



# “Minding the Gap”: Reflections on Media Practice & Theory

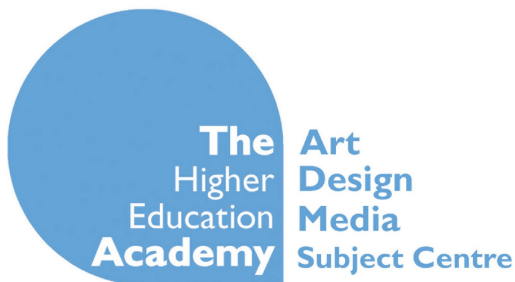
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## **'High Definitions': Articulating Media Practice As Research**

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### **Definitions of Practice Research**

There seems to be a great deal of anxiety about practice research, both within the academy and amongst the practitioners themselves. The academy can't seem to agree on the nomenclature: practice as 'research', 'practice based research', 'research through practice', 'applied research' being used by AHRC and RAE, sometimes interchangeably. I prefer to use the term 'practice research' and have attempted to contribute to the debate by creating Wikipedia entries on Screen Media Practice Research and Practice Research. According to the AHRC, 'If a film-maker wanted to make a film about refugees, the research question should be about the process of making the film, not about the experience of the refugees. The work that results purely from the creative or professional development of an artist, however distinguished, is unlikely to fulfil the requirements of research' (AHRC Research Funding Guide 2006/7). It seems two separate and unconnected points are being made here. Firstly there is the suggestion that media practice can only be about media practice, which seems rather tautological to say the least. The second point is about the relationship between professional practice and research. Media professionals who are entering the academy often precisely because their extensive industry experience, in order to teach the growing number of practice courses, often feel alienated or undervalued when it comes to exploring their practice in a research context (as evident at the recent 'Making the Case: Contextualising and Documenting Media Practice As Research', *Journal of Media Practice* Symposium, June 2007). However, in a climate of knowledge exchange and knowledge transfer, and the growing demand for research to be situated in real-world contexts, practice research drawing on professional experience may come play a more central role.

It seems to me that practice research is different from professional practice primarily in the way in which it is framed and reflected upon within a research context – how this is done (within the practice, external documentation, etc.) remains fraught with tensions – can the practice be self-reflexive and include a route map of the research process within itself, as Trevor Hearing argues elsewhere in this panel? Alternatively, is there a danger of the documentation replacing the practice? There is a feeling of suspicion about the current Research Assessment Exercise, based on experiences in RAE 2001. The RAE 2001 Report stated that many practice submissions did not take

advantage of the 300-word supporting statement. Much discussion of this has taken place in the *Journal of Media Practice*, both through publication and at their annual symposium (one on 'Articulating Media Practice as Research' in 2005, another on 'Peer Review and Dissemination' in 2006) and there has been consultation with the now defunct AMPE (the Association of Media Practice Educators) on the RAE 2008 practice research guidelines, much of which has been incorporated into the current Criteria and Working Methods for Panel O, UAO 66. One of the main barriers, it could be argued, is not the openness of the RAE to practice, but the way that practice is perceived and presented by the submitting institutions. Historically there has also been a lack of systematic peer review of academic media practice, but this is also being addressed with initiatives such as the new *ScreenWork* DVD published by Intellect. It is therefore important to acknowledge the growing recognition of practice as a valid research methodology within the Media, Communications and Cultural Studies subject body, both in terms of funding and research assessment. Rather than the anxiety which surrounds the perceived gap between theory and practice, practitioners are now beginning to take more ownership and responsibility, unapologetically, for sign-posting their work as research for the funding and assessment bodies, as well as their own institutions. Given the current lack of opportunity for academic peer review and dissemination, practitioners also have to be inventive about obtaining peer review for their work through conference presentations and research seminars. My own strategy has been to try to develop a patina of 'Significance' (one of the three the RAE watchwords, the others being 'Originality' and 'Rigour'), by getting my practice seen at both international film festivals and academic conferences, inviting fellow academics to write reviews of my work which I then publish on a supporting website, developing a DVD with a route map of the research process and publishing on my own practice (see Crofts 2007).

### **Exploring the Gap through a Practice Research Project**

In my current research I am grappling with these issues. I've recently been on a six-month HEFCE funded Promising Researcher Fellowship at University of Bristol during which I have been developing a documentary research project on the impact of digital technologies on the film industry, from production and distribution, to film preservation and the futures of cinema. One of the primary aims of the research is not simply to document this technological shift, but equally to reflect upon the 'aesthetics, psychology, ideology and economics' (Steven Neale 1985: 1) of emerging digital film technologies, and to do this through practice. Digital technology is clearly not a single entity, but a number of overlapping and shifting technologies and apparatuses that are being

adopted at a different pace in each sector of the film industry. My research attempts to document this important period of transition in cinema history across the range of production, whilst also situating it in the context of a long record of technological 'evolution' within the cinema history. I am interested in exploring the discourses and 'structures of feeling' surrounding the shift to digital technology within the industry (Raymond Williams: 1997).

By undertaking the research through practice, I also aim to understand how digital technology has impacted on the 'workflow' of not only feature film production, but that of also independent and amateur filmmaking. Using an embodied practice (see Bourdieu: 1990), in which the process of making the film becomes part of the research methodology, I am modelling through by practice the very arguments about digital technology that I am also exploring through my critical reading. Shooting on HDV (a prosumer version of High Definition) and editing on Final Cut Pro I am exploring the new territory in terms of my own film practice (having previously shot on film and miniDV). So far I have shot over fifteen hours of interviews at Panavision, Kodak, Technicolor, Aardman and the Curzon Community Cinema in Clevedon and much of this has been edited into a three-minute pilot for dissemination at academic conferences and research seminars, with a view to obtaining further academic funding and industry sponsorship to take the research further. At this stage, the research is still very much in the development stage and I have been accruing the interview material as much as part of the research process as the raw materials for a finished film. Before I discuss the future directions of the project and the struggles I have been having in articulating my practice as research, it is necessary to outline in a bit more detail some of the key themes that are emerging from the interviews and to reflect on how I've attempted to explore these through practice in the current pilot.

The pilot opens with a title-card stating: "This is a love poem to celluloid, shot on HDV". The asteroid theme-tune kicks in as we see curtains swish open on the old Pearl and Dean ident. We cut abruptly to John Williams' *Raiders of the Lost Arc* score and a perspective shot of a corridor with the floor being polished, cutting to a detail of the framed black and white film stills on the wall and the cleaner polishing the floor to a shine. Over these images we hear the voices of Clive Ogden (Kodak): "Digital Cinema is coming and it will come", and Lionel Runkel (Technicolor): "We're are very much in a transitory stage at this moment in time." A rapid montage of shots of objects and people follows: a pile of camera cases labelled Do not touch any of these"; a close up of a 35mm

film camera covered over for the night with a clear plastic cover, with another cleaner pushing a trolley in the background; the Panavision logo. These shots both situate us in a particular location, the film company Panavision, and also introduce the theme of making visible both the often hidden ‘work of production’ and the ‘cinematic apparatus’ (de Lauretis and Heath: 1980): the unsung people, equipment and labour that go into feature film production. Cutting these images to such a well-known action adventure soundtrack evokes the feeling of engulfment experienced when watching a Hollywood film. This is intended to operate on an ironic level to draw attention to the mundane and unsung role of many film technicians and creatives who work in the industry. The montage continues, with a FilmGear 650 light being switched on, as we hear Jeff Allen (Panavision): "It's become a highly charged, highly emotive subject, film versus HD". We see a sequence of images of people working: a technician lovingly wiping a lens; equipment being moved around; workers striding across the shop floor as we hear Ogden: "it's the same old argument, you know, about digital technology .... when you do look at a film image it has certain qualities to it that you can't quite put your finger on", Runkel: It's that *je ne sais quoi*" and Allen: "But that might not necessarily be what you want to tell your story".

We zoom slowly out of the geometric pattern of a black and white camera test card, whilst Ogden explains: "The amount of information captured on one 35mm frame is far more", and Runkel concurs: "It is second to none at this moment in time". We see the empty equipment checking area, with the camera test card lit up. Allen states: "Anything I can do on HD, I can do on film". We see a complex shot of a young woman assembling a 35mm film camera; this is shot through the handle of the Genesis HD camera. Maurice Thornton (Curzon Clevedon): "There's a warmth about film". Appearing to contradict himself, Allen then states: "Anything I can do on film, I can do on HD". We see a series of shots of young man assembly the Genesis, adjusting the lens, looking through the viewfinder, the Sony logo clearly visible. Allen: "HD is adding something to the palette". We see a blurry test card come in to sharper focus, as Ogden asks: "Are we looking at a grainy image or are we looking at a noisy video image?" here the digital gain of the HDV, captured at DVPal resolution and output to DVD using a QuickTime Codec is clearly visible. The Genesis camera pans round to look at us. Allen: "I think the two mediums *can* coexist".

This is the end of the Panavision section as we cut to Lionel Runkel walking purposefully down a red corridor at Technicolor. We see two images of a dark bubbling liquid, cutting to a man in a

white coat vigorously shaking a beaker and then pouring liquid into another beaker. He takes off his glasses and walks towards camera, a white coat with the Technicolor logo embroidered on it in the foreground. This sequence of shots introduces us to Technicolor and the mystery of the chemical photographic process. Again, the aim is to both celebrate and demystify the ‘work of production’ (like pulling the curtain back to reveal the scientist in a suit in *The Wizard of Oz* or the Oompa-Loompas in *Willy Wonka and the Chocolate Factory*). We see another man in the developing baths, racks of leader getting ready for the next batch of developing, a euphoric tilt sweeps up the length of the leader, coinciding with the triumphant trumpets in Williams’s score. In the neg cleaning room, man wears white gloves whilst he loads the processed film into the cleaning machine. In neg assembly another man wearing white gloves winds the film on a spool and unpegs it from the hook in the bin. Runkel’s voice comes in: “People want to see good quality moving images now” as we cut to the grading suite. Ogden: “You can just change the whole look of a movie.” A man’s hand presses buttons and we cut to a computer screen with numbers flashing up. Allen: “We have to embrace the new as well as the old,” as we see and hear the filmstrip advancing through the grading machine.

We cut to a close up of some 16mm footage from a 1970s shampoo advert, the face and neck of a woman as she flicks her hair erotically, soft focus, lots of film grain, dust and scratches. This shot signals the end of the Technicolor section as we move into the Cinema section: this is made up of shots from the Curzon Community Cinema in Clevedon and Maurice Thornton’s private six-seater cinema in his back garden in Nailsea. We see a shot of Thornton winding the huge take up reel on a 35mm film projector, standing by the projector and looking out of the window of the projection booth. Over this sequence of shots we hear Thornton: “I can tell if it’s a film, I have seen digital projection, and I know the difference”. The use of the degraded 16mm film here creates an irony which both undermines and reinforces what Thornton is saying here: the fact that the image is a) not 35mm and b) damaged appears to contradict what he says about the quality of film projection, but at the same time it is precisely the nostalgia for the flicker, grain and texture of film that it is, for some, at the heart of these debates (filters and plug-ins are available to give digital video this film effect). We cut to the inside of the auditorium, row upon row of empty red seats, and a small organ at the front at the foot of the screen. Allen: “Every generation of teenagers wants to go out to the cinema”, we see the illuminated Ladies, Gentlemen and Exit sign, as Ogden adds: “Well, if you’re taking a girl out you want somewhere to go!”. We are back inside the projection booth as various

spools whirl and we cut to the projectionist point of view through the window as the curtains sweep open on the start picture ident. Thornton claims: “And as soon as I walk through the door of one, I've got the ‘feeling’”. We see a reverse angle of him from within the auditorium looking out of the tiny projection booth. We see the countdown clock as Ogden states: “traditional projection has not been superseded by digital projection” and we cut away just as the contemporary Pearl and Dean ident starts, without the asteroid theme-tune, but coinciding with a romantic sweep in Williams’ score.

We cut to the interior of Thornton’s home-cinema as another smaller set up of curtains sweep open onto the opening of a Super8 short. We cut back to the Curzon organist playing the electric organ, then cut to a shot of Thornton looking out of the projection booth window as we hear him assert: “and that's the difference between showing a film and pressing a button”. What follows is a montage of loving shots of the cinema apparatus in action, as Williams’ sweeping score is brought up in the mix: a slow zoom out of the Cinemameccanica reel; the dazzle of the beam of the projector hitting the lens; the film going through various feed sprockets and gates. Runkel: “Anything digital, with computers, etc., it has built in obsolescence” ... We see a shot of Thornton keeping an eye on the take up spool as we hear his voice saying: “that's really why I like film, because if it gets poorly, I can probably make it better”. We cut to the interior of Thornton’s home-cinema, the dust catching the light in the beam of his 16mm projector as he caresses the film as it runs on to the projector. This sequence works to emphasize the physical and tactile nature of film as a medium, as well as the enduring technology. The absence of any images of digital projection reinforces the idea that it holds no romance and cannot be fixed or tamed like film.

We cut back to a sequence of shots of Thornton inside the projection booth at the Curzon dimming the lights. An interior wide shot of the auditorium as the sidelights slowly begin to go down. Over this long-duration shot, Ogden claims that: “You can still see images that were shot a hundred years ago...” Thornton: “if you don't preserve it, it's gone, and unfortunately it's gone forever” finishing his sentence as the stage lights are nearly fully out, leaving the organ illuminated. We cut back to Panavision as the young technician pulls a protective plastic sheet over the Genesis. Allen: “the death of film is neigh has been said so many times before that I don’t think anybody now believes it” as the organist switches the organ off back at the Curzon and the last of the lights on the curtains finally go out. Runkel: “...at the end of the day, you’ve got to bear in mind, it is down to finance”.

The pilot ends with a rapid montage of action shots of the workers Panavision and Technicolor which seems to be accelerating, to an almost hysterical pace as Williams' score reaches its climax, only to be cut short by a rapid zoom out from the Cinemameccanica reel and an abrupt cut to the 16mm projector grinding to a halt.

### **Academic and Filmic Context**

As this pilot demonstrates, I am interested in the cinema, both as 'film' and as 'theatre'. Just as Steve Neale emphasises the socially constructed spaces of early cinema, my research seeks to explore the social impact of digital technologies on contemporary cinema. According to Neale, "over and above the technology, on the one hand, and the films themselves, on the other, what was important, with the move towards cinema projection and the elaboration of the relations between spectator, projector and screen, was the experience of cinema, and the institutionalisation of that experience across society" (Steve Neale 1985: 55). How is the social practice of cinema going changing in the digital age and what are the cultural and social implications? Just as Dziga Vertov's *Man With a Movie Camera* begins in a movie theatre, drawing attention to the social, cultural and technological apparatus of the cinema, the pilot attempts to draw on the spectator's cultural memory of the cinema as social practice, whilst at the same time also revealing the production mechanisms behind the scenes. The intention is to use self-reflexive techniques, irony, dialectical montage and counterpoint between sound and image to invite the spectator into the complex debates, so that the interview material becomes a texture of conflicting points of view: suggesting that there is no final 'right' resting point in the argument. A brief discourse analysis of the interviews reveals an adversarial language surrounding digital technology and its perceived threat to traditional film production practices.

### **Format Wars, Cameras and Built-in Obsolescence**

Clive Ogden, from Kodak, argues that film has remained stable as a medium for over one hundred years, whereas there is a 'broken chain' of video and digital formats, noting the war between JVC's VHS and Sony's Betamax video tape formats in the mid-1970s - early 1980s, which VHS won; the now obsolete U-Matic SP; Betacam SP and Digital Betacam (which according to Dylan Cave the BFI Archive use as the primary format for backing up their acquisitions); miniDV, HDV, HDCam, HDPro, DVD, HDVD, Solid State Recording onto Hard Disk, etc. According to Usai:

...at the dawn of an era where the moving picture is gradually suffering the loss of the object that carries it - in this case, the photographic film - the object itself is becoming



more valuable than ever. The season of laserdiscs was brief, it's already history. Videotapes will probably last a bit longer by virtue of being cheap and easier to market in developing countries, but their days too are numbered. DVD may or may not set the standard for years to come, but our grandchildren are likely to see yet another episode in the archaeology of the motion picture. ... What next? Something new every year as in the fashion industry? (Usai, 2001: 115).

In terms of digital cameras, there is currently no industry standard.

Panavision have developed a High Definition camera called the Genesis; Arri have the D-20, and there is the 4K RED (working prototype due Aug 2007, [red.com](http://red.com)). Panavision's Genesis, made by Sony, uses a 35mm CCD image sensor chip. What is interesting about the Genesis is that it uses Sony HD technology, but it is housed in the body of a traditional Panavision 35mm film camera, and is compatible with Panavision cine lenses. According to Panavision MD, Jeff Allen, this has made the camera more attractive to DOPs in terms of maintaining their traditional workflow. The technology is moving so quickly; nobody yet knows which format or camera will be the market leader. There are always early adopters of new technologies (e.g. the coming of sound (see Neale, 1985), or more recently George Lucas's use of High Definition and CGI in the *Star Wars* episodes) versus the 'wait and see' approach of the rest of the industry. Joost Hunningher's Cilect D-Cinema Conferences/Workshops 2003 and 2006 at NFT have taken on the challenge of exploring digital film production from image acquisition, post production through to digital projection in order "to see if recent developments in digital camera and projector technology (in terms of colour, image sharpness, resolution, contrast and brightness) mean that Digital-Cinema is a serious alternative to 35mm" (Hunningher, 2003).

### **Replicating Existing Production Practices and Language**

What is interesting about the existing research on digital cinema is that much of the language is about replicating the 'film look' (see Hunningher 2003). There is a great deal of discussion about HD matching the resolution of film. For example, in the camera department, as noted above, Panavision's Genesis is simply a Sony camera fitted in to the body of a Panavision 35mm camera in order to encourage DOPs to adopt High Definition by maintaining the ergonomics of the traditional

film camera. On the production set, there is a great effort to imitate existing production practices. Technicolor has developed a 'Digital Printer Light' in an effort to return the control of the look and feel of the film to the DOP (rather than allowing this to be decided in post). In editing the 'Digital Intermediate' is replacing the Intermediate Film Print. Digital technology has clearly already revolutionised both sound (think Dolby Surround Sound) and editing (neg cutting and optical effects are a thing of the past with the mass-adoption and mainstream accessibility of non-linear editing, see Koppleman 2004).

### **Distribution, Exhibition, Archive and Future-Proofing**

In the interviews that I've filmed, the arguments about 35mm vs. Digital projection are emotive: Jeff Allen (MD of Panavision) describes it as a 'highly charged' debate; Lionel Runkel (Technicolor), suggests that film is still "second to none at this moment in time"; Clive Ogden (Kodak) contrasts film grain with "a noisy video image"; projectionist Maurice Thornton (Curzon, Clevedon) claims he can "tell its digital" and contrasts the highly skilled and creative role of a film projectionist to that of digital projection which he dismissed as "pushing a button". 35mm film prints are still the major form of distribution, but there are issues with the cost of developing and transporting the prints, as well as the quality of the print as it makes its way through the distribution network. According to Cinema Manger Jon Webber, small independent cinemas, such as the Curzon, Clevedon get the prints after a long run at the multiplex, often screening in more than one screen at the same time, the film prints become stretched, acquiring visible dust and scratches (which incidentally have become a desirable filter in post production to give you that 'film look'). The advantages of digital distribution are that it is cheaper to transport for the distributor, and there is no degradation of the image, but the cost of acquiring a digital projector is not yet profitable for most exhibitors, particularly small independents, so it is likely to be a few years before digital projection becomes standard.

In a presentation at TEA07, the annual European D-Cinema and HDTV Conference, *Star Wars* producer Rick McCallum accused cinema owners of 'dragging their feet in their investment in digital projection', suggesting that 'the only reason that LucasFilm, Peter Jackson and James Cameron were preparing some of their recent movies in 3D was to force cinema owners to invest as they can't show them without the new technology' (Julian Mitchell, 2007: 34). In Britain, the UK Film Council's Digital Screen Network (DSN) is a national initiative to kick start digital projection. It is telling that at this stage digital projection needs government subsidy in order to get started,

there is currently no strong business model. According to the UK Film Council, the DSN is part of their ‘strategy for broadening the range of films available to audiences throughout the UK and especially improving access to specialised (or non-mainstream) film’ (ukfilmcouncil.org). The UK Film Council argues that:

...35mm cinema ... does not encourage the wider distribution and exhibition of specialised product. Digital technology offers a potential solution to this economic constraint as the cost of producing digital copies can offer significant cost savings on striking 35mm prints. The Digital Screen Network will facilitate enough of a ‘critical mass’ in terms of exhibition outlets to ensure specialised product can reach a much wider audience. (ukfilmcouncil.org.uk).

The Curzon, Clevedon was one of the first screens in the South West to become part of the DSN, with a new NEC 800C DLP Digital Movie Projector, ‘one of only 31 independent cinemas in the UK’ (curzon.org.uk). With digital projection and satellite distribution on the horizon, cinemas might revert to their role in the community, with kids cinema clubs, matinee, and variety performance.

In terms of archiving, there is currently no agreed format for digital film preservation. BFI Film Archive currently stores new work on Digital Betacam (considered a stable format), not HD or hard disk. Film preservation is also an emotive issue (see Paolo Cherchi Usai, 2001). The old nitrate was film highly flammable and unstable, so all film archives were transferred to acetate film stock (See *Decasia* (Bill Morrison, 2004) for a haunting look at rotting celluloid). It was then discovered that acetate film suffers from the ‘vinegar effect’, so all archives were transferred to polyester, and then video, now digital. According to Martin Scorsese, in his introduction to Paolo Cherchi Usai’s book *The Death of Cinema*, ‘no less damaging than the ‘vinegar syndrome’, the mystique of the restored masterpiece is condemning to obscurity thousands of lesser-known films whose rank in the collective memory has not yet been recognised by textbooks’ (Usai, 2001: ii). As Usai argues, celluloid is an organic substance – each time the master is ‘telecined’ or scanned, even for restoration purposes, it deteriorates. According to Lionel Runkel (Technicolor), the most stable format for future proofing is still film, using the triple dye transfer where a Red, Green and Blue colour separation of is made on silver nitrate film, but this is also the most expensive. There is also the issue of archiving in an age when digital images are becoming so ubiquitous, with advent of peer-to-peer file sharing websites and ‘user-generated content’. In much of the discourse about the

futures of cinema the question of ‘interactivity’ is very prominent, although it is not the central focus of this research. According to Pete Cashmore, there are over 65,000 uploads to YouTube.com per day (Cashmore, 2006). The sheer volume of material makes the question of selection more central. Indeed when the digital moving image is so ‘throw away’ the issue of ‘future-proofing’ our moving image heritage also becomes pressing, and the role of the archivist becomes one of ‘filter’ and ‘gatekeeper’. These are issues that need to be drawn out further through practice in this research project.

### **Market Forces vs. Aesthetics**

One of the key themes to emerge from the interview is the tension between market forces and aesthetics. The language of the monolithic corporations developing the technologies (NEC, Panasonic, Sony, etc.) is that of aesthetics – they claim to be developing these products in order to improve image quality, the narrative of ‘progressive media’, in which each successive development in technology is another step towards closing the gap between reality and the image. There is debate about resolution in the various HD shooting formats and digital projection (2K, 4K, 6K, etc.), which Ogden (Kodak) and Runkel (Technicolor) argue does not yet match 35mm or even 16mm film. There are arguments about the film grain versus gain or video noise. Jeff Allen MD of Panavision says ‘it’s horses for courses’, Celluloid and HD are ‘different tools in the palette’: film is more suited to some types of storytelling, HD to others. However, as Lionel Runkel at Technicolor asserts, “At the end of the day it’s all down to finances”. The BBC recently announced the end of 16mm film for drama; all new drama must be delivered on HD. High Definition is perceived as being the cheaper medium (quicker shooting-time, cheaper stock, etc.), but there are arguments that High Definition costs more in other areas (such as higher production values, set design, more make up, etc. to combat the unforgiving resolution).

There is also the issue of the speed of technological change and the problem of built-in obsolescence, as opposed to the back compatibility of film, i.e. you can hold a film strip up to the light and still see the image, whereas with a digital file or tape you cannot see it once the technology to play it becomes obsolete. However, as Brian Winston suggests (1991), technological evolution is clearly as much to do with social forces as ‘scientific progress’. The market and not aesthetics is the driving force behind technological development.

In some ways it seems as though both the fear of the technophobe and the enthusiasm of the technophile are ‘academic’ as the future has already happened, cinema is already ‘digital’. As Rosalind Kraus would have us believe we are living in a ‘post-medium condition’ (1999, cited in Willis, 2005: 3), and according to Holly Willis, ‘film and video have, despite claims to the contrary, merged’ (2005: 3). Some academics claim that we are entering into an era of ‘postcomputer cinema’ in which, according to Lev Manovich, ‘computer media redefine the very identity of cinema’ (2001: 249, 293). But of course, whilst I agree with Manovich’s argument that ‘new’ media is not that new, and is born out of the existing social and technological structures, residual media does not simply disappear when new technologies come into being.

### **How Digital Technology Has Informed My Own Practice**

The project is being shot on a Sony Z1E HDV camera, this is a prosumer version of High Definition which enables you to record onto a miniDV tape, thus dramatically cutting shooting costs as opposed to full HD. The pilot was edited on Final Cut Pro 5.0.4, captured on DV PAL resolution to save disk space, with a view to reconfirming to HDV resolution for the final cut. Since the project began there have already been issues of built in obsolescence in that the Editor, Lizzie Minnion’s version of Final Cut Pro (Final Cut Pro HD) was not compatible with HDV (despite the name), and that the new version would only work on the latest version of Mac OS X, demonstrating the arguments about market forces stated above. In terms of research this has been an invaluable project for testing the workflow of this relatively new and still unstable medium, bringing up issues of compatibility between software and camera, and feeding in to curriculum development and capital investment strategies for the BA (Hons) Digital Film and Video at London South Bank University.

What I have found also, given the cheapness of the medium, is that I have tended to use the camera as a Dictaphone or note-taking device. I have over fifteen hours of on-camera interviews, many of which will not end up in the final film, but have been crucial in gaining an understanding of the industry perspective on the impact of digital technology. So digital technology is integral to the research process. Now that tape stock and storage space are so affordable, it is the nature of digital video to over shoot. What then becomes precious is time to actually view, transcribe and/or edit the footage in order to create meaning, and draw some initial conclusions from the research. One could

argue that shooting digitally leads to a propensity for lazy filmmaking, reactive, rather than pre-planned, unlike the discipline of film which, because of its expense, requires careful preparation.

In terms of the formal aesthetics of digital film, this is an area that needs more reflection in terms of my own practice as I go on to discuss below.

### **Questions for Project Development**

How best to reflect on and document this moment of transition (whilst acknowledging the ongoing evolution of cinema as always having been in a state of flux)? My current strategy for developing this practice research project is to reflect further on the relationship between form & content. In other words, how might the research use sound and image to embody the theoretical ideas, rather than just present them. There are a number of directions the research could take. My original ambition for the project was to attempt a feature length documentary that would have a cinema release - aspiring for audiences to watch the film in the very venue that it celebrates in much the same way as Dziga Vertov did in *Man With a Movie Camera*. This would enable me to explore the impact of digital technology across the whole industry, from production and postproduction, to distribution and film preservation. The idea would be to explore the theme of digital technology through a dialogue with key figures in the mainstream industry, as I have started to do with Kodak, Panavision and Technicolor, extending this to include other local and global film companies such as the British Film Institute Archive, the UK Film Council, Sony, Fuji, and Arri. This could take the form of further interviews with key creatives, such as George Lucas who pioneered both HD as an acquisition format and CGI effects and Steven Spielberg who still cuts on film on an old-fashioned Moviola. Another idea would be to have a Spaghetti Western-style face-off between a DOP who swears by 35mm film, and an advocate of HD. The temptation is to use the interviews as typical talking-head documentary. What I've tried to do in the three-minute pilot is to experiment with using the various voices to show the complexity of the arguments, so the practice becomes not about finding an 'answer', but a process of discourse analysis: how do these key figures in the industry narrativise this moment of transition from film to digital? By refusing to offer a visual location for the voices I have attempted to leave these arguments open-ended (see Kaja Silverman, Mary Ann Doane, on the relationship between the voice and the image). By not identifying who is saying what, have also attempted avoid allowing the research to become a straightforward soapbox for these film companies' point of view.

However, making a mainstream long-form documentary is clearly an extremely large-scale undertaking and without sufficient funding will be very difficult to achieve - and the case for it as research would arguably be harder, although not impossible, to sustain. There are of course also issues of access and relationships with the industry which need to be unpacked further - Panavision have offered to assist in making contact with key industry creatives, but there is a danger in being in the pocket of one film company in terms of the objectivity of the research. Arri have developed their own D-20 digital camera and the new RED One Cinema is another competitor to Panavision's Genesis HD camera. There is clearly a need to avoid bias towards one company. An alternative would be to attempt to explore all of these ideas through a grounded, particular local example - such as the Curzon Community Cinema in Clevedon which claims to be the oldest, continuously running, purpose-build cinema in the world, and was one of the first screens in the South West to get a digital projector under the UK Film Council Digital Screen Initiative. This cinema has a history through which the shift from celluloid to digital can be explored in microcosm. My strategy in the short term is to adapt the existing three-minute pilot for Channel 4's *Three Minute Wonders* series, perhaps emphasising the Curzon material. Or another option might be to focus in even further on a particular character, such as Maurice Thornton, in order to explore the 'structures of feeling' which surround this emotive technological shift through one passionate individual's perspective. Yet another approach could be to explore these themes in a more esoteric or artistic way, such as Bill Morrison's *Decasia* and Tacita Dean's *Kodak*.

There is therefore much to reflect on in terms of the feasibility, scope, focus and depth of the research, from feature-length documentary, *Three-Minute Wonder* or art-house film. My feeling is that the research will find a path through each of these seemingly disparate approaches. The challenge is how to explore all of this through audio/visual practice? There is a danger of, on the one hand being 'over theorised' (i.e. not exploring the research questions through the practice - might as well just write an article) and, on the other, 'too professional' (and therefore not research).

**Bibliography:**

BOURDIEU, PIERRE (1990) *The Logic of Practice*. Stanford, CA: Stanford University Press

CASHMORE, PETE (2006) 'YouTube Hits 100 Million Videos Per Day', *Mashable: Social Networking News*, Jul <http://mashable.com/2006/07/17/youtube-hits-1-million-videos-per-day/>

CROFTS, CHARLOTTE (2007) 'Bluebell, Rape Narrative and Film Practice as Research: Strategies for Dissemination and Peer Review' *Journal of Media Practice*, 8:1, May, 7-24

DE LAURETIS, TERESA AND HEATH, STEPHEN (eds) (1980) *The Cinematic Apparatus*, London and Basingstoke: Macmillan

DOANE, MARY ANN (1980) 'The Voice in Cinema: the Articulation of Body and Space', Philip Rose (ed.) (1986), *Narrative, Apparatus, Ideology*, New York and Chichester: Columbia University Press, 335-48

HUNNINGHER, JOOST (2003) 'Exploring D-Cinema, a Cilect Project Report' <http://161.58.124.223/archives/d-cinemarept.htm> [20.08.07]

KOPPLEMAN, CHARLES (2004) *Behind the Seen: How Walter Murch Edited Cold Mountain Using Apple's Final Cut Pro and What This Means for Cinema*, New Rider's Press

MANOVICH, LEV (2001) *The Language of New Media*, Cambridge, Massachusetts / London, England: MIT Press

MITCHELL, JULIAN (2007) 'TEA07 Report', *Definition Magazine*, issue 26, 34

NEALE, STEVE (1985) *Cinema and Technology: Image, Sound, Colour*, London: Macmillan.

SILVERMAN, KAJA (1990) 'Dis-embodying the Female Voice' in Patricia Erens (ed.), *Issues in Feminist Film Criticism*, Bloomington and Indianapolis: Indiana University Press, 309-27

USAI, PAOLO CHERCHI (2001) *The Death of Cinema: History, Cultural Memory and the Digital Dark Age*, London: BFI

WILLIAMS, RAYMOND (1977) *Marxism and Literature*, Oxford: Oxford UP



WILLIS, HOLLY (2005) *New Digital Cinema: Reinventing the Moving Image*, London: Wallflower Press

WINSTON, BRIAN (1997) *Technologies of Seeing: Photography, Cinematography and Television*, London: BFI

### **Internet Sources:**

AHRC Research Funding Guide 2006/7 <http://www.ahrc.ac.uk> [20.08.07]

BLUEBELL Website <http://www.eyefullproductions.co.uk/bluebell> [20.08.07]

CURZON Community Cinema, Clevedon <http://www.curzon.org.uk> [20.8.07]

DEFINITION MAGAZINE <http://www.definitionmagazine.com> [20.08.07]

INTELLECT Website <http://www.intellectbooks.co.uk> [20.08.07]

RAE 2008 Criteria and Working Methods <http://www.rae.ac.uk> [20.08.07]

RED Digital Cinema <http://www.red.com> [20.08.07]

SCREENWORK Website [http://www.bris.ac.uk/drama/staff\\_research/screenwork](http://www.bris.ac.uk/drama/staff_research/screenwork) [20.08.07]

UK FILM COUNCIL Digital Screen Network  
<http://www.ukfilmcouncil.org.uk/cinemagoing/distributionandexhibition/dsn> [20.08.07]

WIKIPEDIA Entry on Digital Cinematography  
[http://en.wikipedia.org/wiki/Digital\\_cinematography](http://en.wikipedia.org/wiki/Digital_cinematography) [20.08.07]

WIKIPEDIA Entry on Practice Research [http://en.wikipedia.org/wiki/Practice\\_research](http://en.wikipedia.org/wiki/Practice_research) [20.08.07]

WIKIPEDIA Entry on Screen Media Practice Research  
[http://en.wikipedia.org/wiki/Screen\\_media\\_practice\\_research](http://en.wikipedia.org/wiki/Screen_media_practice_research) [20.08.07]

### **Filmography:**

*Decasia* (Bill Morrison, 2004)

*Kodak* (Tacita Dean, 2006)

*Man With a Movie Camera* (Dziga Vertov, 1929)

*Willy Wonka and the Chocolate Factory* (Mel Stuart, 1971)

*The Wizard of Oz* (Victor Fleming, 1939)