

The Manipulated Image

Keith Griffiths - 2006

Five or so years ago one was likely to be branded a deeply suspicious bar-room bore, to be avoided at all costs, if one so much as mentioned the word 'digital'. Pedants remained convinced that 'cinema' was that island of luminous reality uniquely created by the purr of celluloid film projected in one of the multi-screen sheds that litter the perimeter of our provincial towns. Nowadays comment on the state and future of 'digital cinema' appears like clockwork across a wide range of the critical and trade press. Digital pollution swirls through the sky; it is impossible to ignore. 'Digital' has arrived.

But arrived from where, and, having arrived, where is it headed? What can it do? And what are the likely ramifications of this on a continuously evolving new wave of cinema practitioners and producers?

Basically what it can do is simple. It provides almost infinite scope for manipulating the cinematic image. It can provide a new range of special effects to incorporate into otherwise conventional narratives and it can produce new images for new types of narrative and for non- or partly narrative films. It can also be used not for manipulating images but for capturing them in difficult conditions. And it can be used for a combination of any of the above. In what follows I shall cite examples of all these actual or potential uses.

Back in 1995, the optimistic techno-pioneering director James Cameron said, 'We're on the threshold of a moment in cinematic history that is unparalleled. Anything you imagine can be done. If you can draw it, if you can describe it, we can do it' (*Wired*, December 1995). And later, 'Anything is possible right now if you throw enough money at it, or enough time. We have the right tools, or we can combine tools, to do anything. But that doesn't mean it's easy, that it's straightforward, that it's intuitive, or that it's cost-effective' (*Wired*, May 1996).

To achieve any cinema of ambition and imagination, whether on the mega-budget Hollywood scale that Cameron stands for or the low-/no-budget 'indie' variety, requires a new kind of 'talent'. Traditionally, in Hollywood the word talent was normally reserved for actors, the bulwarks of the storytelling heart of movies. The digital artisan talents, the cool dudes who are going to be the backbone of the cinema of the future, will inevitably emerge as strange mutants. As Scott Ross, chief Executive of the special-effects house Digital Domain, told the *Hollywood Reporter*, 'The kind of artistic digital specialists the technology requires don't really exist yet.'

We are basically asking a lot of people to learn Esperanto and write poetry at the same time' (*Wired*, December 1995).

Meanwhile, much of the recent debate about digital cinema has been sparked, not by the startling digital Special Effects of recent blockbusters, but rather by the distinct range of ultra low budget movies shot on digital (DV) video. *The Last Broadcast* (1998), *The Blair Witch Project* (1999) and of course the first fruits from Lars von Trier's provocative Dogme95 project – in particular *The Idiots* and *Festen* ('The Celebration'), both of which were launched at Cannes in 1998. The razzmatazz surrounding these very modestly budgeted and firmly conventional realist films now dominates debate about digital cinema and consequently associates it firmly with a no-budget-garage-band school of apparently more truthful film-making.

But the euphoria surrounding this low cost digital production of films has somewhat submerged the short but remarkable history of technological dreams and achievements of the intrepid big-budget eggheads. One should not forget that it was Hollywood that shouldered much of the costly burden of research and development in the new technologies. Also, it was they who could afford to pioneer and embrace computer and digital experiments on a larger scale, from the technological and aesthetic challenges of Francis Ford Coppola's electronically produced and painted *One From the Heart* (1982) through to Paul Verhoeven's *Hollow Man* (2000), of which Alexander Walker in his regular column in the London *Evening Standard* in September 2000 surprisingly wrote, 'a film whose bleeding-edge technology is up there with such landmarks of art and science as *2001: A Space Odyssey*.'

To look back at some of those highlights is still revealing and breathtaking. Barry Levinson's *Young Sherlock Holmes* (1985) was the first film to feature a computer-generated character in the form of a stained-glass knight; in *Star Trek IV* (1986) the heads of the principal cast were scanned to create a time-travel effect. Three-dimensional computer-generated imagery made its debut in James Cameron's *The Abyss* (1989), and he then carried forward his experiments in morphing to create the first human-based computer character in *Terminator 2* (1992). In *Death Becomes Her* (1992) Robert Zemeckis digitally cosmeticised both Meryl Streep and Goldie Hawn, while in Spielberg's *Jurassic Park* (1993), with its realistic marauding prehistoric animals, audiences were reportedly driven to edge of their seats. *Forrest Gump* (1994), *The Mask* (1994), *Casper* (1995), and *Species* (1995), were all landmark, mega-budget films from the front line of a digital cinema movement, which was to lead to *Toy Story* (1995), the first 100 per cent computer generated animation motion picture. Since then the technological process has accelerated phenomenally and *Titanic* (1997) *Antz* (1998) *A Bug's Life* (1998) *The*

Phantom Menace (1999), *The Matrix* (1999) and *Gladiators* (2000), all 'pushed the digital envelope' further than most people could have dreamt was possible a decade earlier.

In 1996 James Cameron prophesised that 'it would be five years at the earliest and ten years at the latest, before most movies are scanned end to end after filming' (*Wired*, May 1996) In essence, what he was predicting was a revolution in the very nature and the value of the film frame. He could foresee that each and every frame would soon be manipulated and transformed digitally and that, from thence forth, film footage captured through the lens was clearly to be demoted to raw data.

George Lucas foresaw the other central debate in digital movie-production, when he declared that it would 'eventually create a more democratic filmmaking environment. Anyone will be able to create movies. Pretty soon you'll be doing it on your PC' (in Thomas A. Ohanian and Michael E. Phillips, *Digital Filmmaking: The Changing Art and Craft of Making Motion Pictures*, 1996) Indeed now, seven years later, film-making has never been more accessible and affordable. Many new digital feature films at the micro independent end of the market are actually being made for a few thousand pounds. The theory behind this democratisation is that film-makers can make films more often, keep practising their craft and take more creative risks. But as Rod Stoneman, Chief Executive of the Irish Film Board, writes, 'Before we get carried away with our own optimism we should put this development in context. Cultural production always involves that ineffable, but important component – talent, brilliance, creativity. There has been a widespread cheap availability of the biro for a long time. But there are not a large number of great new novels published each year' ('Recycled electrons: film and the digital future', *Kinema*, Fall 2001). And, this is the rub, are film-makers taking more cinematic and aesthetic risks and do we want or need more movies anyway?

The practical issues of production economics and access have tended to dominate the majority of public debates to date. The charismatic American low budget indie promoter John Pierson (Spike Lee and Kevin Smith were just two of his remarkable success stories) admits that the new digital image-making gizmos are inspiring a phenomenally wide range of people to make movies, but he remains cautious about the long-term benefits. He recognises what many forget, that it is 'very hard to make a good feature film. But maybe putting the possibility in the hands of more people is a net gain' (quoted in David Chute, 'The Auteur as Gearhead' *LA Weekly*, June 2000)

Res magazine (a DV quarterly devoted to 'The Future of Filmmaking') boldly predicts that there will be 'a shift in power, one that turns in the favour of independent filmmakers and away from the studios'. This view is supported by the born-again Lenny Lipton of the digital age, Peter Broderick. As President of Next Wave Films, started in 1997, he provides support to new filmmakers making ultra-low budget English-language features around the world and tries to convert all who fall into his path to the 'value' of the Digital Revolution. 'The digital word has spread rapidly among filmmakers. When people ask me how much they need to make a feature, I ask them how much they have because that will probably be enough ('The Auteur as Gearhead', 2000)

Rarely, however, do Broderick or his evangelists publicly address the question of the aesthetic potential that is dramatically being opened up by the advances in the technology. Indeed, the aesthetic ambitions would appear to be fundamentally reined in by relying on the conventions of mainstream narrative storytelling that dominates both the Hollywood system and the majority of low budget feature films produced and distributed commercially. Next Wave Films stress that the keys to success after 'dedication' are 'a strong, unique script that grows out of a filmmaker's personal experience and passion ... whatever you do, resist high concepts.' This manual for production success is inevitably extremely attractive and tempting to the film-makers who primarily want a cut-price short cut into the 'commercial industry'. (Peter Broderick. 'DIY=DVC', *Sight & Sound*, March 1999)

It is equally appealing to public funding bodies, who increasingly need to justify their activities with instant success and a recognisably palatable if unchallenging product. To take risks, or to attempt failure, in order to see, is not the vocabulary of the Next Wave Digital Manual, and is probably too high a concept anyway. It is certainly some distance from Jean-Luc Godard's dictum 'to see not this or that, but only to see if there is something to see' (*Revue Belge du Cinéma*, no. 20/23, 1989.) The independent sector, targeted by Next Wave Films, could once be clearly defined as a nerve centre for *process*, a think-tank for the stimulation of ideas, where filmmakers often had the courage to bite the hand of those who fed them because, sooner rather than later, their creative content would perversely (re-)fuel the commercial system. This quality of subversion has now increasingly been (re-)decorated by a new cool vogueish movement, which is in equal measure conservative and economically austere. The success of the revivalist Next Wave road-show meetings across the globe is thus explained by the dictum: the revolution is nigh but don't panic; it's neither threatening nor challenging.

One of the pivotal issues for the new digital cinema is highlighted by the respected American independent producer, scriptwriter and academic James Shamus. In a reprinted Round Table discussion 'Independence in the Cinema' (*October* no. 91, Winter 2000) Shamus condemns his academic colleagues for 'embedding the understanding of cinema in primarily a visual arts context' and for a 'lack of interest in the power of narrative'.

Like Peter Broderick, Shamus clearly nails his colours and his increasingly successful Hollywood career to a conventional cinematic mast. He chooses blatantly to ignore the reverse side of the coin and to recognise that the digital signposts point *back to the future* and the inspirational and painterly hand-crafted origins of early cinema. Jean- Luc Godard's point in his video essay *Scénario du film Passion* (1982) was that in early cinema they started by just filming and that 'scripts' came later, with the invention of production companies, as a way of breaking down and itemising costs.

It is of course not surprising that the majority of critics, film-makers and audiences still equate the cinema with conventional storytelling and the term 'digital' as some form of new and possibly interactive way of exploring narrative, or an engagement with the characters and their plot lines. However, the critic and image maker, Lev Manovitch usefully reminds us that 'narrative' explores only one aspect of cinema and one which is neither unique nor that essential to it: 'the challenge which digital media poses to cinema extends far beyond the issue of narrative. Digital media redefines the very identity of cinema' ('What is Digital Filmmaking?' <http://jupiter.ucsd.edu/~manovich/text/digital-cinema.html>). Manovitch proposes that the lens-based recording of reality, which has been the perimeter fence of cinema, is challenged irrevocably by a digital world, because the computer, operated by a skilled artisan, can create similar and totally credible photo realistic images and scenes which have never actually been filmed.

Here one is inevitably drawn back to the development of the optical tools and 'toys' which predominately define our recognition of the pre-cinema period. There were those famous optical toys', including the Thaumatrope, the Praxinoscope and the Zoetrope, which all utilised the manual manipulation of images, or frames, often hand-painted and hand-animated. In particular, the magic lantern shows, with their hand-painted frames, became increasingly complex, with presentations using overlapping and multi-plane images projecting apparent motion. Engineers, optical experts, projectionists and performers also collaborated to create the phantasmagoric illusions and performances (an aesthetic of the supernatural) for the visual entertainment of the middle classes.

These parlour room and entertainment hall projections helped create the public appetite for the range of entertainment genres that would soon encompass most of the cinema and television of the future: travelogues, natural history, the everyday affairs of the military and royalty, fairy tales and melodramas. This rich and complex period of pre-cinema history is of course but one example of the metamorphosis of a very everyday literary culture into one that will become increasingly visually informed. And, the start of an era when once more art, science and technology become increasingly and refreshingly interlinked.

As this history of mechanically generated images and products evolved, it gradually progressed into what we now define and recognise as 'cinema', being a place where a typically itinerant form of entertainment began to be organised outside the walls of the home, and commercially developed for a wider public. At the same time, the value, recognition and importance of these hand manipulated and painted images became increasingly marginalised and metamorphosed into one of the most despised genres of cinema; animation. So, on the one hand, there was a graphic, non-photographic, and often self-consciously constructed discursive and discontinuous form. On the other, was an ever and increasingly stable technology, with a dominant storytelling narrative form, where the production process itself was increasingly eliminated from sight, and where reality was recorded or 'captured' by a lens onto film. The magic theatre was transformed into the dark cave of flickering fleeting images, where audiences pinned to their seats peered at the reality of their everyday lives and experiences. All so-called special effects, whether mechanical or optical, employed in this (re-)production process were now used towards the creation of a completely recognisable 'reality'.

But with the radical development of computing technologies over the past two decades, the perimeter fence has dissolved quite dramatically. The animated image, which had come to be viewed as only a marginal format, and the Cinderella of cinema for almost a century, has now once again become central to the cinematic production process. The big-budget bruiser Jean-Jacques Annaud acknowledged this when he wrote in *Sight and Sound* in 1996, 'Today many people grow up in front of electronic screens rather than library shelves, better acquainted with the iconography of electronic games than the poetry of Baudelaire. The talent of new auteurs will therefore rely less on dialogue. After all, the cinema was built around an animated picture. It has once more the option of becoming an animated painting.'

Logic suggests that we might now therefore be reaching a full circle in the history of a cinema, which was born with the hand-manipulated animated image and now has the potential of returning to that point. Digital film-makers with the training and sensibility of conventional animators can and probably will soon modify every frame of a film by hand, the raw footage being only the first process in a continuous graphic animation process of rearranging and painting 'a filmed reality'. James Cameron's 1996 spectacle of ninety minutes or 129,600 hand-manipulated images is now upon us. And, as Annaud predicted, 'the pendulum of power will swing to directors, who will be able to work not only on the set with human material, but before and after shooting, with all the tools for creating dreams at their fingertips. New technologies will do more for cinema auteurs than the cinephile militants of the 50s ever did' (*Sight and Sound*, * 1996)

Cameron explains that in the early days of both electronic and digital cinema, whilst there was of course always active research, 'it was being done in rarefied environments, at universities and the R&D labs of big software companies. It hadn't reached the artists yet, per se. It hadn't pollinated into the film industry which had both the art and money to make it a broad cultural phenomenon' (*Wired*, May 1996). But, crucially, as this cross pollination has spread, costs have lowered, economic software has become more widespread, and increasingly a wide range of traditional motion picture techniques have been replaced by digital technologies, many of them just bought off the supermarket shelves. So, whilst nearly everything one needs is now readily available, 'what you can't replace is the trained eye, and the heart of the artist. As much as computers have democratised information and computing, software still can't take the place of the artist's mind. You need people who not only have the soul of artists but are trained as artists not as technicians' (*Wired*, May 1996) Once this newly defined 'talent' base is in place, the logic of the lens-based motion picture production process itself could be turned upside down for good.

With this 'talent', increasingly more live-action images will be displaced or made redundant by the ability to create spaces, places and people directly within the computer. As the computer does not distinguish between how an image is created, filmed live-action footage is merely reduced to raw data. It becomes no different from the graphic images created within the computer itself. Thus, live-action footage is now inevitably only the first phase of a production process, during which all images can be digitised, then composited, animated, colourised and morphed to create a new and largely imagined 'digital realism'. What were once defined as 'post' or 'end' processes have been fundamentally shifted to the very heart of the production of motion picture images. The conceptual structure of production has collapsed and the ordering of images, their surface and manipulation have become part and parcel of the same digital jigsaw. The painter-filmmaker that Annaud whimsically spoke of has escaped his chains and is loose and well in the asylum.

The aesthetic opportunities that this digital revolution offers the painter-filmmakers and their coveted blank screens are now almost limitless. It is therefore somewhat surprising that in neither the fields of low- and no-budget fiction nor documentary has this challenge been significantly and radically seized. Unsurprisingly, most of the trailblazing work has been led by film and video artists – for example Iris Batsry (*Passage to Utopia*, 1985-93) and David Larcher (*E Etc*, 1969-87; *Videovoid Trailer*, *Videovoid Text*, & *Ich Tank* (1983-98), both of whom are now working consistently with digital tools. These works are exemplary and monumental visual poetic meditations that defy any traditional definitions or genre.

The video artist Lynn Hershman attempted and only half succeeded with a crossover into low budget digital narrative, with her production *Conceiving Ada* (1997), starring Tilda Swinton as the famous computer pioneer and daughter of Lord Byron, Ada Lovelace. It is probably only the much abused and frequently critically rejected filmmaking path taken by the individualistic Peter Greenaway that offers any serious trajectory for digitally smearing and scratching away at the fiction frame's canvas. From the start of his career the fugitive Greenaway has developed a multi-image aesthetic, bathed his films in rich rippling layers and collaged the screen space with painted images and text. It is with some regret that Greenaway's directory of cinema-action is not one which many filmmakers have been stimulated to follow, though his modest avant-garde research and development programme has been consistently and successfully recuperated by the advertising industry in a multitude of forms.

More recently, some directors, notably Nicola Bruce in *I Could Read the Sky* (1999), have managed to subtly weave DV footage into the body of a film, in an almost notebook style, to heighten the warmth, subjectivity and intimacy of the narrative. Whilst Harmony Korine's *Julien Donkey Boy* (1999) offered a unique but also incoherent visual cacophony from collaging eighty-six hours of footage from the use of thirty different types of DV camera. Also, the directors of *Pi* (1998) and *Run Lola Run* (1998) seized upon the use of digital post-production technology to create a fast and frantic 'Avid aesthetic' that co-opts the old suits of the avant-garde merely to tailor more designer-wear mainstream narratives.

But it has been both surveillance imaging and internet technology that has possibly been the most prominent aesthetic influence to date, used most effectively in *Timecode* (2000), directed by Mike Figgis. He has increasingly experimented with DV camera technology as part of a process of provoking both the Hollywood studios and the audience about where this digital revolution might all lead. 'It is beyond the imagination what digital tools are doing to film-making,' he enthused at a recent Guardian lecture he gave at the National Film Theatre.

Timecode comprises four separate narrative takes, each filmed continuously and simultaneously. Mounted on one screen split into quarters, the film involves twenty main players, who improvise dialogue and whose stories – and screen space – interweave and overlap. Natural sound, music and dialogue are edited and mixed in such a way to guide the viewer smoothly through multiple narratives. Figgis intends to produce DVD versions of the film that allow the viewer to sound-mix their own movie. 'The potential for greater interactivity, for multiple outcomes, is enormous,' explained Figgis, who has also done live sound-mixes of the film at the Edinburgh and Rotterdam film festivals in 2000 and 2001. 'I wanted to demonstrate the possibilities of how you could watch this film twenty times over and never experience the same thing.' It is indeed at this level of playful storytelling and narrative order that the film is most interesting. 'It is all about telling interesting stories – but with the new ability to tell more than one story at the same time, and in new ways.' Yet, in terms of altering the actual surface or the palette of the film, *Timecode* remains strictly conventional.

Writer-filmmaker Chris Petit's 1993 short film *Surveillance*, on the other hand, whilst using a similar but more random split screen form, also starts to engage with the potential pleasures of a degraded picture surface and takes issue with 'storytelling' and 'narrative' in itself. In an almost Ballardian reverie Petit wrote: "I wondered if these surveillance images reminded me of experimental films. I also wondered if these automatic recordings weren't at the heart of a new avant-garde. They hark back to the first films ever made, to the simplicity of a cinema before stories, before production schedules, before the organisation of material, and without a narrative so that the viewer is freed to speculate on those daily details that later become the background to stories. These first films and this latest technology record what is there; people, weather, streets. They are primarily topographical and silent too. They also share the same lack of technical definition. In an age of high resolution, these smeared, dreamlike images have the comfort of a vague memory." (*Film Comment* : March-April 2001)

The most widely discussed digital feature films remain those made by the Dogme Trinity. In reality, these are clearly quite modest extensions of the films of the French New Wave and the North American documentary Direct Cinema movements of the 1950s and 60s. There are in fact a number of films from different parts of the world - France, Britain, Russia, Iran – which make far more interesting use of the potential of digital film-making. I shall start with two recent films by French film-makers. Agnès Varda with her moving and entertaining 'wandering-road-documentary' *The Gleaners and I* (*Les Glaneurs et la Glaneuse*, 2000), and Alain Cavalier, with *VIES* (2000) have both turned to the easy to use, accessible mass-market digital cameras as their technology of choice.

As a result they have produced a body of first-person authored documentary films that are more distinctive, moving and profound than most of the over publicised Dogme films to date.

The Gleaners and I isn't about its director, as its English title might suggest, but Varda does let her presence weave through the film. The subject is actually about the 'foragers, rummagers and scavengers who, by necessity, purely through chance or out of choice, pick up leftover items discarded by others' (Varda speaking at the NYC International Film Festival, 2000). She has said 'that film-making is itself a kind of gleaning' and most of the film-makers who have followed this path have discovered that these small domestic digital cameras can be used as both a very sophisticated vacuum cleaner and as a filmic pen. Consequently, the exceptionally subjective essay film emerges as one of the most suitable forms for the use of this digital technology.

Cavalier was born in 1931, and worked initially as an assistant to Louis Malle, before starting to direct his own films set in the painful reality of the Algerian war. From the mid-1970s he evolved a way of working with little-known actors and a pared down style of mise-en-scène. His most well known film in England, *Thérèse* (1986), was a rigorous and simple chamber piece. Throughout this body of work, Cavalier could be seen as a film-maker of gesture and faces and pursued this fascination within the form of his recent subjective documentaries. *La Rencontre* screened at Locarno in 1996 and was exhibited at a single cinema in Paris for a year. He shot it himself on Hi-8 Video as a kind of intimate diary of everyday exchanges between his partner and himself. The edited images are like a series of miniature intimist paintings, which would have been impossible to capture with the bulk and noise of conventional film cameras.

His latest film *VIES* (2000) is a series of portraits, shot with a digital camera, about which he says, 'I shoot by myself, recording both picture and sound. It makes it easier with the person I'm shooting to move from life to film, and for there to be no observers present. We don't seem to diminish one another, when it might well be the opposite. There's only an affinity, which draws us together. If I get on well with someone, if I'm drawn to what they do, I've an annoying tendency to want to film them.' *

In a second interview with *Le Monde*,* Cavalier explained his method as follows:

The picture to sound relationship is completely different with DV, you're alone, immersed in both image and sound which this time are part of the same apparatus. That changes the whole relationship with what you're filming. Before when I was handling a camera, I learned how to be a camera. Shooting with digital video transforms all relationships in the space in which you're filming. I've been a filmmaker working in kid gloves, I have become an instrumentalist who after practising his scales, then actually performs himself. The smaller the camera, the more simplified becomes the relationship between the one whose in front of the camera and the one whose behind it. That whole century, during which actors were bombarded by Big Berthas, it's all gone. There's been a directorial terrorism, based on a mixture of fear and fascination, which can now be escaped.

VIES is, on the one hand, a speculation on the nature of cinema itself, opening with a filmed sketch of a sixty-year-old eye-surgeon, on his last day in the operating theatre before retiring busily restoring sight. The film closes with Cavalier's mobile subjective camera exploring the beautiful but decrepit ruins of the country house that belonged to Orson Welles. Thus we are left with an archaeological site of cinematic fantasy and imagination. Yet, on the other hand *VIES* is just a series of beautifully created, tender and intimate portrait films that are a perfect example of technology being used as a simple tool to assist a filmmaker in the recording of their everyday perceived reality. Both *The Gleaners* and *VIES* reinforce Rossellini's dictum 'things are there; why manipulate them?'

However, for Jean-Luc Godard, the technology of production and the aesthetic of the image have to be created hand in hand. He was driven to ensure that his cinematic production tools were, like suits, 'instruments built to measure', whilst simultaneously pursuing the potential of transforming and manipulating the image. To this end, whilst making *Numéro Deux* in 1976, Godard developed a video laboratory in which to produce his radically manipulated images and texts, and then in 1978 he worked with Francis Reusser of Aaton Cameras to develop a hand-held silent and unobtrusive 16 mm and 35 mm camera technology. In *Scénario du film Passion* (1982), Godard can be seen reaching up to make contact with a giant white video screen (his blank page or canvas) like a sorcerer summoning up the invisible, so that he can both 'see' (*voir*) and 're-see-ve' (*recevoir*). For Godard, there is no such thing as 'simple images ... the whole world is too much for one image. You need several of them, a chain of images,' and they will almost inevitably be multiple, dissolved, as well as being disconnected and layered.

Since making *Surveillance*, Chris Petit's work has evolved in a similar direction, abandoning the conventional film documentary and narrative feature film for the subjective essay form whilst also embracing the influence of both Godard and Chris Marker, by digitally distorting the surface image. Petit has written: 'Chris Marker's film essays struck me as increasingly important, for their method, form and solitary endeavour, and above all for the way they were alert to the time in which they were made. To paraphrase David Thomson's entry, Marker was part cosmonaut, part essayist: '... in the ground gone over and the distances involved, his travels anticipated the more flexible and solitary possibilities of the digital revolution' (*Film Comment*, March-April 2001).*

Petit's subsequent work produced in collaboration with psycho-geographer, poet, essayist and novelist Iain Sinclair, is an almost random experimentation with the memory of culture using and abusing the new digital technology in the process. In these works the photographic and digital images of the films have, once digitised, been manipulated individually, almost as though each and every frame was an abstract expressionist painting. This process reflects the beauty of Godard's remark in *Comment ça va* (1978), 'to proceed from an image, only one, like an atom, to see how it moves and how it all holds together'. Graphic novelist and digital artist Dave McKean has significantly collaborated in this process and Petit's creative team have significantly transformed the surface of the images and have created a filmed world that resembles one we know might have been filmed, but now bears no reality to it at all. The computer, the very symbol of automation, has in fact been liberated within the film-making process.

The very early days of the cinema of the magic lantern, and the Zoetrope, where once a modest number of frames were hand-painted, is long past and now thousands of images can be manually altered. Both Petit's *The Falconer* (1998) and *Asylum* (2000), are essentially experiments which lean backwards to the notion of very early cinema. In a sense these projects appear designed less as films than as pure explorations of form. Both are visually cluttered, layered, scribbled-over, and multi-textured. Shot like home movies, without scripts, they have an elaborate painterly surface where frames are in both collision and fusion, the result of constantly re-filming and manipulating the image during the edit process. They are clearly marked by a process of tentative discovery and distinguished by the marks of trial and error. Petit has said that he 'was interested in seeing if there was a way of producing a film which was constructed more like writing – because when you are writing something you don't necessarily know where it is going to end up. ... *The Falconer* for example never really aspired to be a film, more to a state of mutation or hybrid. It was an essay or a graphic novel as much as it was a film, an exercise in vertical layering rather than linear unfolding, a catalogue of mistakes and oppositions.'

Alexandre Astruc's classic 1948 essay, 'The birth of a new avant-garde: la caméra-stylo' opens by quoting Orson Welles, 'What interests me in the cinema is abstraction'. Astruc continues by stating:

The cinema is quite simply becoming a means of expression, just as all the other arts have been before it, and in particular painting and the novel. After having been successively a fairground attraction, an amusement analogous to boulevard theatre or a means of preserving the images of an era, it is gradually becoming a language. By language, I mean a form in which and by which an artist can express his thoughts, however abstract they may be, or translate his obsessions exactly as he does in the contemporary essay or novel.ⁱ

What gave cinema part of its value – a confident, assured and unchallenged recording of reality, and one that was extremely difficult to modify and manipulate - has now been fundamentally changed by the new digital technology. Film, of course, still retains a magical, even alchemical property, and the film frame itself has a luminosity that video doesn't and probably never will possess. Nevertheless, the new ways that digital technology offers the potential of manipulating the image poses exciting and radical challenges for the future of cinema and ones that open up exciting opportunities to extend Astruc's concepts of abstraction, subjectivity and complexity.

For seven or eight years the masterful Abbas Kiarostami has indeed been using video cameras, as most people use a pen, to take visual notes and to 'sketch' his ideas. He has now found that working with digital video has opened up a realm of new possibilities that suit his style and methods of working. The deceptively artless *A.B.C Africa* (2001) was a film that gave the first clues that Kiarostami was using the digital format as a bold step in redefining his work. Then, *TEN* (2002) presented an even more radical and minimalist film, with two digital video cameras fixed to the dashboard of a car – one trained on the driver, a middle-class Tehran woman, the other framing the passenger seat, which a range of passengers occupy in turn. Kiarostami offers us ten scenes, episodes or conversations and we never leave the car. Only one shot reveals the world as anything more than a passing blur and the emotional effect of the flow time is both compelling and challenging. The director has said that with his films he wants to rupture what he doesn't like about cinema 'which is the attempt to create the illusion of reality'. He has hinted that the freedom that digital video has given him means that he is now uncertain if he will ever return to working with 35 mm film again.

The eclectic director Michael Winterbottom has been clearly influenced by Kiarostami in the making of his tragic road-movie *In This World* (2002) but he uses the digital camera pen 'as a way of showing a reality'. It is a film that redefines the notion of the writing of a film, with Winterbottom, the 'scriptwriter' Tony Grisoni and the cinematographer Marcel Ziskind working together to create a sense of spontaneity and urgency that could never have been achieved using more conventional production methods. Winterbottom has said that 'DV technology has progressed so that you can genuinely record a journey rather than have to reconstruct little bits. We'd basically turn the camera on in the morning and switch it off at night, and we'd accumulate hundreds of hours of material. So we took this epic journey and shot a continuous record.' Whilst Zyskind shot with available light, the manipulated digital images are strikingly luminous, with the night shots in particular taking on an almost abstract quality. Whilst the use of digital video might have been primarily an economic and pragmatic solution to the filming of this migrant odyssey, the resulting aesthetic significantly adds to the film's tension and the intentional blurring of what is fictional and what is real.

But Alexander Sokurov's *Russian Ark* (2002) stands apart as the most radical recent digital production – a visually hypnotising and cinematic tour de force. The film is a spellbinding ode to St Petersburg's State Hermitage Museum where we don't just pass through history so much as become enveloped in it. Sokurov's is quoted as saying that he made the film because he was 'sick and tired of editing – let's not be afraid of time.'

Shot in one fluid take using a High Definition camera, the making of the film presents an extraordinary list of 'firsts' – the first unedited single-screen, single-take full-length feature film, the longest steadicam sequence and the first uncompressed High Definition movie recorded onto a portable hard disc rather than onto film or tape. Cinematographer Tilman Buttner had to walk, with his specially created portable camera rig, 4,625 feet through 45 rooms, all of which had to be lit in one go to allow for the 360 degree camera movements. This feat was accomplished in an environment containing some of the greatest art treasures in the world, in a single shooting day with only four hours of existing light. He had to navigate his camera through 867 actors, hundreds of extras and three orchestras guided by 22 assistant directors. Whilst the film could probably not have been made without months of preparation and the stamina and inventiveness of Tilman Buttner (who also filmed the running sequences of *Run Lola Run*), the achievements of Berlin's post-production house, Kopffilm, in creating a significantly digitally manipulated film, has gone relatively unnoticed.

Effects such as digital zooms had to be applied to hide lamps and other objects that slipped into frame unintentionally and the speed of many shots had to be adjusted. Snow had to be created digitally to enhance the St Petersburg winter and the end shot over the River Niva was transformed into an ocean covered with rising fog clouds. Also, because the film was a single take with a single lighting set up, it had to be 're-lit' in post-production, so that rooms could be digitally darkened or lifted to reflect the painterly mood that Sokurov was seeking for each different space. It took more than six weeks of work to grade the colouring of *Russian Ark* and in total the film had more than 30,000 digital events compared to an average of 4000 on many feature films. Because the camera was continuously floating and moving without any edits, all this work had to be achieved to be invisible to the eye. In effect the images had to be manipulated frame by frame, like an animated film. *Russian Ark* is a masterpiece because despite its extraordinary technological marvels, the technology never overwhelms Sokurov's artistry and vision in creating a film where the principal elements of cinema (sound, image and time) are perfectly balanced.

Inevitably Cameron, Annaud and the other Hollywood techno-wizards will continue to research, refine and define the making of a highly polished and *invisibly* digitally produced entertainment cinema for the mass market, and the *Lord of the Rings* trilogy in particular has set a new level of sophistication for others to beat. But, it will still be left to the nomadic and itinerant artists to forage away at the digital perimeter fence.. Hopefully some of this radical thinking will literally rub off on both the low no-budget fiction film, and the authored documentary essay. It is to be hoped that a *Digital Cinema* of the future can provide at least one terminal where the filmmakers feel confident and liberated enough to reject the often paralysing yoke of mainstream narrative and storytelling. Where, escaping the drizzle of the everyday they will re-align themselves more closely with the realm of the "animated painted image", which is where cinema came in a hundred years ago. This will certainly only happen within a very small bandit community, with a marginal and small audience for the work. But, it might hopefully achieve a range of more stimulating and radically digitally manipulated fictive films, that refreshingly could at least be closer to what Petit recalls about the writings of Céline – 'hallucinations of reality'.

ⁱ Originally in *L'Ecran français* 144, 1948. English translation in Peter Graham ed. *The New Wave*, *