

Do We Need Film?

David Walsh

Open Forum

It is generally accepted that film as a medium is on the point of disappearing entirely from film production, and there is much anguished discussion in archives as to whether, in a world without film, it will still be possible to continue our role of preserving and showing archive films. Seeing a film on a large screen in a darkened theatre is undoubtedly part of the essential character of the cinema experience, but is an awareness of what mechanism is used to produce the image on the screen important?



Patricia de Filippi, Paul Read, Alfonso del Amo, Patrick Loughney and Noël Desmet addressing the audience of the FIAF Symposium in São Paulo.

Et si nous étions les seuls à nous préoccuper du support sur lequel le film nous est projeté ? Et si nous étions les seuls à pouvoir le savoir ? Et si nous étions les seuls à penser voir la différence entre une projection sur film et une projection numérique ???

Voici quelques unes des questions que le texte polémique de David Walsh se propose d'examiner. Et pour nous provoquer davantage il imagine qu'au symposium de Londres en l'an 2000, The Last Nitrate Picture Show, les participants n'ont vu que des copies *safety* suite à une interdiction des pompiers londoniens de projeter des copies sur support nitrate sous

Imagine the following: the FIAF 2000 Congress in London featured the Last Nitrate Picture Show, a chance (perhaps a last chance) for a large audience to enjoy films projected as actual nitrate prints. Shortly before the event, the local fire officer ruled that projecting nitrate film in the National Film Theatre, crammed as it is beneath a busy road bridge and adjacent to a major cultural centre, was not permissible. Not wishing to disappoint congress delegates, the organisers decided to substitute hastily sourced safety prints, and,

with the projectionists sworn to secrecy, the event went ahead without mishap. No one noticed.

The above, obviously, is a fantasy. FIAF Congress organisers are assumed to be people of integrity, and we have every reason to believe that original nitrate prints were indeed projected. Nonetheless, for the audience in the theatre, the *frisson* of interest at seeing real nitrate prints was provided entirely by the *assumption* that nitrate was being screened (and perhaps by the possibility of a conflagration in the projection room), and not from any perceptible difference between old and new copies. (Admittedly, modern prints can very often be inferior due to the loss or ageing of the original printing masters, but this is by no means always the case.)

Now skip forward to the 2006 FIAF Congress in São Paulo. A major element of the Symposium was a chance to compare film projection with state-of-the-art digital projection. On this occasion the comparison was, alas, hampered by the fact that the film projection at the commercial cinema used for the Symposium was, by some margin, less than perfect. But with due allowance made for the soft focus and poor illumination of the film projection, the overall – and somewhat shocking – message came through crystal clear: digital projection of film scanned at high-resolution easily matches the quality of film projection, despite the

le Waterloo Bridge... Et personne, d'imaginer l'auteur, ne s'est aperçu de quoi que ce soit. Ce faisant, l'auteur laisse supposer que le frisson ressenti par les spectateurs de ces séances aurait été essentiellement produit par la conviction qu'ils voyaient des copies nitrate d'origine, et non par la différence qu'ils croyaient percevoir entre ces copies et des tirages récents.

Six ans plus tard, en avril dernier à São Paulo, on propose cette fois aux congressistes de la FIAF de comparer des projections sur film (dans des conditions loin d'être idéales, l'auteur en convient) à des projections numériques avec des équipements sophistiqués. Or les développements récents dans les systèmes de projection numérique font que même un public exigeant a du mal à distinguer les deux types de projection, à moins qu'on l'en prévienne – mais est-ce désormais bien nécessaire de le faire ? Pour les participants du symposium de São Paulo, il semble que la réponse soit *oui* et que cela a une importance certaine.

Traditionnellement on a plutôt essayé de cacher l'élément projection (la cabine, ses équipements, son bruit) du spectacle cinématographique; pourquoi serait-ce différent avec la projection numérique ? Peut-être craignons-nous d'être les victimes d'une supercherie... Comme le visiteur d'un musée qui découvre que certains tableaux sont des reproductions! Serions-nous en marche vers une *disneylandisation* de la culture ou tout est en train d'être remplacé par des moulages reproduisant les originaux ? Mais est-ce vraiment le cas ? Jusqu'à quel point pouvons-nous dire d'un film que c'est un *original* ?

Selon l'auteur, le vrai terrain du débat, celui où il y a place pour la contestation, c'est dans la capacité de recréer l'apparence originelle des images. La projection à Sao Paulo d'une version numérisée du *Magicien d'Oz*, réalisée à partir des trois bandes noir et blanc du Technicolor d'origine, en constitue une sorte d'exemple limite : c'était précis, avec un grain minimal et des couleurs éclatantes – comme si le film venait d'être tourné avec les équipements les plus récents. Et ça n'avait rien à voir avec un *original* Technicolor qui, lui, aurait

digital material being played out on this occasion from HDCAM, by no means the best of the current HD formats.

This may seem slightly puzzling, since the numbers tell us that HD video does not quite match the resolution and depth of film, but the truth is that technology has now reached a point where, in the right circumstances, even a sophisticated audience has difficulty in distinguishing between matched digital and film presentations – as is routinely demonstrated at the Digital Test Bed at the National Film Theatre in London: typically the audience needs to be told "You will see this footage first on film, and then projected digitally." And, if we need to be told, does it matter?

Clearly, judging by comments made in São Paulo, it does. But what *exactly* is it that matters? If the images on the screen appear the same, then what must matter is, as with the Last Nitrate Picture Show, our presumptions about the source of the images. Why should this be important? After all, an awareness of the machinery clattering away behind us has never been part of the cinema-going experience, at least not since cinema reached its maturity. Theatre designers and managers strive to make their craft as unobtrusive as possible, and only the projectionists are supposed to know what mysterious technical processes are creating the pictures and sounds in the auditorium. Attempts to give the audience a taste of life in the projection booth by opening it up to inspection, while interesting and valuable for those with an interest in things mechanical, rarely enhance the enjoyment of the film itself – visitors to cinema museums which have such open projection rooms may marvel at the wonders of the projection equipment only at the expense of ignoring what is on the screen. Does this mean that an insistence on film projection rather than digital must be for the benefit of the only people who know, the projectionists?

Well, perhaps not. There is one sure way of telling projected film from digital images: if you look carefully enough you will soon see those tell-tale transient marks from the specks of dust which inevitably settle on film in even the cleanest projection booth. So are we perhaps in love with all those comforting spots and scratches which tell us that the image derives from some flawed, but somehow natural, process? It is certainly hard to develop any affection for *digital* projection defects; when things go wrong in this domain, we are likely to be presented with a fuzzy green image, or an image with curious stripes across it, or, most likely, no image at all. However, a defence of film projection is that it has a better class of defect when things go wrong, is hardly going to win many supporters.

No, surely the real worry about the passing of film projection is linked to the uneasiness we all feel at being the victims of fakery. A visitor to a gallery to see a famous artwork is understandably irritated to discover that they have been examining a replica, even if that replica is indistinguishable from the real thing. Current conservation practices mean that it is increasingly common for museums to display facsimiles in place of their valuable possessions – for example, if you visit the Imperial War Museum's permanent displays you will see a number of accurately fashioned (and carefully labelled) replicas where the originals are too delicate to survive long-term display. This kind of practice can

perdu en qualité au moment du tirage à partir des trois bandes d'origine...

Les problèmes d'éthique que les techniques numériques vont poser aux responsables des restaurations sont à l'évidence multiples. Mais le monstre numérique est sorti de sa caverne et aucun discours larmoyant sur la mort du cinéma ne va le renvoyer chez lui.

Selon l'auteur, si l'on parle de présentation des œuvres et de leur accessibilité, nous pouvons saluer avec sérénité l'arrivée du numérique. Il y a pourtant un bémol : la conservation que seul le support film peut assurer...

lead to a perception that we are moving towards a Disneyland-isation of culture, where everything has been replaced by moulded replicas of the original. On the face of it, digital projection of film might look like another step along that road.

But is it? How far can a film print be said to be an original? With an event like the Last Nitrate Picture Show, there may be some justification, since there is undoubtedly an extra dimension in knowing that the copy running through the projector is one which entertained the original audiences 60 or 70 years ago (although in truth it is unlikely that any print still in good condition ever had any significant outings in the cinema). Such a print is perhaps equivalent to a limited edition print of an artwork – except that, unlike the owner of such a work, the film audience does not actually look at the print directly, and certainly is not allowed to handle it. In general, though, archives are not happy exhibiting old prints of their films, given that either they are masters, or they are worn out. Archives are, on the other hand, very eager to show, whenever possible, new prints struck from original negatives. Such a print is certainly no original, but might, at a stretch, be considered to have a tenuous connection to the original,

having run in intimate contact with it in a film printer and bearing an image created by direct exposure to it. But what about that product of the modern restoration, a print made via a digital intermediate? This is perhaps the ultimate fake: a film print recreated from an electronic simulacrum of the original, albeit a very accurate simulacrum. The images on it, exposed by laser beam from a computer file, are a fabrication, electronically manipulated to mimic the appearance of the original film.

Why then does it appear to be acceptable to show such a print, while presenting the digital data by some other, more direct, means, is not? Where is the greater fakery, if indeed it is fakery? While we grapple

with these niceties, are we perhaps in danger of losing the point of showing archive films, which is to present them in the best possible circumstances, as true to their original appearance as possible (as is indeed stipulated by the FIAF *Code of Ethics*: "Archives will seek to achieve the closest approximation to the original viewing experience")?

It is of course in the matter of recreating the original appearance of the images, rather than the means of producing those images, that digital technology takes us on to more contentious territory, something perfectly illustrated – though not much commented on – at the São Paulo Symposium. There we were shown a clip from a newly restored version of *The Wizard of Oz*. It was pin sharp, with brilliant colours and minimal grain, and indeed could almost have been shot yesterday using the best quality equipment available. It looked absolutely wonderful... and absolutely nothing like an original Technicolor print.



Attentive symposium audience in São Paulo.

¿Y si fuéramos los únicos que siguen preocupándose por el soporte en que se proyecta la película? ¿Y si fuéramos los únicos que pudieran saberlo? ¿Y si fuéramos los únicos convencidos de que podemos percibir cierta diferencia entre la proyección analógica y la digital?

Son éstas algunas de las cuestiones que el polémico texto de David Walsh se propone examinar. Y, llevando más allá la provocación, imagina que en *The Last Nitrate Picture Show*, es decir, el Simposio de Londres de 2000, los espectadores sólo han visto copias *safety*, porque los bomberos habían prohibido la proyección de copias de nitrato bajo el Waterloo Bridge... y nadie se ha dado cuenta de nada. De esta manera, el autor llega a la conclusión de que el estremecimiento experimentado por los espectadores durante las proyecciones surgiera sobre todo de la convicción de que estaban asistiendo a la proyección de originales en nitrato y no de copias recientes.

Seis años más tarde, el último abril, en São Paulo, se propuso a los congresistas de la FIAF que compararan proyecciones de películas (en condiciones que dejaban bastante que desear, como admite el autor) con proyecciones digitales con instrumentos estándar del momento. Ahora bien, los recientes desarrollos en los sistemas de proyección digital han sido tales que hasta un público sofisticado no logra distinguir sin dificultad los dos tipos de proyección si no se le advierte de antemano (pero, ¿aún es necesario decirselo?). Según los participantes en el simposio de São Paulo, la respuesta parecería ser que *sí* y que se trate de algo realmente importante.

Tradicionalmente, se ha tratado, en general, de esconder el elemento proyección (cabina, maquinarias, ruidos) del espectáculo cinematográfico; ¿por qué habría que portarse de manera distinta en el caso de una proyección digital? Quizá porque temamos ser víctimas de un engaño... como el del visitante de un museo que descubre que algunos cuadros son reproducciones. ¿Nos estamos encaminando hacia una *disneylandización* de la cultura, en la que todo va siendo reemplazado por copias que reproducen los originales?

The reason for this had nothing to do with the mode of projection: had the images been lasered back onto film, the result would have looked much the same. Neither was it the result of some artificial enhancement carried out by an over-enthusiastic technician trained in modern video technology. The reason it looked so abnormally perfect was because the restorers had scanned the original three-strip Technicolor masters at high resolution, registered and balanced the three colour records, and output the result directly, with none of the intervening losses in quality that each stage of the original photo-mechanical Technicolor process introduced. The result was as close as is possible to seeing the quality inherent in the original negatives, and is a tribute to the fine optics of the three-strip camera.

The problem, needless to say, is that the result was anything but authentic. Should, perhaps, the restorers have degraded the result, more to match the original appearance of the film in 1939? Restorers are (we hope) aware of the ethical dangers of artificial *enhancement* of historical material, but should we also expect them to be prepared artificially to *downgrade* their efforts? There is little chance of this! We restorers have struggled for years with the limitations of photochemistry, trying to squeeze out of unsatisfactory originals something which at least partially resembles the original appearance of the film, but the reality is that photochemistry is just not up to the job. It never has been – but in the absence of any alternative, we have convinced ourselves that the results are acceptable, sometimes even good. Now the arrival of digital techniques has forced us to accept the truth: unless we have the original printing masters to work from in our traditional laboratory (and not always then!), the results are inevitably defective. Digital technology gives us what we have always wanted: the power to extract all the picture and sound information from less-than-ideal film masters, so that starting with a projection print, for instance, we are able to put an almost perfect replica of that print, as it originally looked, up on the screen – something photochemistry has never allowed. So far, so good. But we find the magic also works when we apply our new digital powers to original negatives, where we are often able to surpass the quality of prints made with past technology merely by more faithfully extracting the information locked within. This is particularly true with colour material. Are we expected deliberately to limit our abilities in an attempt to adhere to a pre-digital morality? Of course not. Striving for quality is deeply ingrained in the restorer's psyche, and if the quality is there in the masters, we will do our very best to realise it on the screen.

How real is the danger of going too far? It is increasingly easy (especially for a new generation of technicians schooled in television and computers) to make our restoration look...well, any way the mood takes us. (Remove all the grain? Easy. Give it the appearance of digital video? No problem at all. Make it look exactly like a 1950s Eastmancolor print? Well, what exactly *does* a 1950s Eastmancolor print look like?) One would hope, at least, that this kind of practice is unlikely in FIAF archives: the statements in the *Code of Ethics* that restorations should “not seek to change or distort the nature of the original materials”, and that “new preservation copies shall become accurate replicas of the source materials”, clearly prohibit the kind of artificial enhancement which most archives would consider unacceptable – and will continue to find unacceptable, one

¿Pero es verdaderamente así? ¿En qué medida podemos decir que una película es un *original*?

Según el autor, el verdadero terreno del debate, en el que queda espacio para la discusión es la capacidad misma de volver a crear el aspecto original de las imágenes. En São Paulo, la proyección de una versión digital del *Mago de Oz*, realizada a partir de tres bandas blanco y negro del tecnicolor original, constituye, de cierta manera, un ejemplo límite: se trataba de un trabajo exacto, con pocas fallas y colores brillantes, como si la película hubiera sido rodada con las maquinarias más modernas. Y así quedaba totalmente desvinculado de un *original* en tecnicolor, que hubiera perdido calidad ya desde el momento en que se realizó la primera copia derivada de las tres bandas originales.

Los problemas éticos que las técnicas digitales van a plantear a los responsables de las restauraciones son, evidentemente, múltiples. Pero el monstruo digital ha salido de su escondite y ningún lamento por la muerte del cine lo hará retroceder.

Según el autor, si hablamos de presentación de las obras y de su accesibilidad, podemos saludar con serenidad la llegada del digital. Queda, no obstante, un reparo: sólo la película puede asegurar la conservación...

assumes, even when photochemical copying is a distant memory. Whether these diktats can be taken as licencing the creation of show copies *more* faithful to original negatives than was possible at the time of the film's production, is open to debate, but while we are mulling over the need for a debate, technology is proceeding inexorably and rapidly. The digital beast is out of its box, and no amount of agonising about the death of film is going to stuff it back in.

So should we be worried? Were we only concerned about access and presentation, then emphatically not! We can look forward to a time when archives reliably produce excellent copies from any and all of their material, when we can see on the screen far more faithful reproductions of original films than we have ever had before, and when those contrasty, scratchy, indistinct prints, which for so long have been the hallmark of archival preservation, are at last a thing of the past. Further, as restorative techniques become just one more item in the technician's standard toolbox for duplicating film, it is likely that the distinction between preservation and restoration will disappear. And most importantly, because it was shot on film, what goes up on the screen will still *look* like film, even though we are no longer using film to duplicate and present it.

Unhappily, what we can't do *without* film, is find any reliable way of *preserving* our images. The imminent obsolescence of film is an absolute calamity-in-waiting for the archive of the future. Passive preservation of digital material is simply not possible – we might put it in the deepest, darkest, most perfectly-controlled store, but to no avail: the twin perils of physical deterioration and obsolescence will ensure that we cannot turn our backs on it for a moment. Film may decompose and fade, but at least it *can* be stabilised through good storage, letting us walk away from our archival stores with reasonable confidence. Perhaps the only positive gloss which can be put on this state of affairs is that, in the real world, archival storage for film is expensive to build and maintain – especially for all those rapidly decomposing films in hot and humid climates, where only the most stringent (and probably impractical) environment will offer any significant life expectancy. Faced with this situation, the option of preservation by digitisation, with its unavoidable legacy of perpetual plate-spinning in order to prevent the data from evaporating, may be no worse an option.