

Animation Studies – Animated Dialogues, 2007

Dirk de Bruyn

Performing a Traumatic Effect The Films of Robert Breer

“We must go back to the working actual body – not the body as a chunk of space or a bundle of functions but that body which is an intertwining of vision and movement.”

MERLEAU-PONTY (1964B: 162)

“I used to take lessons in a biplane and do stunts and things.”

ROBERT BREER (IN GRIFFITHS, 1985)

Introduction

American animator Robert Breer's playfully short, quickly moving animations 'research' (MacDonald, 1992: 17) the perceptual experiences of cinematic reception that are generally ignored and buried by the industrial model of film production. They are rich in technical innovation and resist the narrative expectations of an audience weaned on entertainment films. Breer has been credited in introducing the first visual bomb to cinema in his loop film *Image by Images I* (Paris 1954).

Two abstract animated films by Robert Breer are examined: *69* (1968 5 minutes) and *Fuji* (1974 10 minutes): *69* as a metaphor for a system that collapses and *Fuji* as an articulation of that embodied seeing required for train travel. In their single frame or multiple frame bursts and clusters, these graphic animations contain a mixture of abstract and concrete images that explore the illusion of motion through a reconstituted collage of fragments, sudden appearances and subliminal effects. They can be read as formal reflexive examinations of the tension between the single frame and the perception of motion.

A phenomenological approach is useful in focusing in on the perceptual and performative aspects of this work, emphasising phenomenology's focus on the pre-reflective moment at the heart of 'being-in-the-world.' As 'a movie is not a thought; it is perceived' (Merleau-Ponty, 1964a: 58) these films are read here as about as a direct body centred '*making sense*.'

The 'unspeakable' or 'unknowable' of trauma may also be of some value in articulating the elusive text of Breer's moving image art. The relationship between trauma and cinema has generated a level of analytic and critical attention, most clearly indicated by the special debate and dossier sections of the journal 'Screen' in 2001 and 2003 where Susannah Radstone (2001) identified a focus on 'trauma, dissociation and unrepresentability' evident in the work of Cathy Caruth, Shoshana Felman and Dori Laub (see Felman, 1992 and Caruth, 1992) It is argued here that the direct impact of *69* and *Fuji* re-perform a traumatic effect on the viewer. The flashback is identified as such an effect and the unsettling experience of early train travel is also investigated to illuminate the disorienting reception that Breer's films can illicit on the unprepared viewer.

The use of Brewin's neurological research into memory processing evident in trauma is also used here. This is a line of research built on a psychological reading of trauma articulated in the writings of Janet and Van der Kolk.

Pierre Janet, working with the victims of shell shock in the late 1800's identified that such shock or trauma can be precipitated by severe emotional responses and that such responses effect how memories are stored in a fragmentary manner. 'Intense emotions, Janet thought, cause memories of particular events to be dissociated from consciousness, and to be stored, instead as

Animation Studies – Animated Dialogues, 2007

visceral sensations (anxiety and panic), or as visual images (nightmares and flashbacks)' (Van der Kolk, 1996a: 214). Baer's concept of *re-windability* is also introduced as a method for presenting both trauma and Breer's films.

Let us now focus on the two films in question.

69

In 69 the title image oscillates through positive and negative figure/ground flicker, creating afterimages that seem to float in front of the screen. The film proper begins with a line drawn hexahedron rod on white background rotating into frame on the left and moving away from the viewer. Other shapes go through similar arcs of movement. A conventional 3-D perspective is respected in these shapes and movements and there is the precision of an architectural drawing to the imagery at this early stage of the film. The motion effect is like the movements of the rods on a locomotive wheel, yet highly stylised and abstracted. This rotation sequence is repeated throughout the film in various permutations. In the next cluster the line shapes become blocks of colour, then a mixture of line and colour, then with a darker blue background.

Now and then there are bursts of single frame abstractions flickering and flashing. This palimpsest of forms flickers across the original in a repeating, yet disintegrating sequence. The sounds are very mechanical, a phone like repeating click, a tick-tick sound and the sound of switching between stations on a radio reflect these indeterminacies and breakdowns. 69 ends with its opening sequence. The film can be read as a loop, now ready to begin again.

What one sees in such a Breer film is not what is actually physically on the film-strip but the fleeting product of the film's performance on the retina. The velocity of Breer's 'sensory manipulations' generally defies any kind of assessment, or thinking through while watching them. These films are designed as a cavalcade of visual impressions. Thinking can only come after the event. This is a critical point that eternally re-surfaces when describing Breer's films.

Breer says of 69 that: '69 undoes itself. It starts out like a system, then the system breaks down and goes to hell. During the editing I came up with the idea that it should break down, so I shuffled the cards. I thought it served me right to undo my own pretence at formal purity' (MacDonald, 1992: 43). Breer here articulates a critical act of irreversibility: 'In shuffling the cards I could never get them back in their proper order again. They weren't numbered' (Griffiths, 1985). Like the breadcrumbs that Hansel and Gretel drop to leave a trace back out of the forest that then gets erased by being eaten by the birds: there is no way back. Yet we can watch the animation again. In this continual moving away from the originating material in both sequence and form arises this notion of a further displaced *trace of a trace (of a trace)*, which can be considered an approximation of Elsaesser's *event without a trace*.

In the trauma debate that took place in 'Screen' flagged earlier Elsaesser speculates on whether a general traumatizing of the image has occurred inside the post-modern. He asks whether the rule of in-authenticity, the pervasiveness of the fake and within documentary the role of re-enactment situate a 'traumatic' status for the 'moving image in our culture as the symptom without a cause, as the event without a trace' (Elsaesser, 2001 : 197). Is this what is also happening in 69? Is there a traumatising of the image happening in these erasures upon erasures, this moving away from source through a relentless application of technique? Is this not that unspeakable un-locatable space that so much contemporary trauma research is seeking to discern?

Animation Studies – Animated Dialogues, 2007

Fuji

Fuji is constructed from more recognisable imagery. There are a number of wide-angle shots, a panorama of the Japanese countryside being moved through by the train window, with a special contemplative emphasis, through rotoscoping, on Mount Fuji. These sections focusing on Mount Fuji are broken up, paused, by moments of black that could simulate the going through a tunnel in a train. After such pauses we receive another animated sequence out of the train window, often re-using frames from previous sequences at different speeds.

Geometric abstractions reminiscent of 69 are overlaid and inserted over these 'real' rotoscoped traces of movement through the landscape. Posts and shrubs that flash past close to the window offer a connection to such iconic graphic shapes, in both shape and abruptness of appearance and disappearance. These sequences suggest a re-enactment of the perceptual play framed by train travel itself. Within a 'real' moving railway carriage the eye at times focuses on the surface of the window and its flecks of dirt and inconsistencies, at times it quickly samples into the distant slower moving, yet less detailed horizon line or then one stares out of focus at those shadows and blurs that flash past in an instant. Sampling in and out of these layers of movement and abstraction require the same visual skills used to negotiate a Breer animation successfully. Fuji addresses this correspondence explicitly.

Is it merely a co-incidence that both audience resistance to experimental film (within which Breer's animations can be placed) and the perceptual difficulties experienced in viewing the landscape at the advent of train travel are inscribed with parallel histories? Audiences weaned on entertainment often found experimental films dull, boring, unreadable and too stressful to watch. They were not entertainment. It can be argued that the politics of such work is implicit rather than explicit. 'Viewing experimental films is always a bit like experimenting with yourself, being confronted with your own expectations, attention span and viewing habits. We try and watch without inhibitions but rarely succeed' (Edwin Carels in Abrahams, 2004 :14).

Lebrat makes this point specifically about Breer's films:

The speed and compression of images; the refusal of beautiful images and drawings; in short the frustration imposed by the film's short running time, and its denied communication which ensues, upsets people's habits and demands a new kind of spectator. (Burford, 1999: 75)

In his examination of the industrialization of space and time that the technology of early train travel facilitated, social commentator Wolfgang Schivelbusch notes that:

Dullness and boredom resulted from attempts to carry the perceptual apparatus of traditional travel, with its intense appreciation of landscape, over to the railway. The inability to acquire a mode of perception adequate to technological travel crossed all political, ideological and aesthetic lines. (Schivelbusch, 1986: 58)

The disorienting impact of train travel on the early passenger can offer insights into the perceptual tools required to unpack a Breer film. Schivelbusch identified three perceptual adaptations, or organising principles that train travel delivered (1986: 160): Panoramic vision, the compartmentalisation of time and space and a shift to a more sampled reading strategy while travelling. These shifts made the old way of seeing seem alien.

The traveller who concentrated on his reading behaved in just as old-fashioned a manner as a traveller who, accustomed to the pace of the stagecoach, attempted to fix his stare on objects flitting past the compartment window. In both cases, the result was exhaustion of the senses of

Animation Studies – Animated Dialogues, 2007

the mind. To adapt to the conditions of rail travel, a process of decentralisation, or dispersal of attention, took place in reading as well as the traveller's perception of the landscape outside. (Schivelbusch, 1986 :68-69)

This dispersal of attention, de-centredness can prove useful in negotiating Breer's rapid-fire films whose images disappear as soon as they are presented. Visually capturing each fragment and fracture generates too much visual fatigue for the viewer. Letting them wash over you avoids its stress. The frustration builds trying to grab things visually as they disappear. There is no time given to think, to appreciate these objects, so it is better to let go, go with the flow, to survive.

Schivelbusch similarly describes the unique abruptness of train travel as delivering a sense of stress and bodily fatigue through a 'series of small and rapid concussions' (1986: 117) to the body. It could be said that Breer also delivers a series of small and rapid concussions to the eye. If such cumulative stresses of travel can lead to metal fatigue, what effect may it have on the body?

The visual 'acrobatics' required to negotiate a film like *Fuji* can be conceived of as an indexical reconstitution of the performative elements of panoramic vision, which, Schivelbusch contends, with its de-centredness and its focus back on the body, is necessary for train travel. Such 'staring' and body awareness can itself be read as emblematic of a dissociative space associated with trauma.

Phenomenology

Having outlined a level of correspondence between train travel and the reception of experimental film it may be of some use to now backtrack, and expand on the rationale for using phenomenology to frame Breer's films. Train travel and *Fuji* (presented here as a kind of artifact or document of train travel), impart their disorienting effect, their trauma, in that pre-reflective moment before narrative thinking occurs. Trauma may very well be about being frozen, or stuck in such a moment. Phenomenology can provide a method for articulating such a space.

A philosophy for which the world is always 'already there' before reflection begins – as an inalienable presence; and all its efforts are concentrated upon re-achieving a direct and primitive contact with the world, and endowing that contact with a philosophical status. (Merleau-Ponty, 1962: x)

And further:

My field of perception is constantly filled with a play of colours, noises and fleeting tactile sensations which I cannot relate precisely to the context of my clearly perceived world, yet which I immediately place in the world, without ever confusing them with my daydreams. Equally constantly I weave dreams around things. (Merleau-Ponty, 1962: x)

The 'constant play' of 'fleeting sensations' that makes up the real can also be read as the focus of Breer's work. In fact it reads like a description of his animations. 'Invoking dream states' is not of interest to Breer. It is a concern with perception that stands before the dream and the daydream that pre-occupies both Breer and Merleau-Ponty. As Merleau-Ponty attempts in his writing about the 'real,' Breer attempts in a performance of the 'direct.' Neither focuses on the realm of dreams and day-dreams that are 'wrapped around' thinking. It is about something more essential as Breer articulates:

Animation Studies – Animated Dialogues, 2007

‘I have a mind-set that if something crops up and seems absurd that must be good thing in a way. I am not interested in surrealistic juxtapositions. Invoking dream-states or anything of the kind, its not that. But I make choices on a total basis, there might be several reasons for choosing this thing or that thing, one might be the shape of it. See it’s a general point but a good one; animation is a system that leads to metamorphosis.’ (Griffiths, 1985)

In this emphasis of not-dream (or more emphatically: ‘anti-dream’) evident in both Breer’s and Merleau-Ponty’s thinking, phenomenology offers a reading of experimental film and trauma within that pre-reflective space not open to psychoanalysis.

It is interesting that Breer began his research into the moving image in Paris at a time when Merleau-Ponty’s phenomenology was also taking hold there, suggesting perhaps parallel investigations into shared existential issues, one inscribed into the moving image, the other into a philosophical text.

VAM and SAM Memory Systems

“The body is an organ of memory as well as perception.”

J.S. BOLEN, QUOTED IN (WHITFIELD, 1995: 243)

Just as Merleau-Ponty called on Gestalt Psychology to articulate and support his phenomenological theorising about a sense of being-in-the-world, and particularly his discussion of a metamorphosis of the senses, we are employing a similar tactic in foregrounding neurological research on memory to focus in on this immersive pre-reflective space of direct experience in which Breer’s work operates and reflects upon itself. Clinical research into memory processes in post-traumatic stress Brewin et al (1996) has proposed a dialogue between two memory systems – Verbally accessible memory (VAM) and Situational accessible memory (SAM) – to help explain traumatic responses like the flashback.

‘Verbally accessible memory’ (VAM), also referred to as declarative memory (Squire, 1991, Van der Kolk, 1996b: 285), involves the ‘encoding and storage of conscious experience’ (Brewin, 2001: 161). Verbally based, it enables narrative with retrieval upon request. Because it is linear and consequential in assembly its process speed is limited, akin to the impact of low bandwidth in computer technology. VAM enables a strong sense of time. The hippocampus is involved in this formation of conscious memories, of building up a unified ‘cognitive map’ (Van der Kolk, 1996b: 295) that allows flexible access to these memories. It can be related to objective or reflective thinking.

With ‘Situationally accessible memory’ (SAM) or implicit memory, there is no retrieval upon request and no sense of time. It is the situation that triggers the experience. This accounts for the unexpected flashback triggered by external cues or thoughts in traumatised individuals. SAM is ‘unable to encode spatial and temporal context’ (Brewin, 2001: 161). It focuses narrowly on risk and is detail rich. According to Hellawell and Brewin, SAM consists of ‘the exclusive automated mode of retrieval, the high level of perceptual detail, and the distortion of subjective time, such as the event is experienced in the present’(2004: 3). Such processing is more aligned with Merleau-Ponty’s notion of the pre-reflective and with subjective experience. SAM is processed in an older part of the brain; the Amygdala. The amygdala’s functions are not flexible, are concerned with attaching affect to incoming cues and the ‘establishment of associations between sensory stimuli’ (Van der Kolk, 1996a: 230).

Animation Studies – Animated Dialogues, 2007

How do samming and vamming interact when these two systems are operating normally in parallel to each other? When you have a conversation or travel from A to B, you may recall or explain what you have done (vamming) but there are certain gestures, impressions that somehow do not fit in. These may come back to you uneasily (samming). You may talk to someone about them until, somehow, they become integrated into the story of the day.

To insert into narrative, in normal functioning, visual replay (flashback) is rehearsed. This facilitates the move from the SAM to VAM memory system. Metcalfe and Jacobs (1998) have identified that high levels of arousal (trauma) breaks down hippocampus functioning and inhibits vamming so that no narrative exists for the flashback to be inserted into. Like a broken record it has nowhere to go and is destined to try again later. Rich in detail with no temporal context, such 'affect fragments' periodically redial into a network that was never built.

This is a model that describes how a non-narrative film like 69 is experienced. Breer's films' rich perceptual performances are immediate and direct. There is no story for these experiences to be inserted into. Where a narrative does surface, is after the event, and the value of a film like Fuji is that it can be unpacked phenomenologically to reveal in its construction a self-reflexive awareness of its own functioning. That is a story that manifests a level of correspondence with the avant-garde project: 'The avant-garde continues to explore the physical properties of film and the nature of perceptual transactions which take place between viewer and film' (John Hanhardt, 1976: 44).

This relationship between vamming and samming also re-calls the relationship between verbal and visual thinking. Brewin's model is a much more systemic and dynamic model than the left brain/right brain oppositions that Small (1994: 6) employs in his argument in *Direct theory* that the visual reflexivity that occurs in experimental film is a form of theorising with a right brain emphasis. It is also more developed than the old brain new brain dichotomy used by Len Lye to talk about his 'doodling' film work as old brain work (Horrocks, 1979: 33). Maya Deren's thinking on vertical and horizontal editing also resembles Brewin's dichotomy. Correspondences between Brewin's memory systems and McLuhan's insights into oral and visual biased cultures or Innis's concepts of space and time oriented empires (which inspired McLuhan's ideas) are also worth exploring further. As has been indicated Brewin's model can be used to 'flesh out' Merleau-Ponty's pre-reflective/reflective, subjective/objective and implicit/explicit dialectics. The body centred samming and the cortex centred vamming also has suggestions of the perennial mind-body split. Trauma itself has in fact has been conceptualised as an extreme mind/body disassociation.

The Flashback

The effect is certain but unlocatable, it does not find its sign, its name; it is sharp and yet lands in a vague zone of myself; it is acute yet muffled, it cries out in silence. Odd contradiction; a floating flash. (Roland Barthes, 1981:52-53)

The flashback is a term in usage in both cinema and trauma studies. In both instances 'flashbacks' represent an ambivalence and operate in the here and now. Flashbacks not only implore one to remember the past but to insert, to knock, to shatter these forgotten difficult events into the present. Can such flashbacks be thought of as a visual blow: flash back? If so, how much of the forgotten, knocking at the door of re-presentation is re-recognised? Does not the blow itself re-traumatize, delivering back the trauma rather than the memory? There is an unresolved

Animation Studies – Animated Dialogues, 2007

tension between a re-constitution and the flash, the optical stun. What comes back in the flash? It is a paradox that also begs the question: how easy is it to think, to negotiate when you have just been ‘hit’?

Phenomenologically speaking: Is the flashback a replay of a pre-reflective moment or experience that the senses replay anew? Is it a perceptual cluster of effects that is unexpectedly inserted into, and upsets a train of reflective thought, that impacts the body but emerges into reflective thought? The trace of the trauma remains in the body and the flashback is its incoherent call. In its stun it is difficult to unpack analytically, remaining in its performance ‘unspeakable.’

In her discussion for the ‘Screen’ debate on trauma in film ‘The trauma of history: Flashbacks upon flashbacks’ Turim (2001) describes the flashback as signalling the return of a trauma, the break of a settled narrative for both those within the film and the spectator watching it: ‘these flashbacks were often abrupt, fragmentary, and repetitive, marked by a modernism of technique.’ Such a description could double as an account of *Fuji* or *69* and compliments the introductory report on these films. In their abruptness, Breer’s compact films can be experienced as such the incomplete self-contained visual flashbacks that Turim describes and supports Brewin’s VAM/SAM interactive model.

Turim also acknowledges that ‘similar abrupt flashbacks marked 1920’s avant-garde films’ (2001: 207). This suggests an important connection back to Breer’s line of direct research into the moving image. The European Avant-garde of the 20’s, contains within it, in Viking Eggeling, Fernand Leger, Walter Rutmann, Hans Richter and Man Ray, Breer’s originating influences and a line of experimentation with image and temporal structure that can itself be traced back to a ‘pre-cinema’ and early cinema aesthetic that Breer also invokes in his sculptural work, modified from optical toys like the flip-book, the mutascope, the thaumatrope and the zoetrope.

Breer’s work can be related back to the exhibitionist and often joy-ride films from early cinema which were about showing and enacting ‘direct stimulation’ rather than telling or recounting. This is what Gunning has referred to as a ‘Cinema of Attractions.’ ‘Attraction’ is Eisenstein’s term taken from the fairground. ‘An attraction aggressively subjected the spectator to ‘sensual or psychological impact’ (Gunning, 1990: 59). These were the visceral qualities that also attracted the Futurists to Cinema. ‘It is not separate from life but rather rediscovers the primal relationship of things’ (Marinetti [1916] quoted in Cantrill, 1971: 16).

Dadaist shock tactics have also been compared by Benjamin (1976: 238) to the visceral impact of film. For Kirby such effects as used by a 1920’s avant-garde can still act with the ‘force of trauma.’ She identifies a male specific hysteria within such early cinema forms and identifies how shock has not only been co-opted by the avant-garde but resides within film more generally:

If shock was by this time a programmed unit of mass consumption, and a principle of modern perception, it could clearly turn back in on itself and frighten – or thrill – with the force of trauma. (The flicker film is a perennial tribute to this power.) (Kirby, 1988: 121)

Breer has made explicit this debt to a 1920’s avant-garde:

‘The tricks you used to do that are Cubist tricks: figure/ground reversals, intersections, overlappings. Of course, (Hans) Richter did all this in 1921, in *Rhythm 21*. I guess it’s pretty obvious that I’d seen that film by the time I made *Form Phases IV*. I got to know Richter later in New York, but I remember that film having a big impact. I lifted stuff right out of it.’ (MacDonald, 1992: 18)

Animation Studies – Animated Dialogues, 2007

Reprise/rewind

We have described and reflected upon *Fuji* and *69* and Breer's filmmaking practice generally, with respect to Breer's own reflections on his methodology, in relation to symptoms of trauma (Van der Kolk), brain physiology, the perceptual nature of flashbacks in narrative cinema (Turim) and the perceptual qualities of train travel (Schivelbush). It has become apparent in watching *69* and *Fuji* that we are uncannily confronted by what Merleau-Ponty calls the 'real.'

The real is a closely woven fabric. It does not await our judgement before incorporating the most surprising phenomena, or before rejecting the most plausible figments of our imagination. (Merleau-Ponty, 1962: x)

This is not always an encounter we do willingly or with pleasure. We may look away or shut ourselves down and go perceptually and reflectively elsewhere. We may even move our bodies out of the room. But even here Breer has us, incorporates this into his retinal performances. Like with trauma, there is no escape. Into this we are captured. What awaits the viewer of a Breer film is an encounter with one's own perception and a sublime suggestion on how it needs to function and not function in our technologised being-in-the-world.

The perceptual shift or re-alignment of the cluster or Gestalt of the senses required to confront radical experiences can be overwhelming. It can be experienced traumatically. It can shut the body down. It is therefore, as Baer suggests (2002: 170-1), in its rewind-ability that *69* and *Fuji* present a historically specific traumatic structure that remains open for inspection.

Because film presents images not as a succession of still photographs but as indistinguishable from movement, it can continually restage this 'disintegrating unity' without either instituting coherence or succumbing to total fragmentation. (Baer, 2002: 170)

Rewind-ability acts here as a request to inspect history and is enabled because film continues to exist in its originating form after each performance. This availability can present us with a methodology of re-presenting (continually and upon request) the unknowable of trauma.

As at the advent of photography at the beginning of industrialisation, the photograph was seen as offering a superior form of memory in its ability to record the most intimate of details that the naked eye missed, so too here now Breer offers up the moving image for this new digital post-industrial period as a prosthetic memory. It is offered up with an artistic methodology illuminated by phenomenological reflection, to trace the most invisible of missed relationships and to record the unspeakable and transgressive interconnectedness between and across bodies and objects. ∞

References

- Abrahams, A. (2004) *MM2 : Experimental Film in the Netherlands since 1960*, Amsterdam, Filmbank Uitgeverij De Balie.
- Baer, U. (2002) *Spectral Evidence: the photography of trauma*, Cambridge Mass., the MIT Press.
- Barthes, R. (1981) *Camera Lucida: Reflections on Photography*, New York, Farrar, Strauss and Giroux.
- Benjamin, W. (1976) 'The Work of Art in the Age of Mechanical Reproduction'. *Illuminations*. New York, Schocken Books.
- Brewin, C. (2001) 'Memory processes in post-traumatic stress disorder'. *International Review of Psychiatry*, 13, 159-163.
- Brewin, C., Dalgleish, T., Joseph, S. (1996) 'A dual representation theory of post traumatic stress disorder'. *Psychological Review*, 103, 670-686.

Animation Studies – Animated Dialogues, 2007

- Burford, J. L. (1999) *Robert Breer*, Paris, Re:Voir Video.
- Cantrill, C., Cantrill, A. (1971) 'Artaud and Cinema'. *Cantrill's Filmnotes*, 2, 13-16.
- Caruth, C. (1992) *Trauma: Explorations in Memory*, Baltimore MD, John Hopkins University Press.
- Elsaesser, T. (2001) 'Postmodernism as mourning work'. *Screen*, 42, 193-201.
- Felman, S., Laub, Dori. (1992) *Testimony: Crisis of Witnessing in Literature, Psychoanalysis and History*, New York and London, Routledge.
- Griffiths, K. (1985) *Robert Breer: The 'Five & Dime' Animator*. UK, Channel 4.
- Gunning, T. (1990) 'The Cinema of Attractions: Early Film, its Spectator and the Avant-Garde'. In Elsaesser, T. (Ed.) *Early Cinema: Space Frame Narrative*. London, BFI Publishing.
- Hanhardt, J. G. (1976) 'The Medium Viewed: The American Avant-Garde Film'. *A History of American Avant-Garde Cinema*. New York, American federation of the Arts.
- Hellawell, S. J., Brewin, C.R. (2004) 'A Comparison of flashbacks and ordinary autobiographical memories of trauma: content and language'. *Behavioural Research and Therapy*, 42, 1-12.
- Horrocks, R. (1979) 'Len Lye's figures in motion'. *Cantrill's filmnotes*, 31/32, 24-35.
- Kirby, L. (1988) 'Male hysteria and Early Cinema'. *Camera Obscura*, 112-131.
- MacDonald, S. (1992) *A Critical Cinema 2: Interviews with Independent Filmmakers*, Berkeley, University of California Press.
- Merleau-Ponty, M. (1962) *The Phenomenology of Perception*, London, New York, Routledge and Kegan Paul.
- Merleau-Ponty, M. (1964a) *Sense and Non-sense*, Evanston, Northwestern University Press.
- Merleau-Ponty, M. (1964b) *The Primacy of Perception*, Evanston, Northwestern University Press.
- Metcalf, J., Jacobs, W. (1998) 'Emotional memory; the effects of stress on 'cool' and 'hot' memory systems'. In Medin, D. L. (Ed.) *The psychology of learning and motivation*. New York, Academic Press.
- Radstone, S. (2001) 'Trauma and screen studies: Opening the debate'. *Screen*, 42, 188-192.
- Schivelbusch, W. (1986) *The Railway Journey : the industrialization of time and space in the 19th century*, New York, Berg.
- Small, E. S. (1994) *Direct Theory: Experimental Film/Video as Major Genre*, Carbondale, Southern Illinois University Press.
- Squire, L., Zola-Morgan, S. (1991) 'The Medial Temporal Lobe Memory System'. *Science*, 253, 1380-1386.
- Turim, M. (2001) 'The trauma of history: Flashbacks upon flashbacks'. *Screen*, 42, 205-210.
- Van der Kolk, B. A. (1996a) 'The Body Keeps The Score'. In Van der Kolk, B., McFarlane, A. and Weisaeth, L (Ed.) *Traumatic Stress: the Effect of Overwhelming Experience on Mind, Body and Society*. New York, London, Guilford Press.
- Van der Kolk, B. A. (1996b) 'Trauma and Memory'. In Van der Kolk, B., McFarlane, A. and Weisaeth, L. (Ed.) *Traumatic stress : the effects of overwhelming experience on mind, body, and society*. New York, London, Guilford Press.
- Whitfield, C. L. (1995) *Memory and Abuse: Remembering and Healing the Effects of Trauma*, Deerfield Beach, Florida, Health Communications Inc.