



Private Performance and making art with Video

Mike Leggett, 2009

Introduction

The paper draws on two sets of detailed notes made in 1973 that reflected on the creative potential of Closed-Circuit Television (CCTV) systems and the Portapak video recorder. My collaborative work with other artists, including John Latham, Ian Breakwell, Kevin Coyne and tertiary-level art students, expanded the creative possibilities of these motion picture mediums, generating a vibrant range of approaches to working with the new media of the day. The early adoption of video by artists responded to the affordances of immediacy and portability. As experiments progressed, the work began to challenge the market-driven dualisms of producer and consumer.

The making of *The Heart Cycle* during 1972/3 commenced as a series of experiments with a CCTV system and a roll of 16mm 'found footage' film. The outcome was a 9-minute video tape recording the image and sound output from a series of procedures and adjustments made to the system during practice runs and rehearsals made over a period of hours. An approach of this kind to making art is echoed in the work of Donald Schön (1983) and his analysis of professional practice based not on problem solving but problem setting. The artist or researcher makes and tests "... new models of the situation ... to function as transforming moves and exploratory probes."

Based on notes made at the time, now held in the Rewind archive, this paper outlines as a matter of first-hand record conclusions reached about private performance as a condition of synthesising *The Heart Cycle's* final form. With references to VJ culture and interactive media, the conclusions are reviewed in the contemporary context of expanded public situations for the reception of motion pictures.

Background

Video as a motion picture technology emerged in the mid 1960s. The R&D for these low bandwidth video systems had come from military and security service sources. Technology and equipment manufacturers then sought to develop fresh markets, initially in corporate contexts

and later in educational and domestic markets (Bensinger, 1981). There was a distinct resistance initially among many artists and community groups to experimenting with or utilising a technology perceived as 'hi-tech' and elitist on the one hand, and tainted by the politics of the day on the other. (Spielmann, 2008, Langill, 2007, Wright, 1995).ⁱ Nonetheless, communities developed to explore the residual possibilities for 'alternative' and oppositional practice.

In the late 1960s the Centre for Advanced Television Studies (CATS) workshop acquired a camera and monitor. Housed at the New London Arts Lab, an informal loan system gave other users of the Lab the opportunity to explore the possibilities of the video medium. Other residents in the Lab included the London Filmmakers Co-operative (LFMC) and IRAT, the Institute for Research into Art and Technology.ⁱⁱ

The materiality of the film image was much debated throughout the 1970s, less so the video image. Many film and visual artists were averse to the 'non-materiality' of the electronic image or the restricted range of acuity the bandwidth could support at the time. The non-materiality of the video image arises from a perceptual paradigm: the experience of viewing film synchronises the visible image reflected from the screen with the succession of image frames physically rendered on the acetate strip in the gate of the film projector; conversely, light emitted from the video monitor is an asynchronous rendition of the image as "stabilised signal processes" (Spielmann 2008), describing the image recorded as magnetic data stored on videotape. Subject to much variability, the illusiveness of the material base for the video image became one of the themes of work produced from this point onwards.

A poster, *Video + Video/Film – Some Possibilities Suggested by Some Experience*, (Fig 1) prepared during 1973 and exhibited at the Experimental and Avant-Garde Film Festival at the National Film Theatre in June of that year, recorded the process and outcomes of six exploratory projects pursued during 1971 and 1972 (Leggett, 1973)ⁱⁱⁱ.

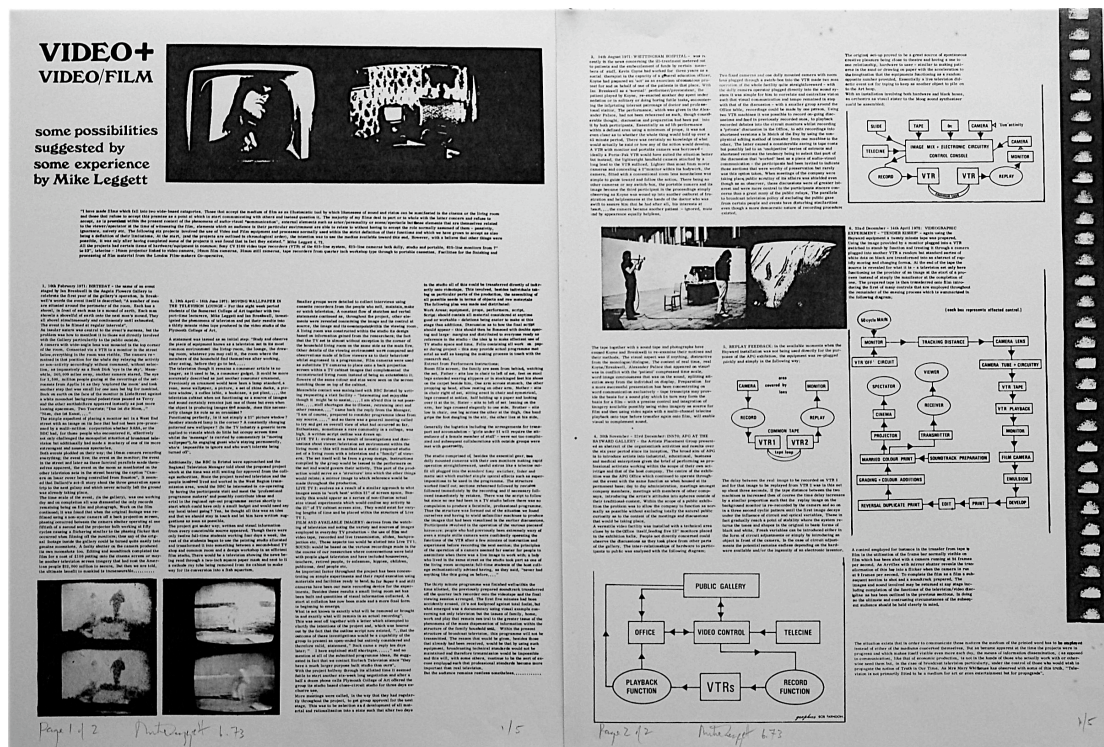


Fig 1: *Video + Video/Film – Some Possibilities Suggested by Some Experience*, (Leggett, 1973), off-set litho print 100cm x 60cm.

These included CCTV configurations in 1971 for Ian Breakwell's *ONE* event at the Angela Flowers Gallery^{iv} (Fig 2); *Moving Wallpaper in the Television Lounge* project at the Somerset College of Art;

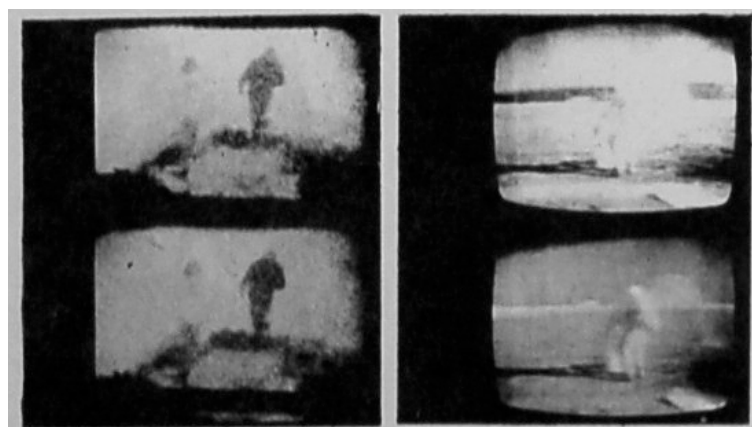


Fig 2 left; *ONE* event CCTV; right; Apollo mission on television.
Frame strips from the 16mm film *ONE* (Leggett and Breakwell)

the Whittingham Hospital performance, *The Institution* with Kevin Coyne and Ian Breakwell at Art Spectrum exhibition, Alexander Palace (Fig 3); and the Artists' Placement Group (APG) exhibition at the Hayward Gallery. (Leggett, 1973/2005)



Fig 3: *The Institution*, l-r: Mike Leggett, Ian Breakwell, Kevin Coyne. Art Spectrum, Alexander Palace 1971.

As performances, the presence of cameras, cables, monitors and the general paraphernalia of the CCTV video studio, the formation of the image and its visibility happened in the same physical space, establishing a synchronous materiality at odds with the usual asynchronous encounter with the video image as it is encountered from videotape or a Television broadcast.

Another note described a recording made using a common tape, between a record VTR and a playback VTR, the distance between the two introducing a time delay within a video feedback system (Fig 4).

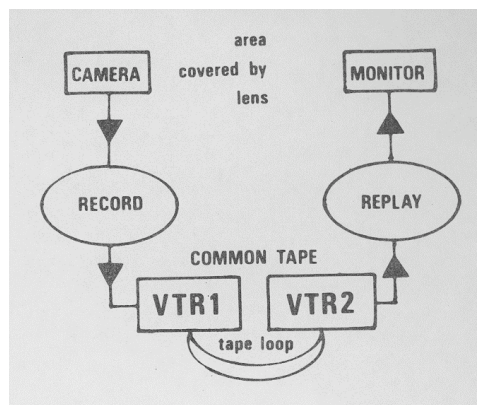


Fig 4: *Video + Video/Film* detail: schema for time delay system

Adjustments were made to the zoom lens on the camera (Fig 4, top left) framing an image of 'snow / white noise' on the monitor (top right):

The original set-up proved to be a great source of spontaneous creative pleasure being close to theatre and having a one-to-one relationship, hardware to user – similar to making patterns in the sand or drawing on paper, with the acceleration to the

imagination that the equipment's functioning as a random opposite number [responsive partner] provided. (Leggett, 1973).^v

Practice

My initial encounters as a filmmaker with the Portapak were revelatory. The key feature, developed from audio tape recording technology of the 1950s, was the ability to record motion pictures in black and white (greyscale) and play back the recording immediately, re-using the recording media if playback showed a recording to be unsatisfactory.^{vi} In the contemporary context this may seem mundane, but in the early 1970s the potential of this facility, as others have noted, (Frampton 1974, Marshall, 1996, Donebauer, 1996, Elwes, 1996, Critchley, 2006, Spielmann 2008), was as novel as it was without precedent in motion picture culture.^{vii}

The CCTV studio setting by comparison was a confined process of working with the electronic image. The familiar 'language of cinema', whereby space is described across time from different viewpoints – montage – imitated using several cameras in a studio, mixed or switched through a vision mixer, to produce the 'classic narrative flow'. When I started working on ideas in response to initial experiences with the Portapak, I found that "on playback, after each attempt, that additions and alterations become quickly apparent. The final version is not shot until later." (See transcript Appendix A, paragraph 2).

Contemporary Reflections

A series of notebooks and loose folders in my collection^x containing sketches, notations and reflections on critical stages of the investigations and experiments, form the basis of reflections on the work I made in the 1970s. The opening sentence of the notes made in July 1973 evoke the spontaneity the technology made possible: *"Driving home with the Portapak in the back – stop at the bridge and walk to the stream and set-up tripod in water – the idea, the location."* By simply beginning a process of recording the scene in front of the camera and then determining where this decision would lead, brought the conceptual framework for commencing the making of a motion picture recording into closer proximity than had previously been possible.^x The note continues that the first take was completed within 15 minutes of getting out of the car: *"Playback to check picture and sound, all in the same time [period] – re-shoot three times [thus] erasing previous takes; pack-up. On [the] way over [the] field spot solitary bullock – walk*

towards [it] shooting without quite knowing what might result; another good recording!” (Appendix paragraph 1). The brief description of recording the water flow in the local stream^{xi} followed by the solitary bullock wandering in the same field^{xii} highlights the point at which a fresh approach was realised for gathering material with which to later work. Around the same time I began to experiment with three studio cameras connected through a vision mixer to the Portapak.

The Heart Cycle: selected annotated notes

In many ways, a CCTV video studio system was similar to the camera, printer, processor and projector at the LFMC workshop – a series of motion picture processing units, with which a wide range of precise interactions could be performed.^{xiii}

Set-up the studio to look at some film – added another camera to relay off the monitor through mix box; [vision mixer]

The intention was clearly to explore the relationship between the film image and the video image where the film image was used as a source to make a video image using a film projector and video camera. The newly acquired video equipment included a simple telecine converter, which using a right-angle prism enabled a video camera to receive the projected image from a film projector. ‘To relay off’ the monitor meant that another camera was pointed at the monitor capturing the image coming from the film projector, a ‘feedback loop’ connected through the vision mixer.^{xiv} My first time encounter with the vision mixer required me to understand the various effects selectable by combining knobs, sliders and buttons.^{xv}

.. became confused by mix box; the temptation being to ‘use’ the various effects [and thus] making even simple switching obscure after a while – went back to beginning and tried again, forgetting the FX! [effects]

The pre-set matte effects for combining camera outputs with various graphical shapes tended to ape the effects with which we had become familiar on television. These visual devices – wipes, irises, boxes, etc - had evolved from silent cinema traditions and accepted conventions of graphical dynamism in narrative transitions from shot to shot and scene-to-scene; it was decided to ignore them.^{xvi} The adjustable matte (Key) effect however, was worthy of further investigation.

Came to 'feel' the [vision mixer] box, the mix, superimpose and cutting – introduced third camera through Key channel and got to know the box with this very seductive FX – finally found the Key image which seemed to work the best, being simple in area and rhythmic in action - this was the film spool on the projector, which after a while was lit with a small spot to improve the outline of the white to black areas. This was controllable using a Key Control knob, such that the area affected by the white key could be altered from zero – a blank screen - to maximum, which produced a distorted image of the spool.

Experimenting with the relation between the object in front of the video camera – the film spool turning on the projector – and the real-time control of the keyed white and black areas, produced a rhythmic device upon which to build the composition.^{xvii} The feedback loop created with one of the cameras and a monitor, was controlled through the use of the sliders on the mixer. The zoom lens on each of the cameras added variables into the system from which, through my interaction, a shape and order began to emerge.

Finally all the elements were combined on the final monitor. The combined images were of great interest, the only problem being where - in terms of start and finish - the [duration of the] combined [images] might exist. A series of takes were made onto the P[ortapak] and ~~again~~ played back at the end of each one. The time base was simply as long as each one took i.e. the amount of time it took to produce something that sustained interest...

Having established a rhythmic element using the keyed film spool, the images combined as layers across several takes or iterations, were of intrinsic personal fascination. This interest was sustained because the straightforward operation of the video set-up was providing an outcome ready for immediate critical review, prior to making further adjustments to the system ready for the next recording ('take'). The ability to see results immediately was quite unlike the experience of making a film, when there is the inevitable delay between exposing the image to film and being able to see the result as a motion picture image. The absence of an image produced by a film camera during recording, close to the qualities seen on the screen of the completed artwork necessitated a different conceptual framework. The feedback from the video system encouraged spontaneity more similar to making music, drawing, or writing: working with the system was something plastic and responsive.^{xviii}

The [vision mixer] box proved difficult again but gradually on watching playbacks bits were noticed and technically improved by rehearsing certain box manipulations. Work on [a] short piece [at a time] – record then playback. Finally something had sedimented ~~out which~~ [but] needed final structuring - the backend of the film seemed to provide the most sympathetic images. The [use of the] Key was to start the piece with a white line on black; there would be a cut to feedback [from the camera facing the monitor] plus [the] key image [of the rotating film spool, which was] also white on black; then the introduction of the [images from the] film; then the reintroduction of the Key into the image.

The process of investigating the convergence of these various elements proceeded as a series of private performances. Based in image and technology, each iteration gradually improved not only my skills of interacting with the various control surfaces but also the outcomes delivered as a live composition.

The rest [of the composition] would concern itself mostly with the interaction of the Key (abstract) and the mixed, cut and superimposed image (real relative).

The investigative activity shifted away from learning the system to understanding how the different components were determining the shape of the composition and the images it contained. The appearance of the film spool had been abstracted by use of the Key: the rounded shapes of the spool accentuated by the Key giving the visual impression of an electronically *generated* image, the source of which is not 'revealed' until the very end of the tape, a *treated* electronic image of a real object.^{xix}

The film on the projector spool feeding through the projector and into the video system was 'found footage' from an instructional film about human blood circulation and the operation of the heart. This had not been specifically selected for the purpose of experimentation – it had been randomly taken from my small collection of various film items.^{xx} *The Heart Cycle* therefore developed from the manipulation of primary elements contained by the video system, with the images in the emulsion on the acetate of the film occupying a secondary position within the structure. The next question was how to fit the elements of the composition so far constructed into an overall time span.

It was noticed during one of the final takes that the film spool would speed up imperceptibly as the film came closer and closer to the centre [of the spool]. ~~such that~~

The rate was noticeable frenetic before the film would actually run-off and suddenly stop the spool [rotating] dead. It was decided that this would complete the cycle.

Problem solved! The duration of the performed procedures with the video system would match the length of the found footage on the projector. The experimental stages of the project had consolidated the procedures to arrive at a series of 'rehearsals' peaking as a final unedited performance,^{xxi} the extent recording of *The Heart Cycle*.

The completion [of the composition] would be to reveal the process as far as possible by zooming out of the mask [the Keyed image of the spool] (requiring re-plugging^{xxii} of course during recording) and dollying the camera around to show the monitors, projector and mix box.

The recording of *The Heart Cycle* ended with a coda, where the physical elements of the performance are revealed using a zoom out and track: the spool and the projector, the cameras and monitors, the vision mixer and Portapak, and then the artist entering right to sit at the mixer and move a slider to fade the image to black.^{xxiii}

These various elements were all put together in a couple of hours. Three takes were needed to get the acceptable one. The temptation was to keep taking [iterating] to attempt the masterpiece. However, the piece by then was not as good as thought originally and a typically good one was preferred, since the obvious joy was the making of the tape as much as the collision of its various elements. To 'perform' the tape each time was the obvious ideal – here anyway was the recording of one of these performances.



Fig 5: frame grab from *The Heart Cycle* (1973)

Though the ideal to 'perform' the procedure to a live audience presciently anticipated the live performances of contemporary VJs and the dynamic possibilities of digital video, the technology of the time had strict limitations when it came to live performance involving complex manipulations. During this greyscale analogue era the exhibition of video was severely restrained compared to film: by the low resolution and size of the image, lack of colour, imprecise editing options, poor quality recording tape, domestic styling of monitors etc. However, where the specific qualities and features of the video medium were deployed, anticipation of technology developments and improvements to come encouraged a measured level of experimentation. Where scale, colour and acuity of the image was necessary, when the considerable costs associated could be covered, film remained the medium of choice for single and multiple-screen presentation.

In *The Heart Cycle* a point was reached in the investigations where the identified elements, emergent from the working procedures, were brought into states of proximity with one another – as images, as durations – and gradually incorporated through a process of composition and sustained for a finite period into a 'video work'. (Spielmann 2008). Interruptions of the sound and interferences with the image are incurred as the system and its variables are performed, on tape, heightening a certain tenuousness and provisional presence for the viewer experiencing the work. As the series of procedures converge on the durational and physical end point of the film in the projector, abstraction seeks to undermine the 'authority' of the instructional documentary, creating a durational space through which the dialectic develops between the representation and its antithesis.

Live Performance and Video

The making of *The Heart Cycle* was a series of live real-time^{xxiv} private performances. By, 'live' is meant the sense of performed iterations proceeding toward the work's completion, conducted in the privacy of the studio. These were similar to the preparations entailed in making the earlier film *Tender Kisses* (1972)^{xxv} and echoed in much of the early video art made in Britain. The 'transforming moves and exploratory probes' (Schön 1983) employed in performing the medium is reflected in the heuristic production of evidence in viewing the completed art work; light as abstract movement, with synchronous/asynchronous sound, as image of place and surface, as image of presence and agency, interrogated within a continuous present. From 'performing the medium' the tendency developed in the following

years towards the medium *framing* performance, video promos from the music industry leading the way. Improvements and upgrades were made to the technology throughout the 1970 and 1980s upgrading the colour and general image quality, and editing precision using dual-VCR controllers. Furthermore, the technologists developed video to have a more 'film-like' appearance encouraging the use of video as a replacement tool for the production of documentary and drama on television. The migration of video to 'substitute television' as others have observed, (Spielmann, 2008, Rees, 1999), embraced a moving image language made increasingly familiar in the 1980s with the expansion of television production in Britain.

In the *Image Con Text* series (Leggett 1978-1984), performance employing several kinds of projectors and sound playback were deployed together with the presence of the artist to deliver a didactic lecture-room experience as a means of framing individual film and video works. The objective was to provoke and precipitate discourse about the experience of sound and image, setting out to counter television documentary forms. It was an approach taken in the spirit of what Duncan White has recently identified as “..*Expanded Cinema’s principle concern with context and the social spaces of reception*” (White, 2008). Towards the project’s conclusion the OBJECTive of an interactive program as augmenting the encounters between teacher and student was identified (Fig 6). The final stage archived the two live performances to videotape *using* the conventions of documentary edited shot construction (Leggett 1983, 1984 later to DVD, 2003).

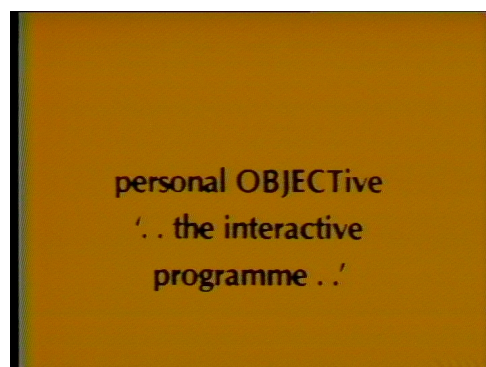


Fig 6: *Image Con Text: Two* (1984) video screen grab

The Body on Three Floors (1984), an interdisciplinary project for television, choreographed the camera viewpoint for interaction with a dance performance, documenting creative play and play-acting as part of the final transmitted program (Fig 7). The juxtapositioning of television 'genre' modalities sort to subvert the transparency of the performances, whether parts of a documentary, or 'art on television', or discussions with a scientist. The sedentary activity of watching late-night television may have entertained or informed in different ways the minds of a

few late night television viewers. But as an engaged, reflexive audience however, they were not so much minds embedded in the world, rather minds headed for bed.^{xxvi}



Fig 7: *The Body on Three Floors* (1985); left, face play; right, the *pas de deux*.

Video screen grab.

Digital Affordances

Paul Dourish describes the world in which we move, affecting and being affected by our actions within it (Dourish, 2001). By utilising the physical, material world through the invention and use of tools, we are able to extend our activity within the world not as passive receptors but as active agents, because as our behaviour adapts our abilities are extended. Dourish argues this principle of adaptive behaviour and embodiment as being essential to understanding how we as active agents broadly speaking, devise and use technology, whether a video camera or spoken and written language itself. The contemporary technologies of the motion picture art experience are many and have developed considerably in the 35 years since analogue video. The microprocessor array directing binary data for all manner of visual devices including the personal computer, the camcorder, the mobile phone, the iPod etc, enables personal agency well beyond the reflexivity possible in the analogue domain.

Artists were among the first to realise the potential of exploring adaptive behaviour as a component of the art experience through the use of tools for making interactive systems such as *The Heart Cycle*. Though games development has been a great commercial success, for the most part games mirror the task-centred goals of software programs written for commerce and industry. Similarly software designed as 'creativity support tools' have largely mimicked the analogue procedures of mechanical technology. The artists represented in a survey show, *<Burning the Interface: International Artists' CD-ROM>* curated for the Museum of Contemporary Art, Sydney (Leggett and Michael, 1996) demonstrated artists' abilities in adapting software tools designed for offices to the purpose of making audio-visual art

environments within which the responses of the interactive participant were essential for the continuing movement of image, but also of mind.

The Heart Cycle began to demonstrate that interactivity involves not only feedback loops or communication cycles but also an active presence, with the interacting subject affecting and being affected by the 'ecology of the location' in which the encounter takes place.^{xxvii} The craft skills and guile of the artist in defining the environment or interface, approaches the issues tangentially, as Darren Tofts has summarised:

"What, or more specifically when, is an interface? [The assumption is] that it only exists in the cybernetic domain, when someone sits in front of a computer and clicks a mouse. An interface, on the contrary, is any act of conjunction which results in a new or unexpected event. A door-handle, as [Brenda] Laurel reminds us, is an interface. So too is the 'chance encounter, on an operating table, of a sewing machine and an umbrella'. [James] Joyce didn't write books. [Marcel] Duchamp didn't create works of art. [John] Cage didn't compose music. They created interfaces, instances into which someone, intervened to make choices and judgments that they were not willing to make. ... You are empowered, you are in control. Cough during a Cage recital and you are part of the performance. That's an interface" (Tofts, 1995).



Fig 8: *Artintact* (1994) top: *The Exquisite Mechanism of Shivers* (Seaman); bottom: *Portrait One* (Courchesne).

The 'performance as participation' within Bill Seaman's generative engine produces correspondences of word and image either with or without human intervention (Fig 8). Luc Courchesne's installation requires the interacting participant to perform a risqué 'conversation' with the female performer in the very public space of the gallery. Later works had intentions

rather than goals, to guide rather than direct the process of encountering computer-mediated artworks and in so doing beginning to indicate directions toward an interactive cinema.

After a further decade we are continuing to identify the interactive paradigms being explored by artists. Practice-Based Research (PBR) approaches provide structures for understanding these developments. Notes on creativity support tools like Processing echo the present notes on the making of *The Heart Cycle* in helping to explore:

“...the contemporary themes of instability, plurality and polysemy. These works are continually in flux, perpetually changing the relationship between elements and never settling into stasis. Each moment in the performance of the work further explains its process, but the variations are never exhausted. The structure is not imposed or predefined, but through the continual exchange of information, unexpected form emerges.” (Reas, 2005)

In positioning audiences’ reflexivity as an essential component of experience in the film and video work of the 1970s, over the last decade the emphasis has been on locating active intervention within a motion picture system and thus including the viewer as part of the performance of the work.



Fig 9: *Changing Light* (Welsby 2004) Artspace, Sydney.

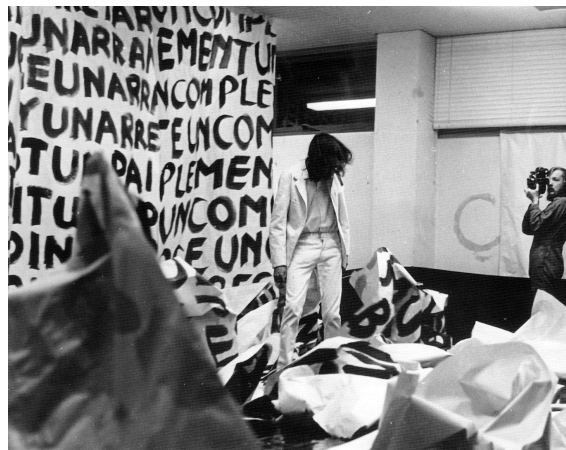
In Chris Welsby’s *Changing Light* (2004) the system projects onto a horizontal screen the image of a lake’s surface, which responds asynchronously to visitor presence using motion sensors as a part of the system (Fig 9) (Leggett, 2004). In the semi-darkened space of a gallery the image of the artist’s performance with the camera and the computer systems is augmented by the private performance of the visitor whose very presence influences the sampling of moments in recorded time of the natural world. A heuristic engagement using ‘exploratory

probes' by the visitor can determine a sense of the dimensions of the system and its capacity to reveal shared agency between artist and participant. Occurring in the public space of the gallery, the affect on each visitor is privately experienced, sensing how presence may (or may not), be effecting the behaviour of the system. An iterative process, observing and reflecting on visual outcomes, the creative activity mirrors that of the artist working with responsive tools. Privately performing experiments that move inexorably toward a final form, the series of sound and visual elements brought into relational proximity one to another, arrive at a composition whose final realisation is deferred to the live 'real-time' space, or to that of the video recording medium.

And thus... [another line here to show connection with earlier parts of the paper]

Concluding

In the migration of time-based works from analogue to digital format, further variables emerge. The film I shot as a performer in the event series *Unword* (1969-70) by Ian Breakwell was initially shot as a film (*Unword* 1971) assembled for screening at 2 frames-per-second (fps) using an analysis projector with tape soundtrack (Fig 10).



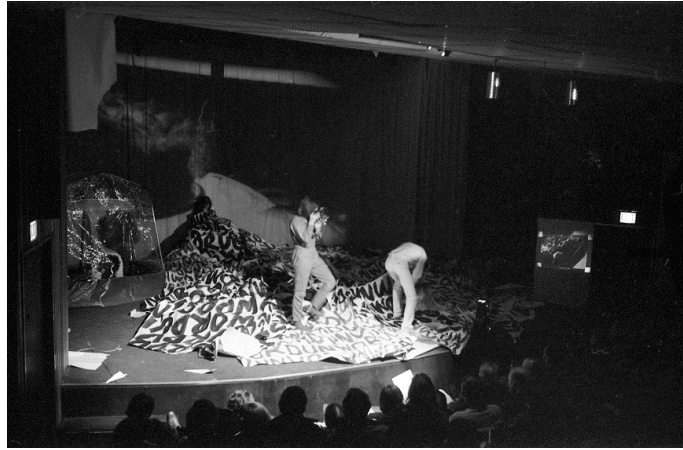


Fig 10: *Unword*, Ian Breakwell; top, Swansea event (1969); bottom, Bristol event (1970). Breakwell and Leggett during performance. The small image to the right of the Bristol event is the projection (with an analysis projector) of the previous event's shot material. © Breakwell and Leggett

The scarcity of analysis projectors meant the film remained largely unseen until 2003 when it was digitally restored to DVD from 16mm film. Now able to be projected as a three metre-high image continuously, it was acquired by the Henry Moore Institute in Leeds in 2006 as their first performance-based sculptural installation, an outcome for the collaboration and the artwork made possible through a process of format migration employing digital technology.^{xxviii}

By contrast, the migration process from the analogue version of *The Heart Cycle* to the digital artefact in 2007, introduced further interruptions and interferences to those already evident: horizontal white lines flick across the screen, the sign of decay caused by the metallic oxide dropping off the tape mylar substrate – 'drop out'. Within the overall schema of the composition this 'variable' becomes a manifestation of the rendition of magnetic and electrical fluctuation into digital data upon the material base, stored on a hard disc or DVD and asynchronously reproduced on replay through microprocessor array onto the screen.

Duration and extreme duration were outcomes of artists' work with the new media of analogue video. For the first time, motion pictures displayed in 'real time', the state of a system in synthesis. *The Heart Cycle* as a record of the synthesis of a performance event, retains the finite time span of the artist's film, a singular event when replayed on the screen of a video monitor. However, in the act of viewing, it retains in the electronic genesis of the black and white DVD image, a provisional gesture in private performance towards a contemporary present.

Appendix A

Unedited transcribed paragraphs beginning “July/August 1973....”, full copy held at BAFVSC and Rewind Archive, Dundee. (Nine paragraphs in total, extracted paras numbered below).

1. July/August 73: driving home with Portapak in the back – stop at bridge and walk to the stream and set-up tripod in water – the idea, the location, shooting in quarter hour – playback to check picture and sound all in the same time – re-shoot three times, erasing previous takes; pack up. On the way over the field spot solitary bullock – walk towards shooting without quite knowing what might result; another good recording!

3. Start approaching the Portapak idea and find on playback after each attempt that additions and alterations become quite apparent. The final version is not shot until later.

6. Set-up the studio to look at some film – added another camera to relay off the monitor through mix box – became confused by mix box; the temptation being to ‘use’ the various effects making even simple switching obscure after a while – went back to beginning and tried again, forgetting the FX! Came to ‘feel’ the box, the mix, superimpose and cutting – introduced third camera through Key channel and got to know the box with this very seductive FX – finally found the Key image which seemed to work the best being simple in area and rhythmic in action, this was the film spool on the projector which after a while was lit with a small spot to improve the outline of the white to black areas. This was controllable using a Key Control knob such that the area affected by the white key could be altered from zero – a blank screen to max which produced a distorted image of the spool. Finally all the elements were combined on the final monitor. The combining images were of great interest the only problem being where in terms of start and finish the combinations might exist. A series of takes were made onto the P and again played back at the end of each one. The time base was simply as long as each one took i.e. the amount of time it took to produce something that sustained interest, personally of course. The box proved difficult again but gradually on watching playbacks bits were noticed and technically improved by rehearsing certain box manipulations. Work on short piece, record, playback. Finally something had sedimented out which needed final structuring; the backend of the film seemed to provide the most sympathetic images the Key was to start the piece with a white line on black, there would be a cut to feedback plus key image also white on black then the introduction of the film then the reintroduction of the Key into the image. The rest would concern itself mostly with the interaction of the Key (abstract) and the mixed, cut and

superimposed image (real relative). It was noticed during one of the final takes that the film spool would speed up imperceptibly as the film came closer and closer to the centre such that the rate was noticeable frenetic before the film would actually run-off and suddenly stop the spool dead. It was decided that this would complete the cycle – it was then noticed that the caption ‘heart cycle’ would appear halfway through the piece of film being used. The completion would be to reveal the process as far as possible by zooming out of the mask (requiring re-plugging of course during recording) and dollying the camera around to show the monitors, projector and mix box. These various elements were all put together in a couple of hours. Three takes were needed to get the acceptable one. The temptation was to keep taking to attempt the masterpiece however the piece by then was not as good as thought originally and a typically good one was preferred since the obvious joy was the making of the tape as much as the collision of its various elements. To ‘perform’ the tape each time was the obvious ideal – here anyway was the recording of one of these performances.”

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Notes

ⁱ Observation of television production had been part of my experience between 1968 and 1970, where I was employed as an assistant film editor with the BBC. In the demarcated industry of television, creative knowledge of video was restricted to understanding the multi-camera procedures for studio-based production with 35mm

film inserted to live broadcast from telecine. The use of two-inch videotape spool-to-spool recorders was restricted to high budget, prestige programs.

ⁱⁱ Histories of the Arts Lab movement in Britain are hard to source, even though from the Drury Lane Arts Lab the alternative approach of multi-disciplinary arts practice spread like wildfire around the rest of Britain. In my experience, the New London Arts lab took a radical but disciplined approach distinct from the eclectic and anarchic revolt-into-style of the Drury Lane experiment.

ⁱⁱⁱ The Poster emerged from several converging circumstances. It was initiated by a colleague in the Printing department at the Exeter College of Art, who offered the presses to make large off-set litho prints. This affordance prompted my drawing together the various notes and diagrams that had been accumulating on paper and in mind about recent work with the 'new media' of the day, video, into a poster form. A form of communication popular in the 19th Century, the Poster (Leggett 1973), though not made for the purpose, is recognised as a common presentational form at academic conferences.

^{iv} Also described and discussed in a paper by Duncan White WHITE, D. (2008) Expanded Cinema in the 1970s: Cinema, Television and the Gallery. Expanded Cinema: the Live Record. National Film Theatre, London..

^v The video recording of these experiments later became used in the opening section of the 16mm film *Tender Kisses* (1972). The tape delay principle was also employed in 1975 for the installation *Eighteen Months Outside the Grounds of Obscenity and Libel*, at The Video Show, Serpentine Gallery, London, UK.

^{vi} The filmmaker Hollis Frampton described the experience vividly: "I remember ... the first time I ever used video. I made a piece, a half-hour long, in one continuous take. Then I rewound the notation and saw my work right away ... some part of my puritanical filmmaker's nature remains appalled to this day. The gratification was so intense and immediate that I felt confused. I thought I might be turning into a barbarian; or maybe even a musician." (Jenkins 2008)

^{vii} In Britain, portable video technology in the early 1970s based on half and quarter inch tape was restricted to corporate and educational settings. During this time, broadcast television maintained 35mm and 16mm film operations for mobile recording of events and performances for insertion into studio-based news, current affairs and entertainment. It was not until the 1980s that Electronic News Gathering (ENG) was negotiated with the workforce into mainstream production, the wholesale

move by the industry from film to video being hastened by Betamax and VHS videocassette recorders for the home.

^{ix} Copies of parts of the collection are held in BFVASC, <http://www.studycollection.co.uk/> and the Rewind project online database at the Centre for Visual Research at the University of Dundee <http://www.rewind.ac.uk/>. Interaction by the author with the latter resource provided a PDF of the original document in the collection, my memory of which had faded. Archives are as useful to the originators of documents as to historians!

^x When working with film the delay between exposing film and receiving it back from processing requires the concept and planning stages to be fully developed - this saves on exposing film and paying for expensive processing. Working with video – and also Super 8mm - avoided the cost associated with film and enabled more spontaneous approaches to developing ideas and outcomes. Iterative methods of filmmaking developed collaboratively with others at the London Film-makers Co-op workshop (LFMC), tuned and later accelerated my approaches to working with video.

^{xi} The sound and image were later processed, the sound with a equalisation filter array, the video, by pointing a camera at a screen of the recording and manipulating both monitor and camera settings to change the appearance of the image from greyscale to black and white. An edited 5-minute version titled *Stream* was included in the compilation tape made for *The Video Show* (1975) exhibition.

^{xii} The animal walked away as I approached with the camera. In following it across the paddock during the 5-minute continuous recording, I terminated the recording at the point the bullock crossed the rushing stream, the same stream as had been recorded previously. The recording was later included, with the title *Cow* in the compilation tape made for *The Video Show* (1975).

^{xiii} The similarities between the video and film mediums as motion picture image processing units included a wide range of precise interactions. Comparison can be made between: the printer aperture band and the vision mixer slider for controlling density, or transparency; bi-packed film in the printer or double exposed camera stock and vision mixing of multiple video cameras; bi-packed film in the printer as travelling matte and the key setting on the vision mixer, etc. The screening of material using multiple projectors or multiple monitors is another similarity.

^{xiv} The 'feedback' image of the camera recording its condition of output, made by simply pointing the camera at the monitor to which it was connected, was often the

initial experience of the millisecond delay for many video users in the 'instant' delivery of the image within the close-circuit television system.

^{xv} The vision mixer or switcher enabled the output from several cameras to be controlled by passing the signal either to a monitor or a video tape recorder or both. 'Mixing' was achieved by either cutting between the viewpoint of each camera, mixing or dissolving the image between each camera, or using the Key effect to electronically filter the image from one camera and use it as a mask into which the image from another camera could be 'matted' or composited.

^{xvi} The earlier collaboration with Ian Breakwell and students from Somerset College of Art (*Moving Paper in the Television Lounge*, described in the *Video + Video/Film* print), included the ironic use of these visual devices.

^{xvii} The development of the rhythmic device in video, in retrospect, echoes the experiments in 1970 with loops of film in the projector and the film printer that led on to *Shepherd's Bush* (1971) and parts 1 and 2 of *Sheepman & the Sheared* (1972-76).

^{xviii} Elsewhere in the typescript: "*Begin talking to the camera with no one else around – relaxed in a chair with the video tape recorder (VTR) running, feeling no compulsion to talk but finding it amazingly easy to do so. Playback available immediately of course, which rapidly became like watching someone else talking useful for preparing a statement, in the same way as these words can be checked back for effect straightaway – rewritten as simply too.*" The article 'Interference' in the Studio International special issue on Video (LEGGETT, M. (1976) Interference. Studio International. London.), was based on the experiments conducted facing the camera, as was the video piece *Seen/Unseen* (1973 and 2005).

^{xix} Electronically generated abstract imagery by this period was a well-established visual phenomenon in television – *Dr Who*, for example – and movies, with sine waveforms and oscilloscope images used to signify a 'scientific' context, besides the miscellany of visual effect.

^{xx} Found footage was not as easy to come by as it is today, where the duplication of files from huge quantities of motion pictures material on the Internet is straightforward. My work for a while in the film and television industries gave me access to film material otherwise destined for the junk bin. The circumstances determining what material would be incorporated into a new work would as often be left open to chance. This was evident particularly in earlier performance work with Ian

Breakwell on *Unword* (1969-70) and the opening sections of the *Sheepman & the Sheared* series (1972 – 76) into which such material was incorporated.

^{xxi} Editing film involves physically assembling together individual shots, but the Edit function on the video decks of this time was crude, intended for simply assembling separate recordings rather than imitating the frame precision of editing film. The tendency of many video works of the period based on long ‘takes’ and durational aesthetics could be put down to this factor. Or as in *The Heart Cycle* case study, a series of procedures performed ‘live’.

^{xxii} The ‘re-plugging’ of the connections to the vision mixer became necessary, as the camera used to perform ‘the reveal’ had been set up with the Key camera input.

^{xxiii} Revealing ‘the apparatus’, that is the tools and materials used in constructing the motion picture phenomena encountered by a viewing audience, was a pre-occupation of several of the artists working with film and video at the time. My own film *Tender Kisses* (1972) is an example; also the film documentation of Ian Breakwell’s performance piece, *ONE* at the Angela Flower’s Gallery in 1971 - both projects are described in the poster print (Leggett 1973). Films and expanded cinema events by Le Grice, Raban, Nicholson, Farrar and others had also this concern in the early 1970s, a source of frequent debate about the representation of the means of motion picture image making. (Gidal, 1975, 1976; Le Grice, 1977).

^{xxiv} Real-time, ‘live’, where one unit of time is equal to one unit of recorded time, without post-production editing.

^{xxv} Also described in the *Video + Video/Film* prints.

^{xxvi} *The Body on Three Floors* (1984) made for Television South West. As the station announcer remarked on introducing the 50-minute program at 11pm one night, “Welcome to the bizarre world of filmmaker Mike Leggett”. Novel, oppositional and other forms deemed ‘minority’ by television network executives and condemned to late-night slots were not without technological amelioration. The widening use of domestic Video Cassette Recorders (VCRs) besides enabling viewing minority programs at more social hours also encouraged the development of personal collections on tape, a prohibitively expensive pursuit on film. Archiving of material on video and the swapping of the tapes became an early form of the digital ‘social media networks’.

^{xxvii} J.J.Gibson initially proposed taking an ‘ecological approach’ to issues of perception, opposing Cartesian formulations that sought to separate body and mind. The study of Human Computer Interaction (HCI) has been developed by many designers and researchers from Heidegger’s original ideas GIBSON, J. J. (1979) *The Ecological Approach to Perception*, London, Houghton Mifflin..

^{xxviii} The 16mm film was telecined to DV tape at 25 fps, which was then captured to the Macintosh computer as a movie file. In the editing application, the frame rate was slowed to 8% so that the frame rate returned to 2 fps, the projection speed of the analysis projector. The quarter-inch sound tape compiled in 1971 from several different tapes used in the performances, digitised as a computer file, was then ‘married’ to the picture to become the soundtrack, with an additional track of the sound of an analysis projector added. Finally, credits were included at the end before the DVD became a limited edition of two copies for the Anthony Reynolds Gallery, London, with two artists’ proofs.

A shorter form of this paper was given at the Expanded Cinema conference, Tate Modern, London in April 2009.

