

It's Spring 2007 and I am coming to the end of the first stage of my work which began with my involvement in video in 1976.

My yet to be premiered long form piece *14, History Lessons, 18, Visions, 21, Beatification*, represents the end of that stage. (2007, PAL, 77 minutes).

I began my involvement with HD around 1992, albeit at arms length and previously there were other indicators in my practice that lead in this direction - my involvement with photography from as early as 1971 for instance). My current and growing understanding of HD's aesthetics and form have made me begin to think in a new way.

Also I am beginning to realise that the term High Definition is not completely correct - maybe it should be High Resolution Imaging - as High Definition is a relative term - relative to what has been.

All of my standard definition work prior to this date has been a preparation for the development of a concern which renders the previous work as sketches, investigations into image making.

My most recent piece, *The Unfurling* represents a threshold I have to now go through. Suffice it to say that the Unfurling requires extreme slow motion and though I have revelled in the artefacts that come about by extreme processing of an image (meaning that it changes in a way that I couldn't predict) and thus enjoying the accidents that come about through stressing the parameters the equipment was manufactured to handle to the point where the image breaks down, I wish for more clarity as opposed to less.

I believe Bill Viola must have come to this moment as he tried to approach a key disclosure his work made to not only himself but his audience. I think Viola was once quoted as saying 'Duration is to consciousness as light is to the eye'. Though talking about the way we experience the world and therefore this is an element that the artist might grasp and manipulate, I believe his intuition was leading him to something that High Definition can deliver - not just duration, but articulation - and ocular articulation is to the mind as luminosity is to the eye.

And given my chosen title for this most recent piece, this also represents an unfurling of a consciousness in my own mind about the way an image functions when demonstrating movement. I was dimly aware in my previous

use of photography through its higher resolutions than standard TV resolutions, that the lessening of picture quality was holding something back from my grasp.

I had explored most other elements within the moving image and have always thought narrative should *not* be excised from the artists palette, regardless of its heavy usage by the entertainments industry - artists of course need necessarily go in the opposite direction from commercial definitions and usages of elements with the available palette as a form of distancing from entertainment and therefore creating a *chiracuso* for their art.

I can articulate this 'something' by talking around it: though cinema requires the creation of atmosphere normally achieved through the distressing of the image, atmosphere was a form of impurity disavowed by artists who tend to seek the truth of their art through an ascetic attitude to purity as a means of obtaining and delivering truth.

Cinematographers on the other hand constantly distort the colour standards and definitions the film manufacturers seek to implement for their stock, to impose atmosphere. 'Atmosphere' is like popcorn in that it allows the easier suspension of disbelief. If film manufactures say that development should occur at such and such a temperature, then heating up or cooling down the developer is a means by which the colour or grain or exposure may be changed in a pleasing way. All cinematographers seek to distinguish themselves from the others primarily to have a signature for themselves that delivers a unique selling point, therefore a higher income - however, as in all practices, there are some that completely transcend the monetary issues.

One issue arises here and that's an argument that has developed in contemporary high end HD photography which is beginning to be won by a faction that I suppose, because I'm a romantic, I disagree with.

High end HD work is far beyond the use of tape to capture the data necessary to render the image accurately. Sony became famous amongst those in the know in HD cinematography by winning the format war against Philips who'd developed a superior 1250 line system in the 1990's by developing a more manageable image of 1920 x 1080 pixels (1080 lines) and then making cameras which threw away about 500 pixels and only recorded 1440. They did this because it wasn't possible to record all 1920

pixels - the data pipelines were not wide enough. Even then, the 1440 pixels were only recorded in a way that lost much detail. A pixel is effectively a packet of data that is represented on screen by a changing luminosity and a changing colour identity - Sony's pixels in HD Cam are in 3.1.1 colour space - that's a description of what each pixel packet contains in terms of data that renders the luminosity and colour in tact - or not as the case may be. The ideal in terms of recording data (at least at the moment is 4.4.4.) though the previous Olympian peak of Standard Definition PAL was 4.2.2. What these numbers mean (and I will go into this at a later stage in a later paper) one can guess that the more samplings there are - the more data can be displayed. As usual, bigger equals better.

At the high end of HD the goal is to record all of the pixels in 4.4.4 colour space. Compression or 'lossy' recording, soon became a solution to massive amounts of data (60 gigabytes per minute of decent HD) so that something of some value could be recorded on tape. In the highest form of HD image capture at the moment one has to record on hard disc - and not just any hard disc (though Sony's data deck, the SR, records a form of high end HD which is in general use). In short, contemporary drives run at 7200 revolutions per minute and read and write between 30 and 50 megabytes per second (MB/sec as opposed to Mb/sec). It doesn't really matter what that means in detail, unless like me you're a train spotter at heart, it simply matters that if you want to record Sony's system which loses 500 pixels at the outset, you need 220 MB/s of information captured and played back and for that you need a Rapid Array of Independent Discs.

If I throw you a ball you might be able to catch it. If I manage to throw you 20 balls at the same time you have no chance, If I throw 20 balls at you and another 19 friends - you have a chance of catching them. A RAID Array uses a group of discs to catch large amounts of data. This of course has a more complicated description and in some ways my metaphor is incorrect - but you get the idea.

If you want to record 1920 x 1080 pixels with their full complement of data then you need read and write speeds of 440 Mbs and up. There are however cheap ways of doing this, but that's another issue. So, given all of that the HD world has spent its time thinking in terms of being true to the form and it really doesn't want to distress an image that is already distressed by being captured badly.

If you do work on the image in camera, in the colour matrix then you limit how much data is recorded. If you crush the blacks to get a 'look' you automatically reduce the data that is output in the image - therefore the cinematographer ever mindful of his or her employ wants every bit of data carried back into post production and when all is gathered in their swag bag and taken home - then the work on the image can begin. But of course if you've ever really watched an image that is produced like this you see that there is a thin patina over the image and the look itself is not inherent in the image you are looking at. As I said before, I'm a romantic so I want the look *within* the image. I spent 30 years shooting video and I know it's possible.

People like Vittorio Storaro (Apocalypse Now, The Spiders Stratagem etc) whose famous colour theories render incomprehension and a throwing up of hands from the more prosaic and practical amongst the brotherhood of cinematographers - but everyone has to agree - whatever it is he is thinking is certainly 'bringing home the bacon' for him in terms of his invention and sheer artistry. Equally, if one is to talk about the cinematographers art, one has to mention Conrad Hall for his inventiveness and commitment to *the photographic* within the cinematic arts. Hall's use of an oppositional term is confusing - cinematography is the photography engendered by a constant flow of images that create movement - so why use the term *photography* when it refers to the still image ?

As his career progressed, and as he traversed the boundaries of contemporary wisdom about what constitutes good exposure, Hall came to understand that the *act* of generating the still image and something within the act of photography gets at something that cinematography rarely gets at and he was therefore concerned with finding the photographic moment *amidst the haste* and flow of images (Baudrillard also noted something similar in his diatribes on the ubiquitous ness of the image). I'll leave definitions of what *the photographic* might be to others, as I don't want to be diverted from my present task, except to point up that the *journalistic* is a large element within finding the *photographic* within cinematic art. Here, I don't mean the prosaic happenings of the quotidian, I mean rather, their opposite, the finding of the extraordinary within the ordinary.

One last thing on the cinematography that is taking place in Hollywood in High Definition shooting. Historically in the clash between film and video, the film users were seen as the craftsmen and the video users were seen as being artless. I remember being on a Ridley Scott set in 1983 as he shot the

famous 1984 commercial. I was shooting for Apple and my footage was used by Apple to heighten awareness that the commercial that was to introduce the Apple Mac was only going to be shown once in the middle of that years Superbowl - this was a fantastic ploy that earned that strategy a massive audience that is still viewing this particular commercial. As we were viewing back our rushes checking focus and exposure (and the fact that we were shooting NTSC and sometimes the frequencies in the English electrical system created strobing patens that need to be identified and therefore the footage might need re-shooting). At that moment of viewing the footage I became aware that about 20 people were standing behind us looking at our monitor.

This was film crew that had never seen what it had been shooting at the same time as shooting it. Usually the film would come back the next day so the past would always be viewed - not the 'present'. We all stared at each other - two alien tribes, previously at war with each other (the video people after all were going to destroy their medium in the long run and take their work). Then one of them grinned in pleasure at seeing this and suddenly, like the German and British troops in the first world war downing their rifles on Christmas day and playing football together, suddenly we were friends. From then on they stopped being horrible to us, even sometimes offering to move lights to let us have more illumination. In the end the artist in me took this footage and I made a piece called Prisoners which Apple had some problem with because on the shoot there were 150 neo fascists from the bovver boots agency who were known to have rioted during the production of Pink Floyds 'The Wall'. Apple didn't want that particular association with their new product. I contacted Ridley Scott's office and he backed my usage of the footage.

But - historically film people are brought in to light video because they are seen as the artists. But they don't know the technology and that has meant that pure unaffected footage gets taken back into post to do the colour grading work.

So, though High Definition is a clear and clean medium which in its nature and form in essence is counter to the notions that lead to the distressing of the structure the image, for me now, HD is beginning to represent the finessing of the detail that is under investigation, and what that detail might mean on one level and do in terms of being an aesthetic, on another.

So, though I understand that *atmosphere* or *the look* as it's called in the business is the means by which the cinematographer (as a kind of tour guide for the story) and as they lead their audience into the commercial entertainment that is the cinema and TV experience, in terms of producing art, the clarity and detail that is an essential part of high definition is now a direction that I have to pursue - especially as these two factors are the area of fastest and most sought after development in High Definition form.

I haven't come to this idea rapidly as I have long cherished the ability of video to create surprises for the maker, but with the development of the video form through its analogue past into its digital future I can now find surprises in the higher rendering of detail. This is one element of HD and my intuition and experience tell me that after a long exposure to HD, I have only just scratched the surface.