher shall we find the beauty thus expressed. The successive intensities of the aesthetic feeling thus correspond to changes of state occurring in us, and the degrees of depth to the larger or smaller number of elementary psychic phenomena which we dimly discern in the fundamental emotion. (Bergson2001: 18)

Aesthetic feelings, for Bergson, convey a 'progressive stepping in of new elements, which can be detected in the fundamental emotion' to show a change of emotion's nature (Bergson, 2001: 11). Sympathy, he claims, is mobility that emerges as the 'essence of higher grace' and grows as aesthetic feelings diversify into various feelings, each 'heralded by its predecessor... perceptible in it and then completely eclipses it' (Bergson, 2001: 13). When artwork appears effortless, the art object stills the 'resistant powers of our personality', enabling us to enter 'a state of perfect responsiveness' (Bergson, 2001: 14). Opening us to the suggested feeling within the artwork, so that we can sympathize with it. The reason music usually has more of an affect on us than natural sound, as Bergson proposes, is because music suggests feelings, whereas nature expresses them.

To understand the beautiful, Bergson examined art that addresses beauty through 'conscious effort' and art that moves with 'imperceptible steps from art to nature' (Bergson, 2001: 14). Nature for Bergson is an artist in its own right and art should aim to suggest not express feeling because then art stops imitating nature (2001:16-17). The feeling of the beautiful, as Bergson finds, is not a specific feeling

although all feelings suggested and not caused acquire an aesthetic character. The merit of an artwork should not be measured by its power but rather the richness of its suggested feeling. Rather than simply dwelling on the intensity of an artwork, as Bergson points out, we can instead 'instinctively distinguish degrees of depth or elevation', as the artist's suggested thoughts and feelings, combine to express their own history (2001:17). He further explains,

If the art which gives only sensations is an inferior art, the reason is that analysis often fails to discover in a sensation anything beyond the sensation itself. But the greater number of emotions are instinct with a thousand sensations, feelings or ideas which pervade them: each one is then a state unique of its kind and indefinable, and it seems that we should have to re-live the life of the subject who experiences it if we wished to grasp it in its original complexity. (Bergson, 2001:17)

Even though a subjective experience the essence of emotion does not have to be an individualistic event, creative emotion similar to when music expresses love refers to more than one person. As Deleuze states, 'when music cries, it is humanity, it is the whole of nature which cries with it...Truly speaking, it does not introduce these feelings in us; it introduces us rather into them, like the passers-by that might be nudged in a dance' (2002:110). When music expresses love, as Deleuze explains 'The quality of love will depend on its essence and not upon its object' (2002: 111).

Olkowski states, 'the "interval" between perception and memory, intelligence and social life is decisive for humans. And what appears in this interval is creative emotion' (1996: 283-92). Deleuze points out that not only does emotion differ, 'in nature both from intelligence and instinct, from both intelligent individual egoism and quasi-instinctive social pressure' it also does not require an object but 'merely an essence that spreads itself over various objects, animals, plants and the whole of nature' (2002:110).

Creative emotion exists in the interval produced by social pressure, intellectual analysis and egoism. This virtual movement can shift from extensive unconscious memory and a plane of abstract images, towards contemplation and contraction, and a final act of creation with matter in the material world. Thus one is liberated from the confines of the everyday to experience the essence of creative emotion and thereby to become a creator of new objects and ideas. This is where both the viewer and maker, as creators of images interject with their own creative emotion. As our organic experience mixes together our perception of movement-images and their passing of present light, alongside our virtual expanding coexistent memories as new images becoming.



Figure 13.

We are the interval between Deleuze's concept of the movement-image and time-image, which is where as the viewer/creator of images we interject with creative emotion. Our perception of real video movement-images mixes with duration, our coexistent virtual memories and our perception of passing and present light becoming. To harness the potential of creative emotion Bergson suggests we utilize the interval and our circular play between the individual egoism and social convention where creative emotion is produced, to breakthrough into the new that exists beyond, the merely inventive, discursive or critical. Liberating ourselves from the confines of the everyday to experience the essence of creative emotion and become a creator of new ideas. Deleuze elucidates, the little interval 'between the pressures of society and the resistance of intelligence' defines a variability appropriate to human society' (2002:111) where 'creative emotion' goes beyond individualistic problems and

constraints or the pressures of society. Creative emotion utilizes this 'circular play' so as to deconstruct the circular motion in a similar manner to in which memory uses 'excitation and reaction to embody recollections in images'. But what is the creative emotion if it isn't a 'cosmic Memory' that actualizes all the levels at the same time. That liberates us from the plane that is relevant to ourselves, 'in order to make him (us) a creator, adequate to the whole movement of creation?' (2002:111)



Figure 14.

Gradually passing painted black window handles, window frames, progressing and retreating without montage techniques sinking into the interior still life of a room. The tracking shot breaks with conventional filmmaking techniques, providing an image whereby long shot, medium shot and close up, it could be argued, become coexistent as the shot progresses backwards. The internal body is a cinematic space that resonates with light, sounds, sensations, feelings and emotions, journeying towards creativity. The camera tracks through the long, medium and close shot continuously and coexistently framing and reframing the image. Narrative filmic structures interpenetrate, extending the cinematic interval, as the entirety of the video progresses, throughout its process of becoming.



Figure 15.

Shifting, tracking, bit by bit pivoting, turning my back on the image as I face the wall behind. Careful, that looking back does not just leave me lingering, simply remembering, remembering must be part of the present passing, as a new beginning, becoming. The camera's perception is divorced from a specific point of view, neither purposefully aligning itself with an on-screen character, the viewer, or the video maker's perception. Breaking with the motor sensory as no central character, narrative structure or specific response to an image is expected. Movement instead suggests the change of creative emotion and the duration of the whole.

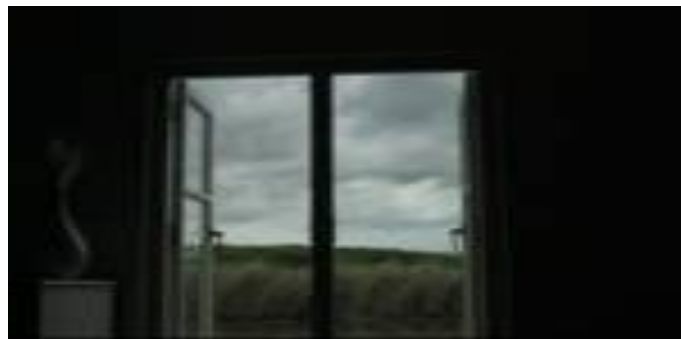


Figure 16.

I hold my breath, imperceptibly I try to move, sympathising with the camera, steadily and continuously tracking backwards. Capturing its own movement the camera frames and reframes its past and present becoming. The camera reaches the tracking's end. I turn the camera off and wait to join the viewer as a perceiver of the video.

I switch the video player on. Light projected onto and emitted from a screen forms our initial perception of the video's moving image, which with memory we retain as our representation of the external video light we watch unfolding and changing before us. Video's projected light functions in a similar way to our visual perception and representation of real matter during our perception of it. The projected video image, similar to our perception of matter, lacks the detail of the original image of matter it captures, processes and projects. Throughout both our own and the

video's duration, we need to continually refer to its present and our present and our virtual past images, to comprehend the video's movement and progression over time.



Figure 17.

Pixels and sensations interpenetrate with the video's passing and becoming. Video sparks with the *élan vital* of electricity as an unrepresentable electrical camera consciousness, digital and analogue, charge, discharge, the visible and audible extend the unrepresentable for perceivers and their creative emotions. Digitally adding, linking interpenetrating, beginning again and again.

The viewer exists in time and space, a collection, a multiplicity of qualitative and quantitative memories, perceptions and psychical states merge with our external body, joined alongside all other surrounding objects in space. Any-object whatsoever, any-space-whatever and any-time-whatever experienced through our unique body. The viewer becomes as spectator-creator, as the video itself is becoming. The viewer paints a self-portrait becoming as spectator-creator, as the video itself becomes.

Each element collaborates within our duration, to continue a process of creative emotion becoming. The past is connected with the unconscious and all our previous realities, while the present is creativity becoming.

Chapter Three

Method of Orange: Bergson's
Method of Intuition

Chapter 3:

The Method of Orange: Bergson's Method of Intuition



Figure 18. Gilles Deleuze

the present, reflected back into the past and perceived inside it as though in a mirror, is then what we call the unconscious of the past. The retroactivity of the present is at the origin of many philosophical delusions. (Bergson, *The Sources of Morality and Religion*, 2002:308)

Bergson's Method of Intuition refuses to privilege either language or mathematics, or any other symbolic representation, which could result in a ready-made philosophy and consequently, render the creation of anything completely new, impossible. Bergson again takes issue with Kant's philosophy by opposing Kant's interpretation of intuition, which is directly linked to a consciousness that is already

given by common sense. As a result, Bergson turned intuition into a method beyond its usual association with common sense and the immediacy of perception. Instead Bergson's intuition reveals a philosophy of immanence, diversity, multiplicity and duration, which extends beyond concepts that simply align with our conscious states.

Unlike Kant, who had tried to define the conditions for all experience, Bergson attempts to discover the conditions of real experience. Bergson's method of intuition is premised upon our emotion of sympathy, which frees us from our subjective state by extending our knowledge and experience towards other people and things. The method of intuition sides with duration, memory, the *élan vital* (or *vital force*) and creative emotion, which although unrepresentable in themselves are able to assist our articulation and representation of the new as it becomes. This method provides the focus for the theoretical and practical discussion in this chapter and how intuition and creative emotion are fundamental to the creation and production of my artistic practice.

The Method of Intuition stems from Bergson's investigation of creative evolutionary processes. The publication of his text *Creative Evolution* (1911) led to a growing interest in his philosophy, which became highly influential throughout the early 20th century for artistic thought, practice, creativity and production. Prominent practitioners such as Stein, Duchamp and Picasso adopted and experimented with Bergson's creative philosophy. I extend Bergson's findings beyond the artistic mediums and methodologies of his day, by applying them to the new time-based mediums of video and audio technology.

The practice work for this chapter consists of two High Definition digital videos and a soundtrack that form the *Method of Orange*. By contemplating one image reflected onto perfectly stilled water I sketch out my plan for the work. This developed into a method, whereby the original image, continuously changes throughout its entire duration, and is also flipped inverted and matched in post-production. Several variations of the image were combined, creating two videos of

continuous change, which simultaneously reveal the inward and outward movement of a movement-image. A process that is similar in nature, to Bergson's Method of Intuition. This has assisted my articulation of Bergson's philosophy and how intuition can be understood in a way that is accessible for both the perceiver and creator of creative artwork.



Figure 19.

For Bergson life is inseparable from creation; creativity supports continuity of life and the discontinuity of a specifically defined and measurable evolution. He critiques a mechanistic view of evolution that ignores life's continuous change, difference and creativity. All teleological approaches to evolution and life require finalism, making the creation of anything completely new impossible. Everything new, whether experienced internally or externally becomes trapped by a measured system. Each individual part of the open whole is then identified by its preceding development as if simply waiting for the discovery of its existence. Mechanism and finalism are incapable of revealing complete change as a characteristic of life. So Bergson sets out In *Creative Evolution* to articulate and embrace life's creative and evolutionary diversity through four factors: 1) The *élan vital* , 2) Tendency theory (Divergent Tendencies), 3) The two senses of Intelligence and Intuition and 4) The Method of Intuition

1. The *élan vital* (vital impulse)

When we contemplate life's entirety we discover beyond any mechanistic division, life is a singular, inseparable and unrepeatable action. Life's telos, implies an original and vital principle that is found at its beginning and not at its end. Bergson calls this original vital impulse, which is common to the creative evolution of all organic things, the *élan vital*. The *élan vital* however does not answer how

evolutionary diversity occurs and nor does it explain life's nature. This inspires Bergson's tendency theory, which relates to life's evolutionary complexity, as well as the simplicity of its original vital impulse. As Deleuze explains,

The essence of a tendency is to be developed in the form of a sheaf, creating through the sole fact of its growth divergent directions. *Élan vital* would therefore be duration itself to the extent it is actualized, is differentiated. *Élan vital* is difference to the extent that it passes into act. Hence differentiation does not come simply from matter's resistance, but more profoundly from a force that duration carries in itself: dichotomy is the law of life.if differentiation is thus the original and irreducible mode through which a virtuality is actualized, and if *élan vital* is duration differentiated, then duration itself is virtuality. (2004: 28)

Virtuality for Bergson, is the co-existence of the past and present through memory, as the future becomes with the *élan vital*.

2. Tendency theory (divergent tendencies)

The vital impulse or *élan vital* is common to all species, whereas tendency theory differentiates the changes in species associated with this creative impulse. This is why Bergson identifies two tendencies and distinguishes them through their alignment with either qualitative or quantitative multiplicity. Here we encounter the successive changes and differentiations of life that can be arranged into opposing tendencies such as instinct and intelligence. The differentiation between the two tendencies begins with Bergson's observation of plant, animal and human behaviour.

Firstly, he differentiates between plants and animals by way of their mobility requirements. Mobility is more necessary for animals on account of their need to find food, whereas plants only require photosynthesis to grow and survive. He then differentiates between animal and human instinct. Animal instinct is far more refined for survival, whereas humans neglect instinct in favour of their intellectual

capacity such as advanced tool making skills (weapons, paint brushes, cameras etc.). Bergson takes these ideas a step further by contemplating human life and intelligence, not for any speculative function but instead, for their pragmatic application to quantitative analysis. Intellectual analysis enhances our knowledge and understanding of empirical scientific facts. However, the limits of scientific investigation cannot account for our personal experience, Bergson instead suggests we follow sympathy, he states,

Instinct is sympathy. If this sympathy could extend to its object and also reflect upon itself, it would give us the key to vital operations – just as intelligence, developed and disciplined, guides us into matter. For-we cannot too often repeat it-intelligence and instinct are turned in opposite directions, the former towards inert matter, the latter towards life. Intelligence, by means of science, which is its work, will deliver up to us more and more completely the secret of physical operations; of life it brings us, and moreover only claims to bring us, a translation in terms of inertia. It goes all round life, taking from outside the greatest possible number of views of it, drawing it into itself instead of entering into it. But it is to the very inwardness of life that intuition leads us – by intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and of enlarging it indefinitely. (1998: 176)

3. The two senses of intelligence and intuition

Human intelligence can only achieve true knowledge and the essence of the creative vital impulse or *élan vital*, when following its opposite direction towards the qualitative potential of intuition. This combination of the two tendencies of intelligence and intuition defines how humans come to absolute knowledge. Intelligence relates to space, matter and quantitative analysis, while intuition relates to time (*durée*) and our qualitative experience of our internal states. And as such, our unrepresentable internal spiritual states such as memory, creative emotion and intuition, survive alongside our perception of our representable body and other objects of matter.

We are unable to comprehend the essence of life when preoccupied with analytical intelligence, however at the edge of intelligence, a fringe of instinct still survives. These remnants of instinct offer us a way back to intuition and the essence of life. Intelligence and instinct are both part of duration and as such exist alongside the original vital impulse. Intuition and intelligence are human tendencies that coincide with the *élan vital* and lead Bergson to turn metaphysics, as Deleuze explains into a 'rigorous discipline' (Deleuze 2002: 115). Bergson does not speak of intelligence and intuition as elite or individualistic states but as tendencies, because then it is impossible to separate either away from duration and life's entirety, as both integrate in a continual process of change and becoming. Intelligence's concern is with objects of matter, while instinct relates to continual change and duration 'intelligence and instinct are turned in opposite directions, the former to inert matter and the latter towards life' (Bergson, 1998:176). As Deleuze explains,

Bergson's thesis could be summed up in this way: real time is alteration, and alteration is substance. Difference of nature is therefore no longer between two things or rather two tendencies; difference of nature is itself a thing, a tendency opposed to some other tendency. The decomposition of the composite does not just give us two tendencies that differ in nature; it gives us difference of nature as one of the two tendencies. And just as difference has become a substance, so movement is no longer the characteristic of something, but has itself acquired a substantial character. (2004: 37-38)

4) The Method of Intuition

We are able to move from intuition to intelligence by analysis but unable to achieve the opposite movement, since intuition is not reducible to analytical data. Intelligent and habitual knowledge might be useful for our everyday needs but they are obstacles to absolute knowledge. Bergson's Method of Intuition assists our knowledge of life by setting up intelligence against itself. Intuition has too often been assumed to lie dormant within ourselves until our vital interests are at risk. However, intuition is not an indescribable feeling or lived experience but a method

that lies within us. If we leap back into intuition a unity of internal and external life emerges. Intuition moves us beyond the external analytical world of intelligence but is also able to progress toward intelligent analysis and its practical application in a spatially understood dimension.

The philosopher's job is to grasp and support moments of intuition by opening them up to each other to reveal how their process coincides with the human spirit and body. Bergson states 'philosophy introduces us into spiritual life... And at the same time, it shows us the relation of the life of spirit to the life of the body' (Bergson, 1998: 268). Philosophy and creativity are our ability to locate and unify the diverse and complimentary components found within the differing lines of metaphysical and scientific knowledge. Thus spirit and diverse matter are united through life's creativity, which is philosophy, because creativity places us back within the creative vital impulse (*élan vital*) and our philosophical experience. Metaphysical and creative thought replenishes absolute knowledge by coinciding with absolute becoming. Bergson illuminates how 'aesthetic intuition, like external perception, only attains the individual' whereas duration relates to everything (1998:177). Duration would remain purely intuitive, if Bergson did not have intuition as a method. As Deleuze explains, 'without the methodical thread of intuition, the relationships between Duration, Memory and *Élan Vital* would remain indeterminate from the point of view of knowledge' (Deleuze, 2002:14).

Bergson's Method of Intuition is a simple act of qualitative and virtual multiplicity, with various meanings in which it can be actualised, as Deluze points out,

Intuition as a method is a method that seeks difference. It presents itself as seeking and finding differences in nature, the "articulations of the real." Being is articulated; a false problem is one that does not respect these differences... A difference of nature is never between two products or between two things, but *in one and the same thing* between the two tendencies that traverse it, in one and the same product between two tendencies that encounter one another in it... Matter and duration are never

distinguished as two things but as two movements, two tendencies, like relaxation and contraction... As long as we remain within dualism, the thing is where two movements meet: duration, which by itself has no degrees, encounters matter as a contrary movement, as a certain obstacle, a certain impurity that mixes it up, that interrupts its impulse, that gives it such and such a degree here, another one over there. But more profoundly, duration is in itself susceptible to degrees because it is that which differs with itself, so that every thing is entirely defined in duration, including matter itself (Deleuze, 2004: 26-27).

The Method of Intuition as Bergson shows is made from several acts that correspond to component parts or degrees of duration (Bergson, 1992: 200). Deleuze explains there are three distinct acts that 'determine the rules of the method' (2002:14). The first act opposes the habit of intelligence and analysis by leaping into duration. The second act requires we make the effort to open our own duration to continuous heterogeneity. The third act differentiates between the extremes of continuous heterogeneity. The three acts 'determine the rules' the first rule considers 'the stating and creating of problems', the second rule the 'discovery of genuine differences in kind' and the third rule, 'the apprehension of real time' (Deleuze, 2002:14).

Rule 1: Stating and creating of problems

The method begins by seeking the conditions of problems, asking why they mislead us when not properly phrased? The reason as Bergson discovers, is when poorly phrased, problems and questions hide the diversity within which they should be asked. Usually theories of knowledge claim meaning, rationality and stability as the order of things by comparing order to disorder. Bergson however, considers order to be contingent with chaos and not in opposition to it and believes we should instead compare one order in relation to another (1998:232-233).

Usually we ask whether the solution to a problem is true or false, without checking, whether the question itself is either of these. Deleuze points out that we need to condemn false problems and reconcile truth and creation at the level of the problem posed (2002:15). For Bergson, the posing of a problem is a creative act and once stated the answer should be implicit within the problem posed. Creation and problems function on the same plane and the solution is reliant on the quality of the stated problem. Bergson specifies two ways a problem could be found to be false: either through its non-existence or because it forms 'badly analyzed composites' (Deleuze, 2002:17)

The first type of problem finds its root in the second, if we ask why is there something rather than nothing we encounter a nonexistent problem. To consider nothing to contain less than something, ends up muddling more, less and nothing together. A question about nothing can never contain more than a question about something because this would require the idea of being, and its negation. Something can only be missing if something else takes its place. To ask why there is something rather than nothing, results in a non-existent problem. The second type of problem arises from being poorly stated because things that are different in kind are randomly placed together and analysed under one generalised and inappropriate concept. For example, when mechanistic inorganic matter and organic life are compared to each other under a concept of order, without acknowledging their individual differences, they appear to contradict each other. When order is thought of as disorder, it returns us to the first type of false problem, where we contemplate the more or less of things instead of their differences in kind. As Deleuze points out,

Conceiving everything in terms of more and less, seeing nothing but differences in degree or differences in intensity where, more profoundly, there are differences in kind is perhaps the most general error of thought, the error common to science and metaphysics. (2002:20)

Rule 2: Differences in kind

This process allows us to phrase the right problem or question, in a way where the answer depends on the question posed. By sympathising with our own situation we are able to sympathise with other people and things, which assists our identification of the diversity and creativity within which differences in kind exist.

We need to discover true differences in kind that articulate our real experience and keep sight of false problems. Differences in kind progress in relation to how their composites are mutually joined through extensity and duration, which can be defined as directions of movement. Duration in this instant relates to how we contract all our qualitative complexities such as sensations, memories, emotions, into a whole incapable of being homogenous, juxtaposed and representable concepts. Extensity on the other hand, allows for the continuation and expansion of matter into an infinite number of homogenous concepts and possibilities. Anything found to differ in kind is a tendency with two possible movements or directions into which the composite of differences in kind, can divide.

We should question how to move beyond this experience, by finding the conditions and differences in kind of the composition. For example, when we consider the division between perception/matter/object and memory/dream/creative emotion, we discover our experience of them leads us back to their re-combination through our duration. When we find a way to express differences in kind relative to their particular nature, we move to a composite where differences in kind intersect again and produce another new experience within ourselves.

This intersection is always different to its starting point and so becomes a new 'virtual point' within us. This creates a new experience, which is why we need the method of intuition, which provides a double movement that moves beyond our virtual experience and the differences in kind – transforming dualisms into monism, and a new virtual point within us. This process allows us to phrase the right problem or question, in a way where the answer depends on the question posed.

Rule 3: Apprehension of real time

When we consider duration, instead of endlessly using quantitative analysis within space, we experience sympathy within ourselves and others, through the communality of duration. Through a common act of the method of intuition, intuition is no longer an individual experience but instead accessible to all. The rules of the method allow intuition to be 'the movement by which we emerge beyond our own duration, by which we make use of our own duration to affirm and immediately to recognize the existence of other durations, above or below us' (Deleuze, 2002:33). The method of intuition presumes the existence of duration because thinking within durational terms, offers a dissymmetry between it and space. Duration enables us to 'state problems and solve them in terms of time rather than space' (Deleuze, 2002:31). The dichotomy between space and time, for Bergson, is the foundation on which all the other divisions such as the Cartesian divide are built. Bergson highlights the impact of this split and how, when intuition is no longer considered as an individual experience, it is accessible to all through a common act of the method of intuition.

This knowledge resides within ourselves and does not necessitate a God or mathematics to explain the inexplicable as we mar our understanding with false questions such as whether something is more or less, better or worse than another. Whereas space is homogenous and can only be understood in relation to infinite juxtaposed differences, we can move beyond this measure of things under a single concept. And this is where duration's tendency, to discover qualitative differences from itself and differences of kind, can assist our understanding of how to create and comprehend, the completely new.

When our general knowledge is built upon comparisons of the more or less, bigger or smaller, better or worse of things, we might satisfy a desire for information but not our knowledge of things themselves. When notions such as intelligence and intuition are conceived in opposition to one another we ignore their unification through our lived experience. Our experience serves to integrate infinite durations

and even though we might not know them all, each one comes into existence and is related in part to others through duration. Intelligence uses matter to synthesise information into general concepts, whereas intuition lets us enter into things instead of analysing them from the outside. To achieve absolute knowledge we need to sympathise with ourselves, seizing ourselves from within, developing self-sympathy heterogeneously into our sympathy for others.

Intuition encourages our experience of differences in kind by sympathising with ourselves and all other things. In this sense, intuition is sympathy because it allows us to step within ourselves and grasp our human experience without the confines of reasoning and intelligence. For Bergson, 'when one sympathizes with oneself, one installs oneself within duration' (Bergson, 1992:185). Sympathy enables our contemplation of immeasurable human psychic states such as consciousness and unrepresentable emotion, which frees us from visual and linguistic signs, symbolic gestures and scientific and mathematical measurement.

Sympathy transports us 'into the interior of an object in order to coincide with what there is unique and consequently inexpressible in it' (Bergson, 1992 :161). The artist, through their effort of intuition as well as their sympathy with the object or thing they are creating, can be understood to dismantle the barrier between their creative metaphysical self and the space within which they create. The artist is able to reveal how metaphysical creativity and the production of something in the external world coincide. Mable Dodge provides the following insight into the importance of Bergson's method of intuition, for Gertrude Stein's creative methodology:

She always works at night in the silence, and brings all her will power to bear upon the banishing of preconceived images. Concentrating upon the impression she has received and which she wishes to transmit, she suspends her selective faculty, waiting for the word or group of words that will perfectly interpret her meaning, to rise from her sub-consciousness to the surface of her mind. Then and then only does she bring her reason to

bear upon them, examining, weighing and gauging their ability to express her meaning. It is a working proof of the Bergson theory of intuition. She does not go after words--she waits and lets them come to her, and they do. It is only when art thus pursues the artist that his production will bear the mark of inevitability. It is only when the "*élan vital*" drives the artist to the creative overflow that life surges in his production. Vitality directed into a conscious expression is the modern definition of genius. (Mabel Dodge, 1913, cited in *Arts and Decoration* March edition)

So how can Bergson's Method of Intuition be applied beyond Gertrude Stein's writing methodology, to include the creation of art with analogue film, video and digital video technology? Andy Warhol was one of the first artists to employ video technology within his practice and to experiment with continuous shots, in both film and video, over a longer duration. The ability to record a continuous shot over a longer time-span has been fundamental to both my practice and theoretical research into duration. This is because it allows the unexpected and new to occur in my work in ways that I could not have envisaged.

The relationship between a medium and its technical capacity or constraints to record image and sound over a longer or shorter time span, has challenged my knowledge of moving-image and sound technology. And as a result my practice work has assisted my understanding of philosophy and art creation, as well as the creative potential of emotion when placed in duration.

Warhol experimented with the capacity of an Auricon 16mm analogue film camera, which could contain a 1200ft film reel, to shoot unedited continuous takes of 33-minute lengths. In 1965 affordable video equipment became available to the general public for home entertainment. During the same year Warhol was loaned high-end video equipment by Norelco for promotional purposes and asked to report his experimental findings. As a result, Warhol produced *Outer and Inner Space* (1965), a 33 minute 16mm film captured with an Auricon camera, which recorded Edie Sedgwick watching a previously recorded video image of herself screened on

a TV monitor (it also includes a few minutes TV broadcast content). Sedgwick appears to be in conversation with her own screened TV image and during the exhibition of the work, Warhol projected two versions of the film opposite to each other, creating a further layer of Sedgwick's interaction with herself. This technique of double projection became a defining technique in Warhol's projection work and can be observed in his well-known film *The Chelsea Girls* (1966).



Figure 20. Stills from Andy Warhol's *Chelsea Girls* (1966)

One of the problems that Warhol's *Outer and Inner Space* highlights is how rapidly video technology changes. The video image seen in his film can now only be viewed as 16mm film because the initial slant and scan video format utilized to create the video image is no longer available. Warhol's use of video predates the famous video artist Nam June Paik's first video by a few of months. In October 1965 Nam June Paik both recorded and exhibited a video on the same day for the "Electronic Video Recorder" exhibition. Nam June Paik went on to write a manifesto for the electronic age in which he stated 'just as collage has ousted oil painting, so the cathode ray tube will replace the canvas' (cited in Video Art – Martin, 2006: 8). Paik also claimed in the manifesto that, 'Someday artists will work with capacitors, resistors, and semiconductors as they work today with brushes, violins and junk' (cited By John Hanhardt, Guggenheim Museum, essay

excerpt courtesy the Estate of Nam June Paik and John Hanhardt). Paik was interested in the relationship between moving painting and sound as the following quote reveals,

I feel inferior to painters and inferior to composers. A German who studied radar during the war told me radar waves make interesting painting, then I had an idea. Why don't I move from electronic music into electronic painting with the TV. I will not compete with the big guys—Jasper Johns and John Cage. I will find something new—the moving painting with sound. (Paul Gardner, 1992: 67).



Figure 21.

Nam June Paik's, *Electronic Highway*

Paik went on to build a video synthesizer that could manipulate both sound and image and would also continuously re-record video images to show the gradual breakdown of the original image into distorted colour shapes. This same process has been applied to re-recorded sound, as the latest version of a continuously re-recorded sound is projected back into space and re-recorded, until it gradually breaks down and distorts. Alvin Lucier's sound work *I am sitting in a room* (1969) is based on the re-recording of his voice in a room. By continually repeating this process, always replaying and re-recording the latest version of his voice, we hear the degradation and breakup of his voice as his speech eventually becomes unfathomable to the perceiver of the work. By sympathising with his own plight, as

someone that struggles to articulate himself through speech because of a stutter, Lucier both comments on his speech difficulties through a medium that best expresses his problem, while also creating a completely new artwork.

More recently, Turner Prize winner Douglas Gordon used video technology to record, project and manipulate the entirety of Hitchcock's *Psycho*, to fit the slowed down image into 24 hours. Since Gordon's production of *24 Hour Psycho*, we have seen video technology develop to include Standard Definition digital technology and High Definition digital video. However, with each development of the technology we find new challenges as more processing power is required and older versions of video become defunct. Alexander Sokurov's film *Russian Ark* (2002) challenged the capability of High Definition technology by creating one continuously uninterrupted shot that lasts the length of the 90 minute film. To process the film the camera needed to be portable and able to deal with vast amounts of digital storage and processing power, as well the narrative demands and the environments it was required to navigate through. The arrival of compact 24p High Definition Sony F900 camera ensured both the portability of the camera by one camera person using a steadicam, while offering a greater storage capacity. As the production notes for the film reveal,

The next challenge was the recording medium. An HD camera can only record 46 minutes without changing tapes. We needed 90. A prototype hard disk recording system developed by the Cologne company, Director's Friend provided the solution. Adapted to be portable and equipped with a special ultra-stable battery, this system could record up to 100 minutes of uncompressed image - but only once. (cited in Seville Pictures: 2003 Russian Ark Production notes).

The digital technological revolution⁹, increasingly dominates the way we create, produce and manipulate moving-image and sound. And as some would argue limits the scope of technological creativity, as it becomes harder to access differing mediums such as celluloid film, analogue video and analogue TV technology. Increasingly film and image technologies are becoming defunct. Recently it has become increasingly difficult to process celluloid film, as 16mm and 8mm printing labs across the world have had to shut down in light of the growing influence, ease and affordability of digital technology. However, even though digital technology is increasingly used throughout the world, in many instances of commercial film production we still find digital film is printed onto 35 mm celluloid film because of distribution requirements. As many parts of the world still rely on analogue projectors to display film images to cinema audiences. Artists such as Turner prize winner Tacita Dean, Becks prize winner Ros Nashishibi and experimental film maker Sarah Pucell have continued to admire the aesthetic qualities of analogue technologies and the medium of film. This way of film making however, is increasingly difficult to sustain as digital processing dominates the world market. Dean has expressed her concern for the continued depletion of film stocks and processing labs, which has threatened her preference for 16mm film production, a medium that she feels links closely to painting.

My films are depictions of their subject and therefore closer to painting than they are to narrative cinema....working as both artist and artisan. It is the heart of my process, and the way I form the film is intrinsically bound up with these solitary hours of watching, spooling and splicing.....My relationship to film begins at that moment of shooting, and ends in the moment of projection. Along the way, there are several stages of magical transformation that imbue the work with varying layers of intensity. This is why the film image is different from the digital image: it is not only emulsion versus pixels, or light versus electronics but something deeper – something to do with poetry. (Dean cited in *Save celluloid, for art's sake*: Higgins, The guardian.co.uk, Tuesday 22 February 2011)

⁹ See appendix 6 for brief explanation of digital technology.

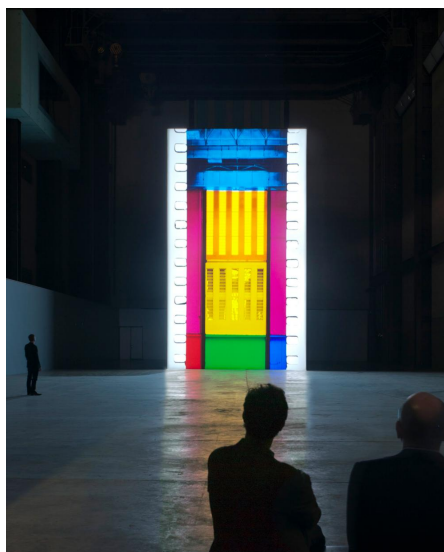


Figure 22.

Tacita Dean: 'Film' in Tate Modern, London

However, Dean does not want to limit her practice to analogue film alone, she simply wants to speak of her loss of another technology, which is different in kind. Dean claims she is not 'fetishising' the medium and nor is she 'anti-digital', she simply wants the option to utilise both mediums (quoted in *Save celluloid, for art's sake*: Higgins, The guardian.co.uk, Tuesday 22 February 2011). As Dean states,

Smaller formats of celluloid film have become increasingly difficult to access as analogue film processing, focuses on 35mm film technology, a decision driven by economics and distribution...Many of us are exhausted from grieving over the dismantling of analogue technologies. Digital is not better than analogue, but different. What we are asking for is co-existence: that analogue film might be allowed to remain an option for those who want it, and for the ascendancy of one not to have to mean the extinguishing of the other. (cited in *Save celluloid, for art's sake*: Higgins, The guardian.co.uk, Tuesday 22 February 2011)

Nashshibi has also recently turned to digital film production, as similar to Dean, she finds it increasingly difficult to access and process film – as a result she has embraced digital technology as a new experiment.

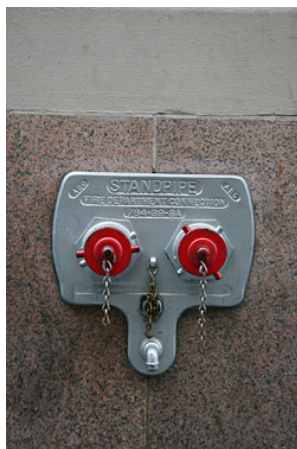


Figure 23. Ros Nashshibi's, *Happenings*

The age of digital technology is ever more variable and artists are increasingly embracing a hybridity of analogue film, TV, analogue video, digital technologies and production techniques. Hockney now paints with digital technology, as he records the durational change of landscape with multiple digital video cameras and a variety of digital technology.



Figure 24. Still from David Hockney video installation

Char Davies began as a painter and filmmaker before encountering digital software, which prompted her exploration of immersive virtual environments. Davies created *Osmose* 1995 as an immersive interactive virtual environment that is perceived with a head-mounted display, which the viewer navigates through using their own balance and breathing. The observed computer-generated image is constructed to appear as if in a 3-dimensional world and challenges our conscious perception of ourselves. The accompanying sound is designed to allow audience interaction and changes according to the perceiver's environment, navigation and speed of motion. To this end Davies questions the divisions of the Cartesian divide.

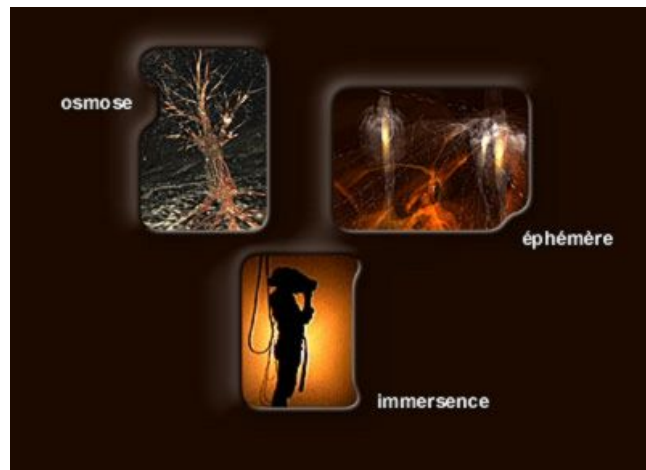


Figure 25. Char Davies's, *Osmose*

Artists such as Davies and Natalie Jeremijenko have grasped the technological enhancements of digital technology to create immersive and socio-political experiences that challenge our perception of the mind/body split and dominant ideologies. These artists continue to develop alternative perceptions and interactions to our everyday experience and use a hybridity of digital and analogue technologies, to assist their creation of sound and moving-image.

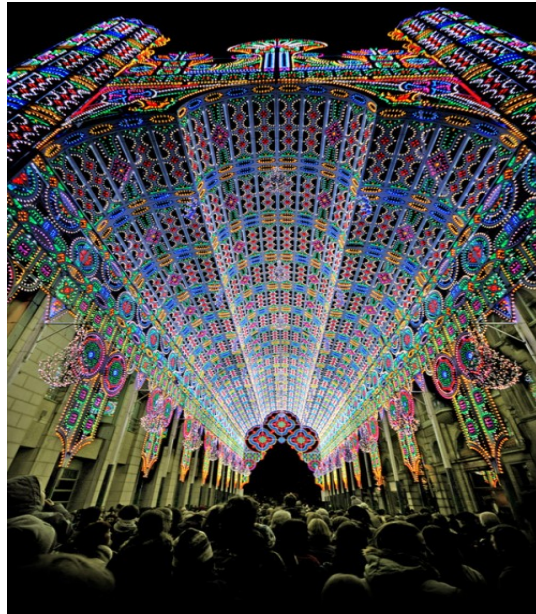


Figure 26. Natalie Jermijenko's, *The Cathedral of Light* (2012)

If I now reconsider how to question and determine the usefulness of either analogue or digital technology for the purpose of light and image creation in duration. I can begin by applying the acts and rules of Bergson's Method of Intuition to the ongoing debate about which technology, digital or analogue, is the better or worse for moving-image creation? I start by sympathising with the variety of film and video making technologies and remind myself of the *élan vital*. This vital impulse or in this instance the technological medium's *élan vital*, I construe as its ability to record and display light. This technological *élan vital* becomes in duration with light, using chemistry (e.g. celluloid film/chemical processing) or electricity (video/ TV/digital video processing), as well through a combination of both (as in Warhol's projected images or the work of artists such as Davies and Dean).

I then determine the differences in kind relevant to both digital and analogue technology, which splits their tendencies into quantitative and qualitative multiplicities. Thus dividing their movement either towards their quantitative analysis in space or their qualitative becoming in duration. In one, the quantitative and representable, I can calculate light and technology with retrospective mathematics, chemical symbols and light particles and waves. While in the other,

the qualitative and unrepresentable, chemistry, electricity and light are themselves becoming in duration. Thus we discover two tendencies, one that measures technological attributes to sample and process light in space, while the other is their ability to capture and display light becoming. As a result, I move beyond their measurement as film grains or digital video pixels to reconsider their attributes, not for their better or worse, but instead for their potential to assist art creation with light.

This extends my analysis equating technological functionality with the symbolic representation of mathematics in space, to engage with their individual potentials through the lens of their *élan vital*. This vital impulse is their ability to capture and display light for the benefit of our perception with light, which enables our creation of something new with light sensation, using either or both technologies to express creative emotion in the material world. If we consider our observation of images, we find the initial and final result of our observation of all movement-images is a simple function of our perception of real light in the material world over duration. The simple act of vision, as Bergson reminds us, requires the indefinable sophisticated function of the eye,

The mechanism of the eye is, in short, composed of an infinity of mechanisms, all of extreme complexity. Yet vision is one simple fact. As soon as the eye opens, the visual act is effected. Just because the act is simple, the slightest negligence on the part of nature in the building of the infinitely complex machine would have made vision impossible. This contrast between the complexity of the organ and the unity of the function is what gives us pause. (Bergson, 1998: 88)

Ultimately, we are simply using the functioning of the eye and our observation of light to appreciate the production and creation of something new with light. Artists such as James Turrel and Antony McCall provide artistic evidence of this, as their work is premised upon the duration of light itself.



Figure 27. James Turrell's, *Afrum I (White)*



Figure 28. Anthony McCall's *Room with Altered Window*

Our observation of images of light, whether created with digital or analogue technology is our observation of light itself within the duration of the whole, which is light becoming. Bergson elucidates how,

It is the picture, i.e. the simple act, projected on the canvas, which, by the mere fact of entering into our perception, is decomposed before our eyes into thousands and thousands of little squares which present, as composed, a wonderful arrangement. So the eye, with its marvellous complexity of structure, may be only the simple act of vision, divided for us into a mosaic of cells, whose order seems marvellous to us because we have conceived the whole as an assemblage. (1998:90)

A question about creativity with light proves that a question about differences of technology and which is better or worse, whether analogue or digital, is too simplistic. This is because it neglects what is being created and why it is being created with light in duration, and the vital force and creative emotion that drives us to do so. When we observe moving-images or listen to sound we rely on the qualitative functioning of our sight and hearing and our ability to perceive sound and light sensation. A preference for either analogue or digital or the combination of both technologies, only becomes relevant when the artist specifically needs to express something in particular with a specific medium for a specific reason. This has led to my experimentation with analogue film, digital video and analogue and digital sound.

The practice work for this chapter began with the creation of the sound piece, *Moments in a Journey of Speech*, which contemplates the movement of unrepresentable emotion and a pre-linguistic journey of the voice. It alludes to the movement and potential of unrepresentable creative emotion, while contemplating the internal *Moments of a Journey of Speech*, prior to its expression as vocals in the material world. To achieve this, I recorded my voice and digitally manipulated the sound to distort language into sonic noise. The resulting sound was assigned to specified speakers to create spatial movement. The soundtrack pans back and forth between stereo speakers and was designed to travel from one end of a corridor like space to the other. At moments selected sounds bounce back and forth between speakers, while overall the track continues its graduation towards

the opposite end of the space. The thing about sound, as with light, is we forget they are not linear but a radiation outwards in all directions.

The soundtrack was then accompanied by a 1:30 minute panning shot using 8mm film (see figure 29. below for stills from the film). It focuses on a section of the most intense colour of sky at sunset, while silhouetted against this light are the shapes of the blackening landscape. The visual piece reflects upon my research into the representation of neuroimaging techniques and the mapping of emotion and audiovisual areas within the brain.

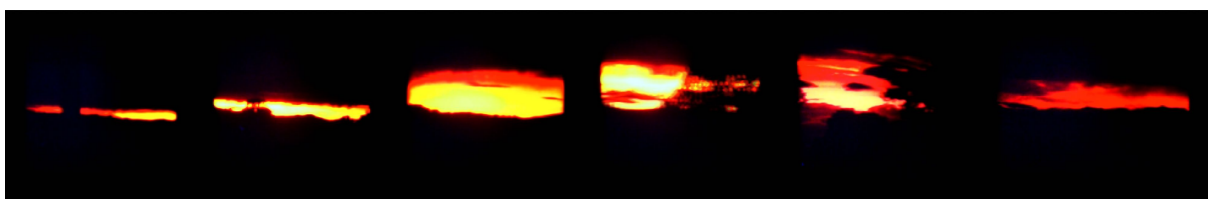


Figure 29. Stills from *Moments in a Journey of Speech*

The audiovisual piece *Moments in a Journey of Speech* led to the development of the practice work *The Method of Orange*.

This audiovisual work consists of two new HD video pieces that relate to Bergson's theoretical discussion of the Method of Intuition. The soundtrack created for *Moments in a Journey of Speech* was looped and edited together with the two new HD videos, to portray the outwards and inwards movement of the *Method of Orange*.

The way we perceive light and colour as an altering image, whether: fluctuating light graduating to an image becoming (*In my Breath I Drew*), moving from external light and landscape into an internal room (*Portrait of Myself*) or light shifting towards darkness (*The Method of Orange*) has influenced my entire PhD practice. Deleuze considers how,

Between light and darkness, between colors, between nuances, difference is absolute. The passage from one to the other is itself also an absolutely real phenomenon. We therefore grasp duration and *élan vital*, the virtual and its actualization, as two extremes. Still, it must be said that duration is already *élan vital* because it is the essence of the virtual to be actualized; we therefore require a third aspect that shows it to us, one in some way intermediary to the two preceding. It is precisely under this third aspect that duration is called memory. Through all of its characteristics, duration is indeed a memory because it prolongs the past in the present, "whether the present distinctly encloses the ever-growing image of the past or whether it rather bears witness, through its continual changing of quality, of the ever-weightier burden one leads behind oneself as one grows older. (2004: 28)

I have watched subtle and sudden change of light throughout summer, spring, autumn and winter. Figure 30. below, shows three stills from *Hour Between Light and Dark*, a video I captured showing the progression of day into night over the duration of one hour. As the exterior light fades, the interior light becomes increasingly more reflective on the interior windowpane, creating the effect of moving from exterior to interior. The audio accompanying the work is the sound of the television programme, which is also visually reflected in the interior windowpane. This practice research influenced my experimental text/vocal piece, *The things I have to go under - A Short Film to be read aloud* (see Appendix 7). It also informed ideas for the *Representing Refugees* exhibition.

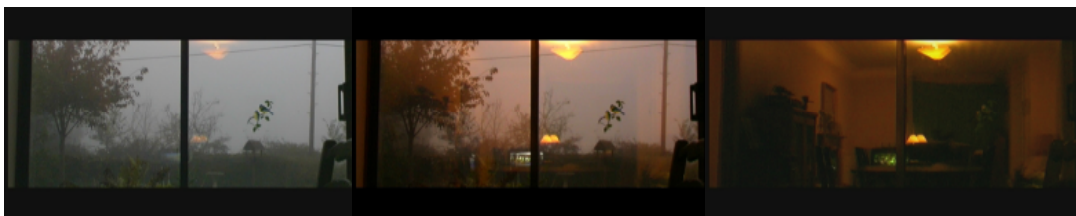


Figure 30. Stills from *Hour between light and dark*

The way analogue and digital technologies record and display the effects of changing light meant extensive testing of exposure settings and different camera types. For this section, my final choice of technology was a HD camera, as I wanted to gain a better understanding of HD technology and the challenge of processing vast amounts of digital video data, during both the production and post-production stages. I needed to understand when recording light over duration, how long the HD digital capture card/s (4 x P2 cards) could run for and how long the data would take to process, render and compress? I began to test post-production techniques with High Definition video as the increased image definition required a vast amount of time to process on a home computer. This led to fairly challenging post-production testing and techniques, in order to retain as much of the quality of the original High Definition image, as possible. A substantial amount of testing was required to ensure the compression of the image did not affect or degrade the colour of the image too severely. This was to ensure an acceptable file size could be achieved to fit the image onto a playable storage medium for display and exhibition purposes. However, as I reach the end of this research it has become increasingly frustrating to find it is still difficult to produce something of the same standard as the originally captured HD video data that fits to an accessible storage medium and player.

The final HD video was shot in England in mid-summer on the Norfolk coast near Salthouse. Initially, I spent a couple of afternoons driving along a stretch of coast, watching a calm sea as light reflected from its surface and began to fade towards a darkening summer sky. On the third evening I looked up towards the brightest part of the sky, perceiving the change of sunlight as it painted colour onto gradually drifting clouds. I set the camera up turning it towards the brightest part of the sky. Intuitively framing, focusing, resetting settings, switching buttons, zooming the lens into a shot that framed the most vibrant and well-lit section of sky. Light streamed through the lens projecting onto a focal plane, where photoactive sensors captured its essence. Unseen, digital technology selected and measured samples of continuous real world light, breaking it down into imperceptible intervals as the capturing device momentarily, switched on and off.

The HD video camera recorded a single shot of the changing colour and the movement of clouds at sunset. The camera's storage medium (P2 card) retained digital information equivalent to a continuous shot of 16 minutes, as the movement of light and its differentiation, faded towards dark. The recorded and projected images, similar to our own sense-perception of external things in the material world, will never contain the depth, density or complexity, of the actual light and cloud formation, however, when screened again, the light will be renewed light becoming.

Sympathising with the image, I knew this was the movement of creative emotion, as the sky clearly revealed change, differentiation and the becoming of duration. For Bergson, the unrolling of duration is similar to a unity of movement that progresses like a multiplicity of states, spreading across a colour-spectrum. Intuition, he points out, is of duration and if we imagine no other colour but orange, sympathising and entering into it, we would find ourselves 'caught between red and yellow' (Bergson, 1992: 187). Perceiving a variety of shades from dark orange to red, and from light orange to yellow as we sense the whole colour spectrum that exists beneath and above the colour orange. Lawlor and Moulard, paraphrasing Bergson, state,

I may introspect and sympathize with my own duration: my duration may be the only one. But if I make an effort, I sense in my duration a variety of shades. In other words, the intuition of duration puts me in contact with a whole continuity of durations, which I could, with effort, try to follow upwardly or downwardly, upward to spirit or downward to inert matter. (The Stanford Encyclopedia of Philosophy, 2012)

Driving home I contemplated the image and its mirrored moving-image, as if reflected from a surface of water. This led to the initial moving-image being replicated in postproduction to create four separate versions, each of which when

synced up and pasted back together, consecutively mirrored and matched its opposing reflected image. Deleuze points out that,

there will not be in Bergson's work anything like a distinction between two worlds, one sensible, the other intelligible, but only two movements, or even just two directions of one and the same movement: the one is such that the movement tends to congeal in its product, in its result, that which interrupts it; and the other turns back and retraces its steps, rediscovers in the product the movement from which it resulted. The two directions are natural as well, each in its own way: the former occurs according to nature, though nature risks losing itself in it at each pause, at each breath; the latter occurs contrary to nature, but nature rediscovers itself in it, starts over again in the tension. The latter can only be found beneath the former, and it is always thus that it is rediscovered. (2004: 23-24)

My final composition for *The Method of Orange* formed two new video images, one that seamlessly integrates four moving-images so they appear to move continuously outwards. I then rearranged the same four moving-images, beginning with the reflected image first and utilising the same method as set out above. This created another digital moving image, which continuously moves inwards. Through this method of reflecting and mirroring the originally recorded image, two new video projections were created. The two images clearly reveal two movements, one that moves away from its centre, towards its representation in space, while the other folds back into itself, as it moves inwards towards its unrepresentable interior. As Deleuze discusses,

For the time-image to be born...the actual image must enter into relation with its own virtual image as such; from the outset pure description must divide in two, 'repeat itself, take itself up again, fork, contradict itself'. An image which is double-sided, mutual, both actual and virtual, must be constituted. We are no longer in the situation of a relationship between the

actual image and other images, recollections, or dreams, which thus become actual in turn: this is still a mode of linkage. We are in the situation of an actual image and its own virtual image, to the extent that there is no longer any linkage of the real with the imaginary, but indiscernibility of the two, a perpetual exchange. (1994: 273)

In *The Method of Orange*, one video image contracts back into itself as if absorbing the external representable world through intelligent analysis. The other video image reveals the internal unrepresentable world of intuition, which continuously emerges and creates itself, with creative emotion in the external world. The images below show stilled frames from both the outward and inwards method, utilized to create *The Method of Orange*.

Outwards Method

The original image (a) below can be observed alongside its mirrored image to its right. Both were combined in the top half of the video-editing screen. These same two images were then mirrored again replicating their reflected images below in the bottom half of the screen. The resultant image matches all four images together to reveal one shot that moves continuously outwards. Over duration, the entire moving image travels outwards as the video projection progresses towards fading light.



Figure 31

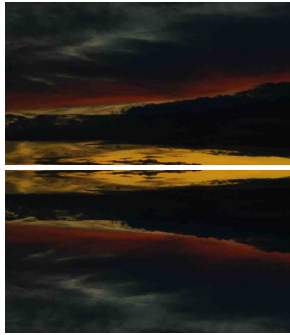
Inwards Method

When the same process of mirroring and reflection (as discussed above) is repeated starting with the mirrored image first, we experience a second image that can be observed continuously moving inwards as the light fades.

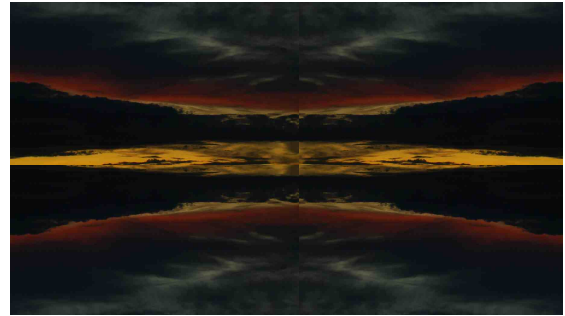
Mirrored image



Mirrored again to right



Final Image



Mirrored again below

Mirrored again from below and right

Figure 32.

Both images should be projected within a space that would allow the perceiver of the work, to observe them simultaneously and experience the movement of the soundtrack between speakers located in the same environment. In this way, the perceiver of the work would be able to encounter two visual analogies to Bergson's Method of Intuition that reveal our creative journey, between our unrepresentable internal intuition, and its suggestion through the creation of video moving- images in the external world.

In short, actually divergent series give birth to, in duration, coexistent virtual degrees. Between intelligence and instinct there is a difference of nature because they arise from two divergent series; but what does this difference of nature finally express if not two degrees that coexist in duration, two different degrees of relaxation or of contraction?...Because if everything [tout] is not given, it remains that the virtual is the whole [le tout]. Let us recall that the *élan vital* is finite: the whole is what is realized in species,

which are not in its image any more than they are the image of one another.If the past coexists with itself as present, if the present is the most contracted degree of the coexistent past, then this same present, because it is the precise point at which the past is cast toward the future, is defined as that which changes nature, the always new, the eternity of life. (Deleuze, 2004: 30)

Dean discusses the importance of artists displaying their work for exhibition and how a restriction of technology affects the presentation of their work, especially when attempting to display something that moves beyond the importance of narrative structure. For Dean,

artists exhibit, and so care about the final presentation and presence of the artwork in the space. Other professions have their work mediated into different formats: TV, magazines, billboards, books. It remains only in galleries and museums that the physical encounter is so critical, (cited in Save celluloid, for art's sake: Higgins, The guardian.co.uk, Tuesday 22 February 2011).

Thus to exhibit the two video images created for *The Method of Orange* within an environment that is conducive to their specific installation requirements, would enhance their meaning and potential.

Installation of *The Method of Orange*:

Images: Two looped projections:

The original H.D. image was 16 minutes long but to assist the viewer's experience of the subtle change of the image it has been slightly speeded up to fit to 11 minutes. The original image was then copied and manipulated to create two

separate moving images 1] Outwards: reveals movement towards its external frame and 2] Inwards: reveals movement towards its centre.

Sound: Looped audiotrack *Moments in a Journey of Speech*.

The Sound would be played in stereo through 2 left speakers assigned to 1] Outwards projection and 2 right speakers assigned to 2] Inwards projection. This would enable the perceiver of the work to experience the spatial movement of the sound between left and right speakers and the moments were sound bounces back and forth between the two. For an alternative to this soundtrack, listen to D. Payling's soundpiece, which he created for *The Method of Orange*, as part of the practice submission for his PhD ¹⁰.

1] Outwards image with 2 x left Speakers – the sound would travel away from these speakers.



2] Inwards image with 2 x right Speakers – the sound would travel towards these speakers.



Fig 33. Stills from Method of Orange

¹⁰ **Dave Payling:** (see/listen to *Sunset Reflex/Sunset Soundtrack, Time Dilation and the Sky*)
<https://davepayl.wordpress.com/category/video-music/>
<https://davepayl.wordpress.com/2011/01/19/sunset-soundtrack-time-dilation-and-the-sky/>
<http://soundcloud.com/dave-payling/sunset-reflex>

finally, he shows us that if degrees coexist in duration, duration is at each instant that which is differentiated, that it is differentiated into past and present, or, if you prefer, that the present is doubled in two directions, one toward the past, the other toward the future. These three times correspond, in the whole of the work, to the notions of duration, memory, and *élan vital*. (Deleuze, 2004: 31)



Figure 34. Gilles Deleuze

FIN

Conclusion

Conclusion

Henri Bergson identified two types of emotion, firstly those that are representational and secondly those that are pure and unrepresentable. The unrepresentable characteristics of emotion function throughout a fluid duration as its complex nature ceaselessly changes into new psychic states. It is this unrepresentable emotion that I have investigated, in relation to Bergsonian duration and creative emotion.

In this dissertation, I argued that Deleuze's cinematic concept, the movement-image, not simply because of its representation of content but also due its continual process of change over the duration of its screening, can assist our understanding of emotion's changing nature. Film, like music, requires our experience of the entire duration of its becoming as a specific video, film or sound work, in order to comprehend its meaning or essence. The fundamental characteristic of mediums such as sound and video images are their progression through movement and change over time, otherwise, we would be unable to make sense of them as time-based mediums.

The similarities between the motion of film, video, light and emotion are not only their observable characteristics and signs of movement in space, but their continual becoming as an act of creative emotion over duration. It is this potential to change over duration and time instead of simply revealing a change of position in space that I have used to show, using mainly Bergsonian and Deleuzian philosophy, that unrepresentable emotion like moving-images continues to change and create the new. To show how our experience of internal and external duration can fuel our creative potential and relate creativity to my digital video and sound production work.

This observation has also informed my research into unrepresentable emotion and its movement and creative potential in relation to time-based art production in our

digital era. Increasingly, especially in the Western World, we live, work, communicate and create with computers and digitally enhanced multimedia. We build computerised mathematical systems or geometric models to assist our representation and understanding of both our external and internal worlds. Advanced digital imaging maps our brain and internal body's geographical regions, usually providing stilled images of internal human activity. Often though, our analysis of emotion, the brain and search for the mind lack mention of the relevance of movement and continual change for our questioning or understanding of these concepts.

We have entered an age whereby binary systems and mathematics are held ever more in high esteem, At times our passion for everything digital, makes it hard to believe that mathematics is not a material object. Our rationalization of the world often leads us to forget that mathematics and geometry are abstract symbolic concepts that represent and evidence human creativity. We should remember that digital does not exist as a material object, it is instead a human representation of an abstract idea, based on the functioning of analogue ideas that are now linked to the digitization of electrical volts. Electricity has transformed our access, capture, storage and output of data for human perception and understanding. It is important, though in an age of time-based production works, that we remain aware of their foundations and the relevance of movement to their functioning and our experience of emotion and creativity.

Deleuze, allows us to understand, and I believe the images I have submitted for this PhD more clearly show, film (digital video and all moving image) is an image of a section of its own duration becoming, which is within the whole of duration as it becomes. It is not that narrative film is worse or better than experimental film or analogue is better than digital. Instead film's nature, similar to the nature of creative emotion, is a creative force becoming. Bergson states,

It is the emotion which drives the intelligence forward inspite of obstacles. It is the emotion above all which verifies, or rather vitalizes, the intellectual elements with which it is destined to unite, constantly collecting everything that can be worked in with them and finally compelling the enunciation of the problem to expand into its solution. And what about literature and art? A work of a genius is in most cases the outcome of an emotion, unique of its kind, which seemed to baffle expression and yet which had to express itself. (Bergson, *Two Sources of Morality and Religion*, 2002:46)

Throughout this research I have mentioned artists of genius compelled to create, not to be judged as better or worse, but because a creative force flows through them that dares to be expressed, in the material world. Sound, light and matter-flux are created as moving things becoming, which an audience continues to change, long after they have looked away and left the art space. As Deleuze writes,

It is the genesis of intuition in intelligence. If man accedes to the open creative totality, it is therefore by acting, by creating rather than contemplating ... In philosophy itself, there is still too much alleged contemplation: Everything happens as if intelligence were already imbued with emotion, thus with intuition, but not sufficiently so for creating in conformity to this emotion. (Deleuze, 2002: 111-112)

Appendices

Appendix 1:

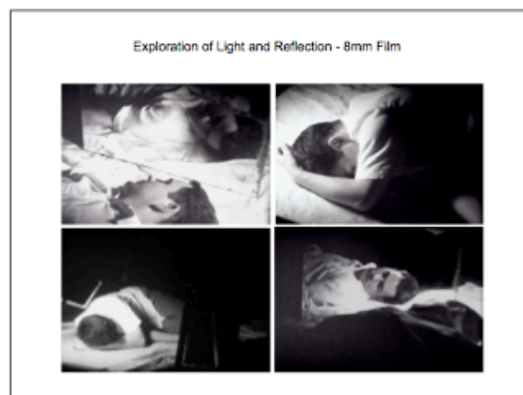
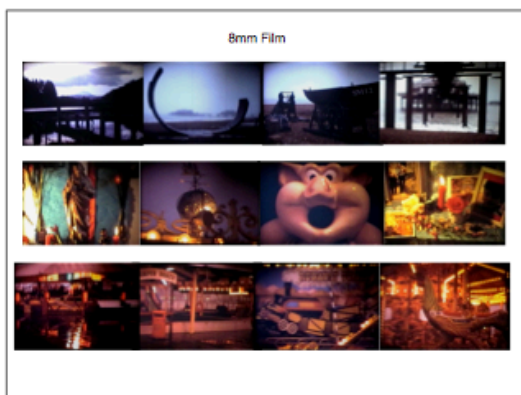
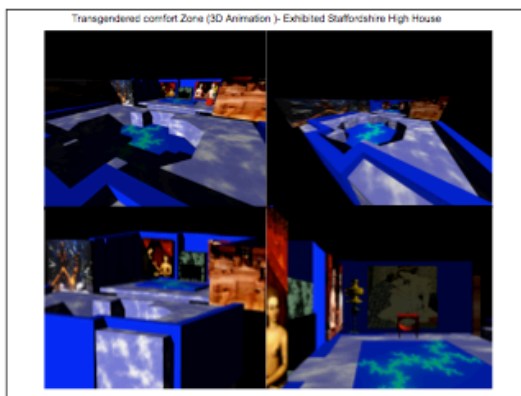
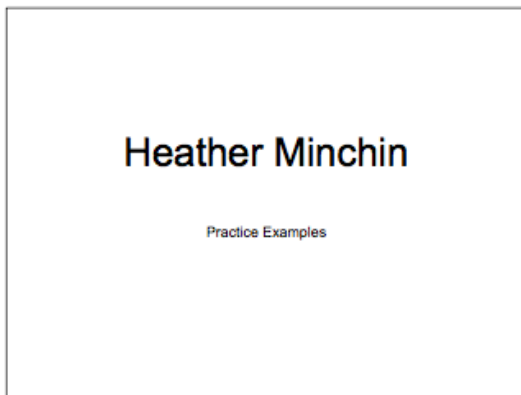


Figure 35.

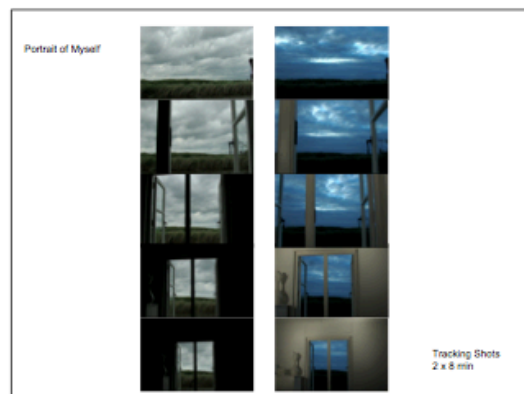
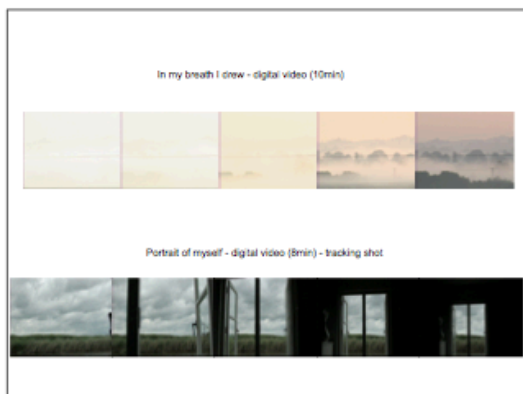
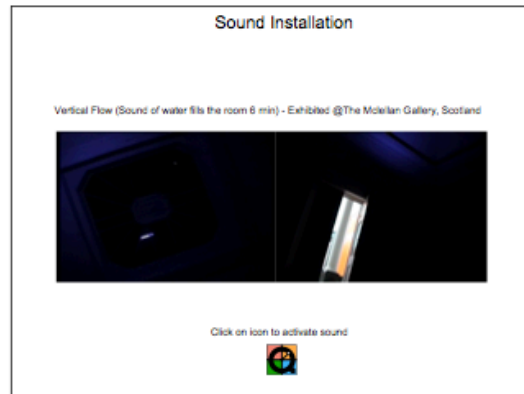
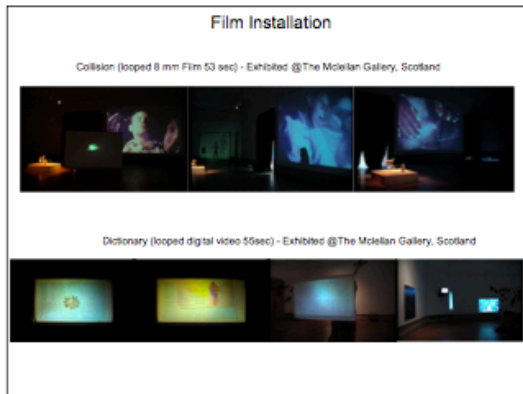
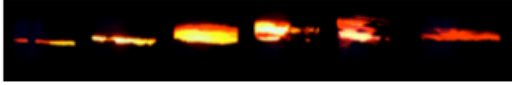


Figure 36.


Moments in a Journey of Speech - 8mm film with panning sound manipulation (Looped 1:30)



Click on icon to activate sound



Hour between light and dark




Sound examples

for artist radio, gallery readings and for compilation artist CD


- **Chalk and Cheese (2:34)**
- (Exhibited @ Mackintosh Gallery, Glasgow - Individual dictionary definitions divided between stereo speakers: considers the right & left hemispheres of the brain)

Click on icon to activate sound



- **Inside the Cinema (3:43)**
- (Published on CD - Sound pans across speakers horizontally and contemplates the cinematic space and the internal experience of the body)

Click on icon to activate sound



Method of Intuition: High Definition Video Installation


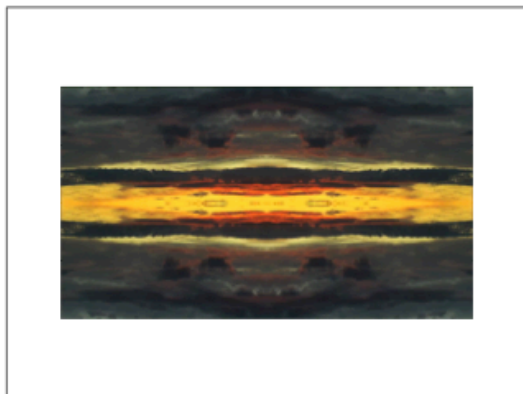



Figure 37.

Representing Refugees





Forward by Rabinder Singh QC

There can be few people who have become more demonised in this country than asylum claimants. Indeed the term "asylum seeker" has become almost a term of abuse, so that judges are now advised to use "asylum claimant" instead. Yet only a generation ago people who sought what was then called "political asylum" were welcomed as they were usually from the Soviet bloc during the Cold War - every defection from the communist east was regarded as a success for the capitalist west. Now they come from many other parts of the world which are usually torn apart by war or repression. We would do well to learn the lessons of the 1930s, when Jewish refugees from Nazi Germany were not always welcome. As Auden put it his poem Refugee Blues:

'Say this city has ten million souls,
Some are living in mansions, some are living in holes:
Yet there's no place for us, my dear, yet there's no place
for us.

...

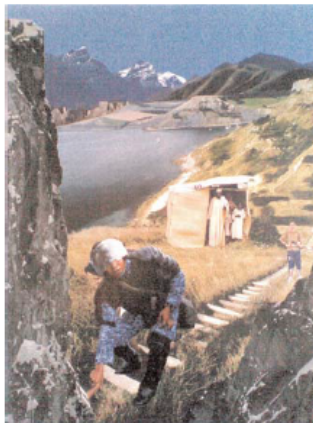
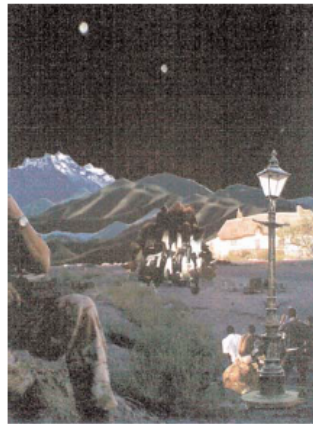
Came to a public meeting; the speaker got up and said:
"If we let them in, they will steal our daily bread";
He was talking of you and me, my dear, he was talking of
you and me.'

Few people choose to leave their home voluntarily unless there are compelling reasons to do so. Quite apart from the difficulty of making the journey, we human beings are reluctant to lose contact with our culture, our history, our roots: these things indeed form our identity. On any view, a large percentage of asylum claimants will turn out to be "genuine" refugees. But even those who do not qualify within the strict definition of "refugee" in the 1951 Convention may well have real reason to fear human rights abuses, as the government itself recognises, and it will not be possible to expel them.

Booan Temple is unique as an artist and a lawyer. It is refreshing to see a barrister express her ideas and feelings through the works of art you will see in this exhibition. We are very proud of her at Matrix, which has tried from its inception in 2000 to encourage innovative ways of being a barrister, and a sense of social responsibility among lawyers.

We hope you enjoy this work too.







Representing Refugees

Booan is a self-taught artist. Throughout her eclectic career she has always tried to express ideas and thoughts through art.

Called to the Bar in 2001, she joined **Matrix** in 2002, specialising in asylum and immigration law.

This is her first solo show.

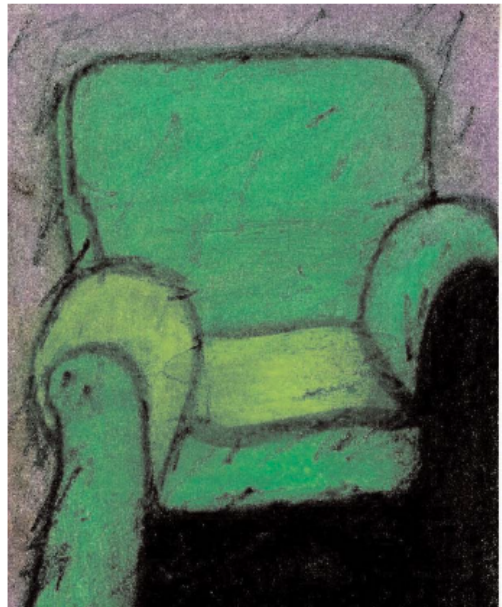
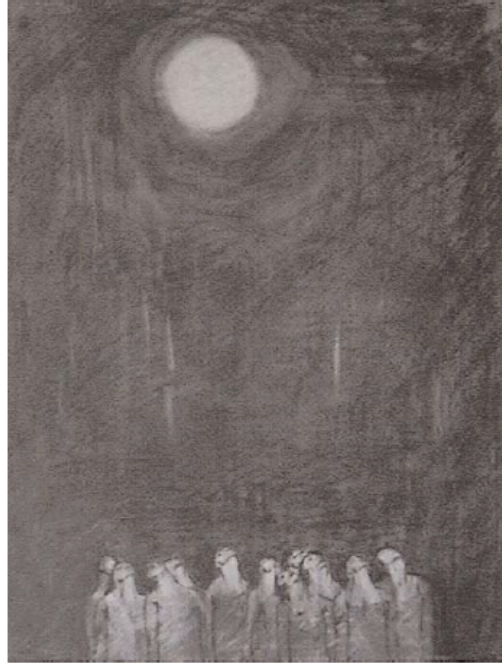
Through this synthesis of 'art' and 'law' Booan's work invites us to share something of the asylum-seeking process by suggesting associated events and emotions. However, the work adeptly avoids the traps of stereotyping, sensationalism or polemic.

Booan's approach allows the viewer their own creative input. The work draws us into its complex narrative, deepening our engagement with the subject matter. Moving through the exhibition we are invited to wonder about the lives and memories represented here.

The work evokes solitude, reflections and aspirations shared by the refugee and the advocate, providing a rare opportunity to empathise with both.

The exhibition is curated by Heather Minchin







FORWARD

The Foundation for Women's Health, Research and Development (FORWARD) was established in 1983. It is an international non-governmental organisation that works to advance the sexual and reproductive health and human rights of African girls and women globally.

FORWARD is committed to eliminating harmful gender-based discriminatory practices that violate the sexual rights and reproductive health of women and girls, such as female genital mutilation (FGM) and child marriage. At our 20 year review FORWARD formally incorporated into its mandate other issues allied to FGM, in particular vesico-vagina and recto-vagina fistulae and child and forced marriage.

FORWARD'S role in the anti-FGM campaign has been catalytic and ground-breaking, moving FGM onto the international and national policy agendas: and building the capacity of groups, professionals and communities to implement necessary changes.

Our vision

FORWARD envisages a world in which all African girls and women are accorded their inalienable rights to dignity, equality and freedom from gender-based discrimination and violence – a world in which they are able to attain and enjoy the highest level of physical, mental and social well being, irrespective of their age, culture, religion or socio-economic status.

For further info go to:
www.forwarduk.org.uk

FORWARD
Safeguarding rights & dignity



nia project

the nia project has for over 30 years, been providing essential work and safe spaces for women and children to escape from and begin to understand the violence they have experienced in their lives.

the nia project has been recognised as a model of best practice. In October 2005, **the nia project** received a Mayor of London Award of Distinction in recognition of outstanding and innovative work to further the aims of the London Domestic Violence Strategy to make London a safer place.

As well as safe accommodation in one of the organisation's six refuges, **the nia project** provides specialist services for women with substance abuse issues, women who have experienced sexual violence and women involved in prostitution. The organisation also employs an in-house solicitor to provide women with free legal advice and representation, as well as specialist children's services offering therapeutic support for children and young people, including a Family Learning programme and work with young women at risk of sexual exploitation.

Our specialist work includes work with BMER (black, ethnic minority, refugee) women and children. **the nia project** also provides accommodation and support to women with no recourse to public funds. BMER Women and children living in the UK who have experienced violence are doubly marginalised through the silencing of both racism and abuse and are often unable to access main stream support. We currently provide advocacy services for Turkish, Vietnamese, Somali speaking and Eastern-European women. Our work with BMER women and children is a central part of the nia project work and an area we aim to develop further.

the nia project also offers accredited training to professionals on a wide range of issues relating to violence against women.

For further information go to:
www.niaproject.info

the nia project
Working for the safety of women and children





Matrix

Immigration and nationality law have been increasingly influenced and directed by developments in EU law, from free movement of persons to rights under association agreements. The influence of international law has been most marked in extensive litigation and legislation concerning asylum in the United Kingdom under the Refugee Convention and the European Convention on Human Rights.

The Human Rights Act 1998 has added to the significance of this case work and provided additional grounds to promote respect for family and private life in immigration control.

Matrix members are recognised as leading practitioners in this field, with extensive experience in all areas of immigration law and practice. This leading position has been confirmed by appearances in the groundbreaking cases of the last couple of years.

Matrix
Griffin Building
Gray's Inn
WC1R 5LN

Tel: 020 7404 3447
Fax: 020 7404 3448

www.matrixlaw.co.uk



Appendix 3:

During the viewing of the work - to be recited aloud, read silently to oneself or ignored, to allow focus on the image and the ambient sound.

In my breath I drew
For words rubbed out on lips
And so in drifting through
Touched the drums of ears
There they marked a beat
Remembering a pace
I turned to breathe again
Reaching out for space

I found the breaking sound
It broke the back of barriers
In flying it had found
Finding darkened rooms
Reaching the speed of light
Painting it cast its spell
Flew into its flight
And so before you fell

For a light that begins to fall
Falling begins to paint,
Painting the speed of blue,
Blue that begins to recede
Receding it spills the red
Red that begins to proceed
Proceeding becomes an expanse
Expanding away from me

I turn to face the dark
Its sound so deep inside
Remembering to say
In my breath I drew.

Appendix 4:

Damasio

Antonio Damasio is a Professor of Neuroscience, Neurology and Psychology and explores the relationship between the mind and brain and the relevance of emotion to rational thought. His book *Descartes Error* reveals how Descartes claim 'I think, therefore I am' excludes how fundamental human emotions are to our existence. Damasio's research questions our understanding of the function of our organs, neurons, cells, nervous system and brain, which have been represented by the latest neuroimaging and bodyimaging technologies within the body landscape. However, Damasio acknowledges that Neuroscience and Psychology have focused their ideas and research on the brain and cognition, which is to the detriment of emotion. He argues that emotions assist social behaviour and communication as well as rational thought.

Damasio was influenced William James's doctrine of *Radical Empiricism*, which challenged Kant's divisions of subjective and objective knowledge and rejected the domination of sense data. James's doctrine revealed how ordinary empiricism's notion of experience, splits 'knowledge from emotional investment in the procedures one has to follow' (Meyer, 2003: 11). Instead, in relation to our experience as human beings, James stressed the importance of process and procedures and conjunctive and disjunctive relations.

Bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur IS the emotion (James, 1884: 188-205).

Emotions in this instance are the perception of bodily responses to a unique physiological response, which results in different feelings such as sadness or anger. James's definition of emotion though, has been accused by philosophers

like Wittgenstein, of appearing to be closer to a definition of sensation. Also Walter Cannon, who studied 'emergency reactions' like fear and pain found the autonomic nervous system was often activated prior to an emotional response, in anticipation of action rather than as a reaction and that certain physiological states can affect more than one emotional response.

Damasio distinguishes between feelings and emotion, claiming that emotions are specific bodily reactions to mental states. Feeling on the other hand, requires combined perception of a causative object, a subsequent emotional state, followed by the related thought. Damasio believes 'pre-feeling' emotion can arise from bodily feedback, or simulated feedback in the brain's somatosensory maps. He claims that the 'mind results from operation of each of the separate component, and from the concerted operation of the multiple systems constituted by those separate components' (2006:15).

The anatomical structures involved in this concerted operation consist of organs and brain regions that have specialized functions that interact For example: Broca's and Wernicke's areas for language, the hippocampus for episodic memory, and the amygdala for fear memory. In commenting on ventromedial prefrontal cortices and amygdala, Damasio states,

there appears to be a collection of systems in the human brain consistently dedicated to the goal-oriented thinking processes we call reasoning, and to the response selection we call decision making, with a special emphasis on the personal and social domains. This same collection of systems is also involved in emotion and feeling, and is partly dedicated to processing body signals (Damasio, 2006:70).

Although Damasio makes a distinction between the brain and body, he in fact believes they function as the organism, as a whole. He associates the brain with the nervous system and the body as an organ without neural tissue (Damasio, 2006: 86). Brain and body communicate both ways through nerve and chemical activity,

The brain receives signals not only from the body, but, in some of its sectors, from parts of itself that receive signals from the body! The organism constituted by the brain-body partnership interacts with the environment as an ensemble, the interaction being of neither the body nor the brain alone. But complex organisms such as ours do more than just interact, more than merely generate the spontaneous or reactive external responses known collectively as behaviour. They also generate internal responses, some of which constitute images (visual, auditory, somatosensory, and so on), which I postulate as the basis for the mind (Damasio, 2006: 88).

Damasio develops his theory of 'Mind' as an internal image display, rooted in brain-body-world interaction. He believes we perceive things, not images and we should not confuse perception, which occurs in an organism at a personal level, with neural activity that happens at the subpersonal level. Bergson and Deleuze have similar points of view in relation to perception, representation, memory and the virtual. Memory for Damasio, whether image storage or recall, has the capacity to recall by re-activating firing patterns in sensory cortices, which are controlled by 'potential patterns of neuron activity' or 'a dormant firing potentiality' (Damasio, 2006:102-103). These dispositions are found in other parts of the brain to those discovered in the sensory cortices, highlighting the difference between firing patterns in memory and those located in the sensory cortices.

Damasio connects 'knowledge' to dispositional representations that are innate and developed in the hypothalamus, brain stem, and limbic system. When a new born child needs to know how to breath, regulate temperature and suckle, this acquired knowledge is constructed out of representations formed in the subcortical nuclei and higher-order cortices. Which suggests that thought is formed from images. For Damasio, images include perceptual and recall images: Perceptual images relate to things such as music, landscape, touch, sight and movement, which are

perceived as various sensations. Recall images, refer to 'shapes, colours, movements, tones, or spoken or unspoken words. Those images, which occur as you conjure up a remembrance of things past' (Damasio, 2006:96).

Although we develop species-typical structures, Damasio believes that nature is open to nurture and our lower brain areas constantly interact with higher brain systems. The actions we plan are constructed in our higher brain and these are 'evaluated and shaped by a fundamental set of preferences of the organism that consider survival paramount' (Damasio, 2006:111). The lower brain stores these preferences, which it signals to the upper brain via an emotional valuation system.

According to Damasio, Descartes' error lies in his overestimation of reason and not the dualism of humans and rationality, as opposed to animal instincts and emotion (Damasio, 2006:124- 126). However, as Damasio himself points out, as organisms we experience a continuously changing succession of states that during analysis, we perceive as a snapshot of our underlying processes. These frozen moving-images or snapshots, for Damasio, are images of artificial states that consist of 'discrete units' or 'merge continuously'. These images though, offer a mere,

momentary slice of life, indicating what was going on in the various organs of a vast organism during the time window defined by the camera's shutter speed. (In reality things are a bit more complicated than this) (Damasio 2006:87).

Appendix 5:

The brain has been mapped and divided into areas such as the brain stem (connected to the spinal cord and central nervous system), the cerebral cortex (made from neurons and considered to be for complex functions like thinking and speaking), the left and right hemispheres and sensory and motor areas. The brain's emotional responses are often confined to areas that have been designated to lower brain regions, which stem from and connect to primordial and primitive parts. These regions are linked to and located near the spinal cord and the nervous system, which are defined as parts of the motor active system and the instinctive, impulsive and emotionally charged body.

Below is a brief outline of a few neurological distinctions of brain areas. (Figure 40. shows numbered brain areas and a brief description of their function).

Motor-sensory:

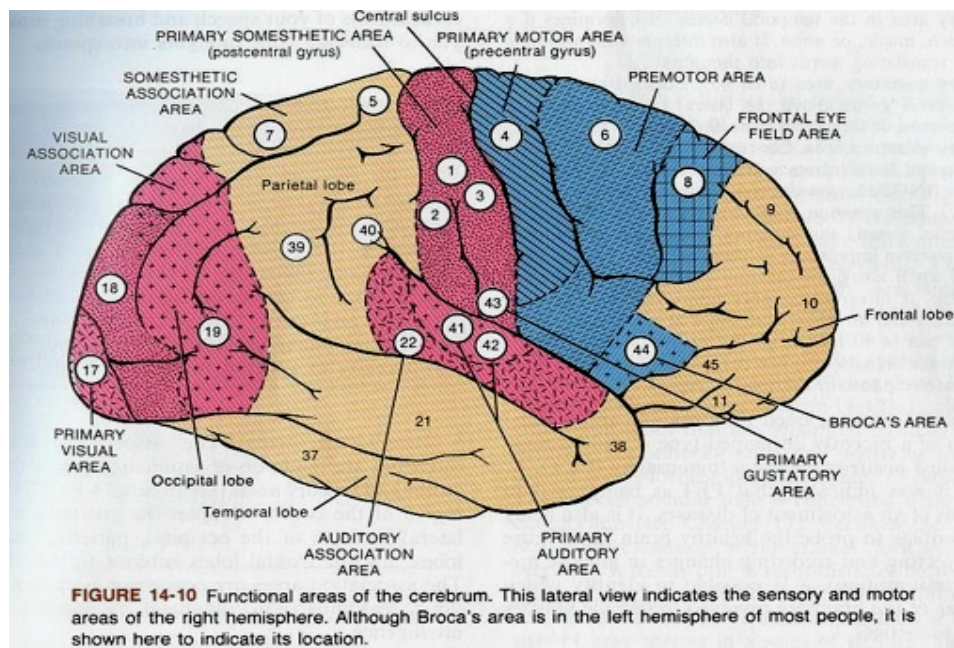


Figure 38. Motor-sensory areas of the brain:

Sensory Areas Include: Primary Somesthetic area (diagram no.1, 2+3): receives sensations from visceral and muscular receptors located throughout the body. Its main function is to locate where the bodies sensations originate. Secondary somesthetic area: connected with less specific aspects of sensation. Somesthetic association area (diagram no.5+7): receives input from lower brain sections such as the thalamus and primary somesthetic area. Decodes and Integrates felt sensations, without visual influence, which enable shape and texture identification of objects to orientate one object to another and sense relationship between the two. Although, memory storage within the brain is disputed by Bergson, this area has been linked to the storage of memories from previous sensory experiences for comparative purposes.

Other sensory areas include: Primary visual area (diagram no.17): receives sensory impulses from eyes and translates movement, form and colour. Visual association area (diagram no.18+19): receives signals from thalamus and primary visual area that relate 'present to past visual experiences with recognition and evaluation of what is seen' (Tortora, Anagnostakos, 1987: 322). Primary auditory area (diagram no. 41+42): interprets basic characteristics of sound such as pitch and rhythm. Anterolateral section responds to low pitch sounds and the posterolateral section to high pitch sounds. The Auditory Association area (diagram no. 22) verifies whether audio is sonic noise, speech or music and analyses speech meaning, by translating it into thought. Primary gustatory area (diagram no. 43): interprets sensation of taste. Primary olfactory (44): interprets sensation of smell. Gnostic: among somesthetic areas and visual and auditory association areas, this receives impulses from these areas and lower brain stem, the thalamus and areas of taste and smell. Combines sensory interpretations from associated and other area impulses to form thought from sensory inputs. Transmits signals to other parts of the brain to assist appropriate responses to sensory input.

Motor Areas Include: The Primary motor area (diagram no. 4) controls muscles and muscle groups. Stimulation of the area leads to muscle contraction on the

opposing side of body. The Premotor area (diagram no.6) relates to complex, sequential and learned motor activities. It produces impulses that cause specified muscles to contract in sequence (e.g. during skilled activities such as writing). The Frontal area (eye field) - (Fig 39. Diagram area no.8): controls eye movements as when seeking a word in a document.

Language area (Fig 39. Diagram area no. 44): is usually located in left cerebral hemisphere of the brain and involves the integration of two distinct potentials, one is expression and our ability to speak and the other is comprehension. The Broca's area is responsible for speaking in association with the motor area controlling muscles for articulation. The Wernicke's area is for language comprehension and understanding written and spoken language. These areas also help us to translate speech and written words into thoughts.

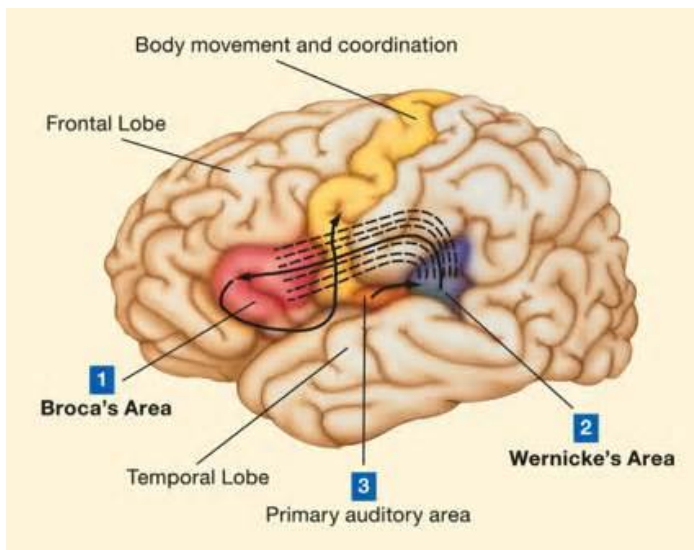


Figure 39. Language areas: Broca's and Wernicke's area

<http://web.uvic.ca/~lalonde/psyc335/notes/lecture08.html> [Accessed 25-05-2013]

The sensory areas included in this process are: primary auditory, auditory association, primary visual, visual association, and Gnostic. To translate thought into speech requires the motor control of the Broca's area. Signals are sent to premotor regions that control muscles in the larynx, pharynx and mouth.

Simultaneously, impulses are sent from Broca's area to the primary motor area. From here, impulses reach your breathing muscles to regulate the proper flow of air past the vocal cords. The coordinating contractions of your speech and breathing muscle enable you to translate your thoughts into speech. (Tortora, Anagnostakos, 1987: 322).

Emotion Areas:

Neurological research into emotion has mapped brain areas linked to specific emotional responses and affects. Attempts have also been made to define Primary and Secondary Emotions and the role of specific brain areas and hierarchies. When researching brain areas related to emotion, neurological digital imaging technology has tended to focus on imaging specific responses in the Limbic system. **Areas of the Limbic System include:** The amygdala: relevant to friendship, love and affection, mood, fear, rage and aggression. The hippocampus: related to long-term memory and comparison of past and present experience. The hypothalamus: connected to sexuality, combativeness, hunger and thirst, pleasure, rage, displeasure and uncontrollable laughter.

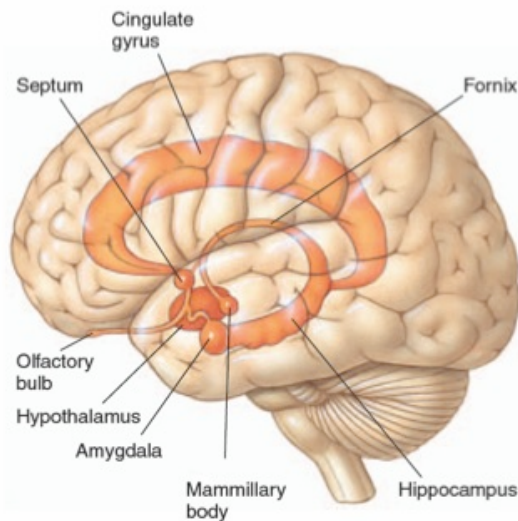


Figure 40. The Limbic System

<http://mikeclaffey.com/psyc2/notes-cog-motivation-emotion.html> [Accessed 25-05-2013]

The Limbic System is shown to encircle the brain stem in a wishbone shape and thought to connect to 'primitive' brain areas. Primary emotions are defined as being universal and include six basic and instinctive emotions: happiness, sadness, fear, surprise, anger and disgust (Eckman, 1969). These are linked to the amygdala and related to primordial areas of the brain stem and spinal cord, which are considered to be an early evolutionary development of the nervous system (Damasio 2006:137). This implicates the limbic system and its function with the impulsive and primordial responses required for survival behavior, which in part explains why emotions complexity has often been undervalued.

Secondary emotions are thought to be more complex than primary emotions and can be acquired and learnt e.g. optimism, love, humiliation, and hope. Damasio links secondary emotion with orbitofrontal/ventromedial cortex, which is located just behind the eyes (Damasio, 2006:134-139). Neuroimaging technology reveals this connection between the brain and emotion by highlighting areas of brain activity, when stimulated by specific sensations from the external world.

However, to begin to establish any kind of relationship between the functioning of the brain and emotion requires technological imaging of emotion and brain responses over the duration of the emotion. This movement requires continual representation, for the stilled MRI images that we see in response to an emotional stimulus, simply reveals a particular visceral response of a specific moment of time. Emotion, like film and sound continually changes over time and our duration. Whereas time has been used as an external measure of things, the journey of our emotions and lived experience persists throughout our entire duration.

Appendix 6:

Digital Technology:

Claude Shannon, using the mathematical symbols of 0 and 1 designed electrical circuits to store and manipulate the most basic units or 'bits' of electronic data. This calculation of numbers into units of electronic data is simplified by using the binary codes of 0 or 1. These 'bits' of digital data relate to being either switched on or off by an analogue-to-digital converter (ADC). The ADC samples continuous real world analogue signals, using equipment such as a camera or microphone, to convert samples of light and sound into digitally discrete numbers at defined signal rates. As the ADC is unable to instantaneously convert analogue signal input to a digital value, usually a capacitor samples the analogue voltage input by electronically switching and disconnecting the capacitor from the signal. To determine the amount of electrical volts/values captured and processed throughout an analogue signals recording, the converted resolution is a numerical representation of discrete values produced over the range of the captured analogue signal.

Each capacitor when exposed to light, transfers its contents via a controlled circuit to a neighbouring capacitor, the final capacitor deposits its charge into an amplifier that converts light into a voltage. Photoactive sites enable each capacitor to accumulate and store an electric charge proportional to the light intensity at its location. Electrical charges of greater or lesser intensity are translated by an analogue-to-digital converter (ADC) into pixels of specific brightness and colour value.

The digital computer is constructed from a collection of millions of connecting switches that turn on and off as they process binary number calculations. Digital technology data is then transferred to a digital processor where bit numbers are used to reconstitute the data for monitor/projector/speaker display, as coloured

pixels or sound samples. Each binary holds the code for recreating pixels of a certain colour or sounds of a specific tone, the greater the byte or bit-number the more comprehensive the colour and sound palette, which provides a better rendition of the originally captured analogue information.

Digital picture quality is defined by its colour depth, formed by breaking black, white and colour into small units of value to create the tonal range for each pixel. Digital colour images are made up of bits resulting in a pixel recreated from a number formula. For example an 8-bit number value, is equal to the colour formation of a single pixel formed from a mixture of red, green and blue (RGB) components made from a palette of millions of colours (for example $R256 \times G256 \times B256$ is equal to 16 million colours). Finally, to assist our comprehension of the digitised sound or image, it needs to be played back to us as an analogue form.

The shutter speed and aperture combinations of the camera set and affect, the quantity of exposure according to the sensitivity of a digital cameras charge couple devices (CCD's). The contents is processed and converted into a sequence of voltages that are sampled and digitised. Low light levels require slower shutter speeds to enable enough light to fill the photosite container. 2 - Each photosite cell creates a separate pixel and when fully charged, photosites create white.

Appendix 7:

The things I have to go under? (A Short Film to be read aloud)

Your nose has something stuck on the end of it. Should I tell you or not? If I tell you, do I tell you because that's the rational thing to do, or do I tell you because that's the emotional thing to do? Whatever, I like you and if I tell you its because I like you and if I don't tell you its because I like you. I'm driving my car, its an automatic, its slow on country roads, especially when passing tractors. I wonder if you like me...there's something stuck on the end of your nose

This emotion causes problems, clever, can't be trusted, impulsive, over sentimental, irrational, cool, calm and sophisticated. It knows too much.... frankly it's out of control. How much better or worse can this get? Often I confuse it with sensations, feelings, odd expressions and outlandish behaviour. Red, lorries, yellow tractors, red cars, yellow lorries. All of these help but what about your nose, the light is fading, I'm driving, accelerating.

Me and this emotion, we risk division. What is its difference, its ideas, its knowledge? I refuse its separation, it lives with sensations, feelings, intelligence, intuition, brain, body, mind that bus up ahead! Emotion, sparking, fuelling, moving, falling, soaring, graduating, fading, changing, light from day to night. In-between moments are my favourite, moving light to dark and back again, unclear which way, recognising nothing, wondering everything.

Who's been on this trail before? Science, history, psychology, brain activity, behaviour. A viewer, an actor, an emotion, chuffed scientists colour in the amygdala, the hippocampus, the hypothalamusred, green, blue and every visceral hue, Descartes passions, Darwin's expressions, the colours of rage, jealousy, joy. Could philosophy help? Unobservable, immeasurable, everything touched, felt, sensed, smelt, tasted, folded and moulded?

Artists, lead me down your avenues, pathways to psychology, science, philosophy. Gertrude Stein, you are a mentor and William James yours, A painter, philosopher, neurologist, psychologist, the father of American psychology, What is Emotion? I flick on my lights, it's a murky old day.

James and Bergson, Bergson and metaphysics, creative evolution, creative emotion, cubism. Picasso, portraits, Stein, Duchamp. Painting, sound, text. mobile phones. Deleuze, text, taxonomy, signs, time-images, intuition, movies, painting, sound, movement, light, intervals, vibrating, Stein, Bacon, Deleuze, sensation, neuroscience, limbic systems, neurons, confusion.

Hypothalamus, combativeness, sexuality, hunger, thirst, pleasure, rage, mechanistic Americans, tender buttons and uncontrollable laughter. Amygdala, Damasio, affective, activities, fear, rage, friendship, aggression, love, you pass me an affection-image. Hippocampus, phenomena, long-term memory, comparisons between, past and present. Intervals, memory, perception, affection, sensitive nerves but what of emotion?

Journeys, gut feelings, breathing, depth, throat, mouth, tongue, words, rubbed out on lips. Surrounded, sound above, below, on-screen, off-screen, ice cream, you've dropped your cone, layers, sweet papers. Anatomy, darkness, film, fabulation, morals, religion, spaces, screens, fought, rethought, hesitated. Larynx, choking emotion, liquid, diving up nor down, lodged in throat. Sentences aren't emotional, paragraphs are, rhythm, pacing, moving camera, action shot, speaker systems, landscapes.

Kant look! Sheep, full of beauty and grace, geometry and space, arithmetic and time, repetition, succession, multiplicity. Duration, complexity, qualitative Big Ben, big ben, big ben.... pity, stepping in, fear, sympathy, humility, the car changes gear. Fighter planes roar, gaseous trails drift behind, the past, the continuous present. I check the rear view mirror and think of you.

Perceiver, here is my work, is there room for you? Can you find your creative emotions, your time-image? Indicator, orange, on, off, on, off... right foot, accelerator snug to the floor. Hands full of ideas, few gears, limited control, electric window, up and down, I hate this song, turn it off. This tractor is longer than I thought, ahead car lights grow larger, brighter, stronger, I'm on the wrong side of the road, didn't mean to be. I reach out and touch your nose.

Bibliography

Bibliography

Altman, Rick (ed.), (1992) *Sound Theory Sound Practice*, London, Routledge.

Antliff, Mark (1993). *Inventing Bergson: Cultural Politics and the Parisian Avant-Garde*. Princeton, New Jersey: Princeton University Press.

Bazin, A (1967) *What is Cinema? Volume 1*, trans. Hugh Gray, Berkeley: University of California Press.

Bergson (1900) *Laughter: in Comedy*. Intro. and Appendix Wylie Sypher. New York: Doubleday and Company, Inc.

Bergson, H. (2002). *Matter and memory* (N.M. Paul & W.S. Palmer, Trans.). New York: Zone.

Bergson, H. (1992). *The creative mind: An introduction to metaphysics* (M.L. Anderson, Trans.). New York: Citadel.

Bergson, Henri. (1999). *An Introduction to Metaphysics*. Trans. T.E. Hulme. Indianapolis, Hackett Publishing, Inc.

Bergson, H. (1998). *Creative evolution* (A. Mitchell, Trans.). Mineola, NY: Dover. http://spartan.ac.brocku.ca/~lward/Bergson/Bergson_1911 [Accessed 25 August 2012]

Bergson, H. (2001). *Time and Free Will: An essay on the immediate data of consciousness* (F.L. Pogson, Trans.). New York: Dover.

Bergson, Henri. (1920) *Mind-Energy: Lectures and Essays*. Trans. H. Wildon Carr. London: Macmillan.

Bergson, Henri. (2002) *Two Sources of Morality and Religion*, trans. R. Ashley Audra and Cloudeley Brereton, with the assistance of W. Horsfall Carter (New York: Doubleday Anchor Books). University of Notre Dame Press, Indiana.

Bluestone, George. (1971) *Time in Film and Fiction* in *Perspectives on the Study of Film*, ed. J.S. Katz, Braun, Marta.

Bogue Ronald, (2003) *Deleuze on Cinema*. Publisher Routledge, New York and London.

Bordwell, David & Thompson, Kristin, (1993) *Film Art: An Introduction* (New York, McGraw Hill.

Bresson, Robert, (1977), *Notes on Cinematography* (Trans. Griffin, Jonathan, New York, Urizen Books.

Bruce, Donald Graham (1985), *Bernard Herrmann: Film Music and Film Narrative*, Michigan, Ann Arbor, UMI Research Press.

Brophy, Philip (ed.), (1999) *The World of Sound in Film*, Sydney, AU: AFTRS publishing.

Burns, E. (Ed) (1970) *Gertrude Stein on Picasso*. New York: Liveright, published in co-operation with the Museum of Modern Art.

Cage, John, (1961) *Silence*, Connecticut, Wesleyan University Press.

Carter, R (1999), *Mapping the Mind*: University of California Press, Ltd London.

Chion, Michel, (1994) *Audio-Vision: Sound on Screen*, Trans. Gorbman, Claudia, New York, Columbia University Press.

Chion, Michel, (1995) *David Lynch*. Trans. Julian, Robert, London, BFI Publishing.

Cooke, Deryck (1989) *The Language of Music*, London, Oxford University Press.

Cousins, Mark (1996:149-162) "Walter Murch: Designing Sound for *Apocalypse Now*" in *Projections 6: Filmmakers on Film Making*, London, Faber & Faber.

Currie, Gregory. (1995) *Image and Mind: Film, Philosophy and Cognitive Science*. Cambridge: Cambridge University Press.

Cumming.R. (Ed) (1965), *The Philosophy of Jean-Paul Sartre*, Vintage Books Ltd, USA.

Damasio AR. (1994) *Descartes' Error. Emotion, Reason, and the Human Brain*. New York: Avon Books.

Damasio, Antonio (1994). *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. New York, Harcourt, Brace.

Darwin, (1872) *The expression of the emotions in man and animals*, London, William Clowes and Sons, Stamford Street and Charing Cross.

Deleuze, G. (1994) *Difference and Repetition*. Trans. Paul Patton, New York: Columbia University Press.

Deleuze, G, (2002) *Bergsonism*. Translated by Tomlinson, H & Habberjam, and B: Publishers, Zone Books, New York.

Deleuze, G. (1997) *Cinema 1: The Movement-Image*. Trans. Hugh Tomlinson and Barbara Habberjam. London: The Athlone Press.

Deleuze, G. (1994) *Cinema 2: The Time-Image*. trans. Hugh Tomlinson and Robert Galeta. London: The Athlone Press.

Deleuze, G. (1984) 'La Philosophie critique de Kant (1963)' *Kant's Critical Philosophy: The Doctrine of the Faculties*, trans. Hugh Tomlinson and Barbara Habberjam,

Deleuze, G. (1994) *Difference and Repetition*. Trans. Paul Patton, New York: Columbia University Press.

Deleuze, G. (2004) *Desert Islands and other Texts*. Ed. D.Lapoujade, MIT Press: Cambridge, Mass.<http://www.archive.org/details/DesertIslandsAndOtherTexts> [Accessed August 25 2012]

Dodge, Mabel. (1913) *Arts and Decoration March 1913*
http://www.clpgh.org/exhibit/neighborhoods/northside/nor_n101a.html [Accessed August 25 2012]

Donato Totaro, (2000) 'Art for All 'Time'', *Film-Philosophy_*, vol. 4 no. 4,
<http://www.film-philosophy.com/vol4-2000/n4totaro> [Accessed August 25 2012]

Eaton, R.M (Ed)(1927) *Descartes Selections*, Charles Scribner's Sons, New York, Chicago, Boston.

Egorova, Tatiana (1997) *Soviet Film Music: An Historical Survey*, London, Harwood Academic Publishers.

Eisenstein, S (1986) *The Film Sense*, London, Faber and Faber.

Eisenstein, S (1949)'*The Cinematographic Principle and the Ideogram*' [1929], in Jay Leyda, ed. and trans. *Film Form*, New York: Harcourt, Brace, and World Inc.

Ekman, Campos, Davidson, de Waal (Eds) (2003) *Emotions Inside Out: 130 Years after Darwin's The Expressions of the Emotions in Man & Animals*. New York, New York Academy of Sciences.

Erdmann. J, Hough Williston S (Ed) (1924), *The History of Philosophy, Modern Philosophy Vol II*, George Allen & Unwin LTD, London.

Flanagan, Owen. (1991). *The Science of the Mind*, 2nd edition, Cambridge: MIT Press.

Fowler. H & Fowler. G (Eds) (1964). *The Concise Oxford Dictionary of Current English*, Oxford University Press, London.

Fraser. J. (1990), *Of Time, Passion, and Knowledge*, Princeton University Press, New Jersey.

Gaer. Joseph (1963). *What the Great Religions Believe*, publisher, Signet Books, New York

Game, A. (1997): *Sociology's emotions*. *Canadian Review of Sociology & Anthropology*, 34, 4, 385-99.

Gardner, P. (1992) in "Tuning in to Nam June Paik," *Artnews*, May edition: 67. <http://namjunepaik.wordpress.com/> [Accessed August 25 2012].

Green, P. (1993) *Andrei Tarkovsky: The Winding Quest*, Basingstoke: Macmillan.

Grene Marjorie, (1998) *The Aesthetic Dialogue of Sartre and Merleau-Ponty*, in *The Debate Between Sartre and Merleau-Ponty* ed. Jon Stewart, Northwestern University Press.

Gregory. R (1988) *The Oxford Companion to The Mind*, Oxford University Press.

Gunn .J. Alexander (1920) *Bergson and his Philosophy*, The University of Liverpool.

Haas, Robert (Ed) (1971) *Gertrude Stein, A Primer for the Gradual Understanding of Gertrude Stein*, Los Angeles, Blacksparrow Press

Hockney, David, (2001) *Secret Knowledge, Rediscovering the Lost Techniques of the Old Masters*, Thames and Hudson Limited, London.

Hoffmann, Charles, (1970) *Sound for Silents*, New York, Drama Book Specialists.

Holman, Tomlinson, (1997) *Sound for Film and Television* London, Focal Press.

Honderich. T (Ed) (1995), *The Oxford Companion to Philosophy*, Immanuel Kant, Oxford University Press, Oxford

Illingworth.V. (1979), *The Macmillan Dictionary of Astronomy*, The Macmillan Press, London.

James William, (1884) *What is an Emotion?* First published in *Mind*, 9, 188-205. *Classics in the History of Psychology*, An internet resource developed by Christopher D. Green. York University, Toronto, Ontario. <http://psychclassics.yorku.ca/index.htm> [Accessed August 2012]

James, William. (1890). *The Principles of Psychology*. Reprint 1950. New York: Dover Books.

James William, (1912) *Essays in Radical Empiricism*. New York: Longman Green and Co.

Kant, Immanuel (1790), *The Critique of Judgement*. Trans by James Creed Meredith (1952). First published 1790, <http://www.library.adelaide.edu.au/etext/k/k16j/k16j.zip>, Rendered into HTML on Sun Apr 9 14:22:37 2000, by *Steve Thomas* for The University of Adelaide Library *Electronic Texts Collection*. [Accessed August 25 2012]

Kant, Immanuel, (1781) *The Critique of Pure Reason*. Translated by J. M. D. Meiklejohn. First edition 1781. The University of Adelaide 2004, <http://etext.library.adelaide.edu.au/k/kant/immanuel/k16p/k16p.zip> [Accessed August 2012]

Katz, Joy (1997) "Walter Murch in Conversation with Joy Katz" in *Parnassus: Poetry in Review, The Movie Issue* (Vol. 22, Nos 1 & 2, 1997:pp124-153).

Korsic, Igor. (1988) *Suspended Time: An Analysis of Bazin's Notion of Objectivity of the Film Image*. Stockholm: University of Stockholm.

LaBelle, Brandon and Steve Roden, (1999), *Sight of Sound: of Architecture and the Ear*, Los Angeles, Errant Bodies Press.

Lack, Russell, (1997) *Twenty Four Frames Under: A Buried History of Film Music*, London, Quartet books.

Lander, Dan & (eds.) (1990) *Lexier, Micah, Sound by Artists*, Art Metropole, Toronto, Walter Phillips Gallery, Banff.

Lawlor, Leonard and Moulard, Valentine, "Henri Bergson", *The Stanford Encyclopedia of Philosophy* (Fall 2012 Edition), Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/fall2012/entries/bergson/>>.[Accessed August 2012]

LoBrutto, V. (1994) *Sound-On-Film: Interviews with Creators of Film Sound*, Westport, Conn. Praeger.

Merleau-Ponty, M. (1964). *The Primacy of Perception: And Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics*. Northwestern: Northwestern University Press.

Merleau-Ponty, M. (1968). *The Visible and the Invisible*, Alphonso Lingis, Trans. Evanston: Northwestern University Press.

Merleau-Ponty, M. (1964), *The Film and the New Psychology*, in *Sense and Non-Sense*, trans. by H. Dreyfus and P. Dreyfus, Evanston: Northwestern University Press.

Merleau-Ponty, M (1964) *et l'esprit*, Paris: Gallimard. J. Edie trans, *Eye and Mind*, in *The Primacy of Perception*, Evanston: Northwestern University Press.

Maurice Merleau-Ponty, (1993) *Cézanne's Doubt in The Merleau-Ponty Aesthetics Reader: philosophy and painting*, ed. Galen Johnson & Michael Smith
Northwestern University Press.

Meyer, Steve (2001). *Irresistable Dictation: Gertrude Stein and the Correlation of writing and Science*, Stanford California, Stanford University Press

Meyer, Leonard B. (1956) *Emotion and Meaning in Music*, Chicago University Press.

Murch, Walter, (1995) *In the Blink of An Eye*, Los Angeles, Silman-James Press.

Murch, Walter (1995:pp237-251) "Sound Design: The Dancing Shadow," in *Projections 4: Filmmakers on Film Making*, London, Faber & Faber.

Myers, Gerald E. (1986) *William James: His Life and Thought*, Yale University Press, New Haven and London.

Owkolski. Dorothy, (July 1996) "Beside Us, In Memory," in *Man and World*, Special issue in memory of Gilles Deleuze, Constantin V. Boundas, ed., Vol 29, No. 3 :283-292.

Nisbett, A, (2003) *The Sound Studio*, London, Focal Press.

Reisz, K & Millar, (1968) *The Technique of Film Editing*, New York, Hastings House.

Rodowick, (1997): *Gilles Deleuze's Time Machine*, Duke University Press, London.

Sacks, O. (1995). *A New Vision of the Mind*. In *Natures Imagination: The Frontiers of Scientific Vision*, ed. John Cornwell. Oxford: Oxford University Press.

Seville Pictures (2003): *Russian Ark Production notes*,
http://people.ucalgary.ca/~tstronds/nostalgia.com/TheNews/RussianArk_SevillePressNotes.pdf [Accessed 7 June 2013]

Stein, Gertrude. (1995) *The Making of Americans*. Normal: Dalkey Archive Press.

Stein, Gertrude (1997). *Tender Buttons*, New York, Dover Publications Inc.

Stein, Gertrude (1990). *The Autobiography of Alice B Toklas*. New York: Vintage Books.

Storr, Anthony (1992) *Music and the Mind*, London, Harper Collins.

- Strawson, (1973) *The bounds of sense-An Essay on Kant's Critique of Pure Reason*, Methuen & CO LTD, London.
- Szendrei, Eric V. (1989), Bergson, Prigogine and the Rediscovery of Time - *Process Studies*, pp. 181-193, Vol.18, Number 3, Fall, 1989. *Process Studies* is published by the Centre for Process Studies, 1325 N. College Ave., Claremont.
- Tan, Ed S. (1996) *Emotion and the Structure of Narrative Film: Film as an Emotion Machine*. Tr. by Barbara Fasting. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Tarkovsky, (1986) Andrei. *Sculpting in Time: Reflections on the Cinema*. Translated by Kitty Hunter- Blair. London: The Bodley Head
- Takemitsu, Toru, (1995:pp36-45) "Conversation on Seeing" in *Confronting Silence: Selected Writings*, Berkeley, Fallen Leaf Press.
- Taylor, Richard & Christie, Ian (1991) "Making Sense of Early Soviet Sound" in *Inside the Film Factory: New Approaches to Russian and Soviet Cinema*, London, Routledge.
- Toop, David (1995), *Ocean of Sound*, London, Serpent's Tail.
- Tortora G, Anagnostakos N (1987) *Principles of Anatomy and Physiology*, fifth Edition. New York, Harper & Row, Publishers.
- Tranel D, Damasio AR. (1985) Knowledge without awareness: an autonomic index of facial recognition by prosopagnosics. *Science* 1985; 228(4706): 1453±4.
- Tranel D, Damasio AR. (1988) Non-conscious face recognition in patients with face agnosia. *Behav Brain Res* 1988; 30(3):235±49.
- Van Cleeve, James. (1999) *Problems from Kant*, Oxford University Press, Oxford.
- Walker, Jayne (1984) *The making of a modernist: From Three lives to Tender Buttons*, Amherst, The University of Massachusetts Press
- Weis, Elisabeth (1982) *The Silent Scream: Alfred Hitchcock's Sound Track* (Rutherford, Fairleigh Dickinson University Press.
- Weis, E & Belton, J (eds.) (1985) *Film Sound: Theory and Practice*, New York, Columbia University Press.
- Whitehead, A. N. (1978) *Process and Reality*. New York: Free Press.
- Wilson, E. A. (2004) *Psychosomatic: Feminism and the Neurological Body*. Durham: Duke University Press.

Woodrow, P. & Dunning, A. (n.d.) Einstein's Brain Derive,
<http://www.acs.ucalgary.ca/~einbrain/derive.htm> [Accessed 25 August 2012]

Wyld, H, (Ed). (1955),The Universal Dictionary of the English Language. The Waverley Book Company Ltd, London.

Video\Filmography

Video\Filmography [All links below accessed on 24 September 2012]

Marina Abramovic: Balkan Baroque Film by Pierre Coulibeu:
<http://www.ubu.com/film/coulibeuf.html>

Dryden Goodwin
<http://www.drydengoodwin.com>

Douglas Gordon: Interview: Meet The Artist: Douglas Gordon - Part 1 (1hr.11min)
<http://www.youtube.com/watch?v=DXY99WS-Byo&feature=related>

Douglas Gordon - Part 2 (47:20)
<http://www.youtube.com/watch?v=SjYb6EN0v8w&feature=related>

Gary Hill
<http://www.garyhill.com>

Takahiko Imura
<http://www.takaiimura.com>

Derek Jarman:
<http://channel.tate.org.uk/media/26406493001>

2 - Derek Jarman: Wittgenstein: (Feature Film – useful to observe minimal set design and film lighting)
http://www.ubu.com/film/jarman_wittgenstein.html

3 - Derek Jarman:
<http://www.ubu.com/film/jarman.html>

Isaac Julien
<http://www.isaacjulien.com/home>

2 - Isaac Julien - Interview with Isaac Julien Re: Derek Jarman Documentary
<http://www.youtube.com/watch?v=DysA0u0591Y&feature=related>

Anthony McCall
<http://www.anthonymccall.com>

Tim Macmillan - Time Slice Films
<http://www.timeslicefilms.com>

Bjorn Melhus
<http://www.melhus.de>

Jonas Mekas
<http://jonasmekas.com>

Jonas Mekas: Film on UbuWeb: Scenes from Allen's Last Three Days on Earth as a Spirit
http://www.ubu.com/film/mekas_ginsberg.html

Michelle Naismith:
<http://www.michellenaismith.com/>

Rosalind Nashashibi (Becks Prize Winner 2003) : ICA London Exhibition (DEC 09):
Discussion with artist Olivia Plender (Dec 2009)
<http://www.youtube.com/watch?v=huRFE1r4zVI>

Rosalind Nashashibi: In conversation with Dieter Roelstraete (Dec 2009)
<http://www.youtube.com/watch?v=XG8YIJ2UQJ4>

Nam June Paik:
<http://www.paikstudios.com/>

2 - Nam June Paik: UBUWEB Interview
http://www.ubu.com/film/paik_master.html

Pipilotti Rist: Video Art on Ubuweb: Video Works (1986-2003)
http://www.ubu.com/film/rist_works.html

Skip Blumberg video about: Nam June Paik (1932-2006):
http://www.ubu.com/film/paik_master.html

Cindy Sherman Film on UbuWeb: 'Doll Clothes (1975)'
http://www.ubu.com/film/sherman_doll.html

James Turrell

<http://www.facebook.com/pages/James-Turrell/25735791242>

Bill Viola

<http://www.billviola.com>

Chris Welsby

<http://www.sfu.ca/~welsby>

Andy Warhol: Empire

http://www.youtube.com/watch?v=7idi_5laMrk

Trinh T. Minh-ha: Film on UbuWeb: 'Shoot for the Contents (1991)

http://www.ubu.com/film/minh_shoot.html