

Forum, Round Table and Vinegar: Managing the Cellulose Acetate Microfilm Challenge

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INTRODUCTION

This final paper from CAMF 2005 is intended to provide some kind of synthesis and commentary on the Forum, plus an update on the third International Round Table on Preservation Microfilm (hereafter referred to simply as the Round Table) which took place, and which I chaired, the day before. In offering these concluding reflections on the Forum, I hope to give a sense of the ways in which the agenda for tackling the cellulose acetate microfilm challenge around the world can be, and is being, taken forward.

FORUM

The Forum itself was a highly successful event, with some really excellent presentations, a large international attendance, and significant engagement from all the delegates, which was very evident not merely during the breakout sessions in the afternoon but also from the intensity of the conversations which took place both at the reception the evening before and during the refreshment breaks. I was sitting among, and mingling with, delegates throughout the Forum, listening attentively and taking copious notes, and on this basis the first part of this paper has been compiled. On this particular occasion, unlike the many others on which I have been invited to summarise a conference, my task of trying to pull together some of the threads from the day was made relatively easy by the remarkable consistency in what the presenters actually said. The following are the five principal headlines, which I have distilled from the Forum's proceedings.

The first key finding is around the answer to the question, 'is there a problem?' The message, which we heard loud and clear at the Forum, is that there is a genuine professional and service issue here, which globally we have to confront. To that extent, perhaps, Nicholson Baker was just a fraction right in what he said in his book *Double Fold* ([Baker, 2001](#)). However, I think it is also apparent that the extent to which it is a problem for the delegates' institutions is variable. We heard at the Forum from one of the major commercial producers, Proquest, that they have got the problem under control, or relatively so, and I suspect that this is probably true of some of the other major commercial publishers who are still in business. But during the microform industry's heyday there were lots of smaller publishers (whose names are long since forgotten) who were active, particularly in the US and the UK, and I guess there are some more doubts to be raised about the permanence of their master stock of what, in many cases, will be our library and archival material.

Within libraries there are differential priorities again. A handful of libraries - notably, in terms of the scale of the challenge, The British Library and the Library of Congress - have been very heavily involved in their own production of masters, and they have a priority around a preservation strategy for them, whereas many other institutions are more concerned with the durability of the service copies which they have bought in from third parties. But, despite these differences of emphasis, it is quite evident that we do have a cellulose acetate problem, and that the problem particularly affects preservation microfilm surrogates of newspapers, compounded by the inherent instability of the newsprint itself, even should the originals have been preserved after microfilming - which we now know, from Baker's exposé, often not to be the case. We have also heard at the Forum that, by its very nature, the problem is a time-limited one since polyester base microfilm has generally taken over from acetate in most parts of the world from the mid-1980s, although in Germany the switch seems to have begun in the 1970s, while in Australia, as Colin Webb reminded us in his paper, there were occurrences of the continuing use of acetate for new filming into the 1990s. In that sense, we are largely having to confront a legacy issue and not a growing problem, but there is equally only a time-limited window in which to face up to the challenge since, without our intervention, the acetate microfilm will eventually wither on the vine. There is, accordingly, no do nothing option.

My second observation is around research and development. It is very common at these sorts of events to end up the proceedings by saying that actually we do not know anywhere near enough about the scope of the subject, and the means of its potential resolution, and that we need more research into the matter before we can begin to think what we should be doing about it. By contrast, the very strong and unambiguous message we received from the Forum is that this is not the case with acetate microfilm. In terms of the scientific

research and development, most of the facts we need to know to act were known about fifteen years ago, largely through the wonderful work of the Image Permanence Institute in the US, and of Jim Reilly in particular. The gauntlet thrown down to us as library, archive and other information professionals and managers is, therefore, what are we now going to do about it? Yes, we undoubtedly do need to disseminate the knowledge of that research and development, and hopefully CAMF 2005 will have helped considerably in this regard, but the real challenge is back to us in dealing with the significant capital and revenue resourcing issues, and also perhaps in facing up to some of the cultural and attitudinal blocks to progress which we have in our institutions, including lack of managerial interest. Fundamentally, however, the solution to acetate microfilm is not a matter for further scientific research.

My third set of reflections is around the significance of proper investigation, analysis and preparation. We received a lot of advice from presenters at the Forum about how we should carefully work towards an action plan for dealing with this legacy issue, and ensure that the ground is carefully prepared before launching into the writing of a strategy and the implementation of an action plan. Specifically, there was a lot of emphasis at the Forum, especially from Maria Sorjonen, on the need to document institutional preservation microfilming policies and practices before rushing into solutions. It is vital that we assemble, analyse and reflect upon the information about what has been done, when it has been done, and how it has been done. We were also advised by our presenters about the importance of conducting surveys, particularly sample surveys. Sandy Ryan gave us an insight into how this has been tackled at The British Library, but, as became evident from the afternoon breakout groups facilitated by Sandy, Deborah Novotny and Sarah Jenner, there are a variety of methodologies which can be used, no single one particularly right or wrong. Obviously, a primary purpose of such surveys is to determine how close an institution may be to the autocatalytic point for its acetate microfilm collections, and how urgent the corrective action may be.

There are, however, a number of health warnings to be issued about surveys. They are inevitably only samples, so they will never tell you specifically which 0.1 per cent (or whatever) of your collection you should be worrying about, only that you have got 0.1 per cent of a problem in your collection. Moreover, those surveys are really looking at the material from the point of view of vinegar syndrome. So, what they are not necessarily doing is answering the question of whether that stock is fit for all the purposes for which you would want to use it at some future date. We heard an example from The British Library in the breakout group which I attended where quite a lot of cellulose acetate microfilm of newspapers had not actually failed its vinegar syndrome test, but nevertheless was not of a sufficient quality to support digitisation and had to be refilmed.

In addition to surveys of the microfilm stock, we learned much, especially from Jim Reilly, about the critical requirement to audit the macro storage environment. Then we have to put the survey results and the audit of the storage environment together, undertake a risk assessment, and determine priorities for moving forward. Those priorities could vary between institutions: some might be driven by the content significance or uniqueness of the material, some by the seriousness of the deterioration, some by the extent to which the microfilms are in high demand, and so on, but prioritisation according to a valid set of criteria is essential. The whole problem can rarely be tackled by a single institution all of a piece. It also follows that, once an institution has conducted its own empirically- and risk-based prioritisation, it should place its prioritisation within a wider context, and see what others are doing with similar problems to those that you have identified for similar types of material. So, do not think that you have to solve all of the problems of the world on your own.

On the content of the action plan itself, my fourth topic, we heard many words of wisdom at the Forum. A crucial reminder is to remember the audience at which such an action plan is being addressed, and to write it in an appropriate language. The target group is not just preservation professionals, and the document must be meaningful to other professionals and to institutional management as a whole. As I explained in my introductory remarks to the Forum, cellulose acetate microfilm is not just a preservation issue; it is a holistic life-cycle collection management challenge, with substantial service and reputational ramifications. In terms of remedial measures for the plan, the message we received very clearly throughout the Forum is that the macro storage environment is probably the biggest single improvement which we can make, certainly so far as containing the problem is concerned, 'buying more time' (the title of Jim Reilly's presentation), and pushing the window for action at the item level well into the future. The point, which was particularly strongly emphasised, was that, of all the variables affecting that macro environment, temperature is the most sensitive one. Improvements to the microenvironment, such as reboxing the microfilms, should not be discounted, but it is now quite clear that they are probably of secondary importance in solving the cellulose acetate microfilm problem, although they may have other preservation dividends.

Beyond the environment, we learned from our presenters that reformatting to a polyester base, which at one point seemed to be a sort of universal (but hugely ambitious) solution, is something which could now

probably be applied much more selectively, possibly on demand as material is required for use, or in relation to a set list of priorities. We also heard, in Sandy Ryan's experience at The British Library, that reformatting can be troublesome, and that it is not necessarily a cheap option, particularly if you are having to go down the refilming route rather than the duplication route. In addition, reformatting may not always work, and there may be some generational loss of quality. After reformatting, there are no hard and fast rules at the moment about what you do with your acetate microform masters, to discard or to retain for their artefactual value, and the jury is still out on that. To help thought-provoke your own action plan, I would commend, not least for its simplicity, clarity and rigorous costings, Michele Youket's overview of the Library of Congress strategy. Her summary was particularly cogent and powerful: inventory control for all materials, cool storage for printing masters, cold storage for masters, reboxing for many microfilms, duplication for the few, and digitisation for some.

The fifth and final reflection from the Forum, while obviously linked to and a component of the action plan, is also sufficiently critical to be a detachable point. This is the question of bibliographic and intellectual control, that 'aftershock' of which Cate Newton spoke so eloquently at the Forum, and for which she has been such a consistent advocate at the Round Table, and once again a key linkage to broader institutional issues and priorities. Hopefully, we are all now learning the lesson that we must include bibliographic control not only as part of our legacy action plan for acetate microfilm collections, but also that we must build it into our current bibliographic policies and practices for all kinds of preservation or service surrogates now being made, so that we do not add to the existing problems or create new ones. We have similarly heard that the challenge of bibliographic control is not just one for the catalogue, in the sense of what information is there or is not there for end-users as a finding and requesting tool, but that it can be even more fundamental than that: we often do not have proper inventory control of where our masters and our printing masters actually are. There was a very clear encouragement throughout the Forum to improve the integration of, and the interface between, preservation and cataloguing staff in our institutions. There was a strong steer given that the public catalogues we all maintain, regardless of the vendor system, can and should be extended to incorporate preservation capability. The international [FRBR](#) initiative was noted in this context. Even if not all of us can develop, as The British Library now has, a preservation and conservation management module for its integrated library system, most of us in a library context can seize Cate's potential to use the MARC21 583 field even more than we are doing at the moment. At the same time, we have to heed Cate's warning that XML will be a contender with MARC for some descriptions, and that we have to expect to work increasingly in a hybrid metadata environment. The continuing importance of international microform master registries was likewise stressed in the presentations.

ROUND TABLE

Happily, and quite fortuitously, these messages distilled from the Forum are in agreement with much of the thinking of and actions from the Round Tables, the third of which took place at The British Library the day before the Forum, on 23 May 2005. Facilitated by an overlap of key players, the two events have thus in practice been mutually reinforcing in their understanding of the issues, and the perceived ways forward.

Following a careful review of the success of its action plan for 2004-05 (agreed at the second Round Table in Washington in March 2004), and a reassessment of the ongoing need for international collaborative action over cellulose acetate microfilm, the third Round Table did unanimously resolve that it had a continuing purpose. It will thus carry on meeting (with a fourth session being arranged at Princeton in the spring of 2006), and not just for the benefit of the membership of the Round Table, even if these libraries and archives do face some of the biggest issues in quantity terms, but as a service to the wider professional community around the world. The Round Table further resolved to retain a strong focus on cellulose acetate microfilm from a preservation angle, and not to dilute its efforts by embracing the management of other cellulose acetate media at this stage. The sustainability of our master microfilms of newspapers will remain a particular concern, but not an exclusive one.

Five principal strands emerged from the 2005 Round Table, and will be taken forward into the action plan for 2005-06. The first of these is a strong commitment to advocacy, dissemination and professional development work around cellulose acetate microfilm, of which CAMF 2005 and the ensuing publication of its proceedings in *LIBER Quarterly* is, of course, a major practical manifestation. Helen Shenton has referred in her paper to the launch of the cellulose acetate microfilm website, under the auspices of The British Library with support from the Library of Congress, which will become a key resource in that wider advocacy, and which will seek to complement and enrich the information available from the National Library of Australia's [ANICA](#): Australian Network for Information on Cellulose Acetate site, and from the

[Image Permanence Institute](#), not least in helping to promote wider awareness and take-up of the main research and development outcomes, which go back some fifteen years.

The Round Table's second commitment was to accelerate its activities in and around the development of cold storage, particularly outside of the US, where lessons have generally been learned and are being applied. In other areas of the world, not least - perhaps surprisingly - in the UK, the activity around cold storage has been, to be charitable, rather limited and piecemeal. This strand will be taken forward by The British Library in association with Oxford University Library Services, both of which are formulating long-term storage strategies. In her paper to the Forum, Helen Shenton has already referred to the option appraisal of cold storage which The British Library will be conducting.

A third strand will be around bibliographic and intellectual control of cellulose acetate microfilm, and I am very pleased that the National Library of Scotland, through Cate Newton, and colleagues at the New York Public Library will be continuing to raise awareness and promote solutions in that field.

Very much allied to that is a fourth action relating to the ongoing importance of the existing registers of microform (and now digital) masters, as a mechanism to improve the quality and flow of international management information which we all need in order to make informed decisions about what each of us should be doing, whether severally or consortially, and The British Library will lead that work through Deborah Novotny and her staff.

Fifthly, the Round Table will be picking up an issue which Colin Webb touched upon in his paper at the Forum, and which has not hitherto been at the forefront of the Round Table's work since it started in December 2002. This is around the future of preservation microfilming. Much professional wisdom until very recently has been that preservation microfilming is essentially the default preservation surrogate medium, and that the digital surrogate created by digitisation (either directly from the original material or via the microfilm surrogate) is very much a mechanism for access. That orthodoxy was not challenged when the Round Table first met three years ago and drew up the original St. Pancras Principles. There are now some slightly 'heretical' voices to be heard, even heard amongst a few delegates to CAMF 2005, querying this received wisdom and setting store on the preservability of the digital object. Given everything that is now happening in the whole area of the development and installation of digital asset management systems, and digital preservation research, we probably do need to initiate a debate as to whether there is a long-term future for the preservation microfilming in which many major repositories and some commercial publishers are continuing to invest. While the Round Table does not want to get completely submerged in the whole digital agenda, this is a very important point of crossover between the Round Table and the digital world, and it deserves further investigation. Harvard University and the National Library of Australia have agreed to lead that stream of the Round Table's action plan, but they will obviously connect into the existing work which is being done through bodies like the Association of Research Libraries in North America and the Digital Preservation Coalition in the UK.

In addition to these five work strands, the Round Table has agreed to keep its membership under continuous review to see whether there is any scope or requirement for a modest enlargement, in terms of individual countries (we are conscious of the current apparent US/UK 'bias'), particular institutions, or specific global organisations. We have noted, for instance, the Latter-Day Saints have made a huge investment in the preservation microfilming of archival material for many years. We also wish to strengthen the links between the Round Table and other international players in cognate fields. Given the disproportionate importance of newspapers on the Round Table's agenda, a greater measure of interaction with the [IFLA Newspapers Section](#) is certainly called for, and we are very fortunate that Ed King, the current secretary of that section, is a member of The British Library's staff, and I know that he will actually be reporting on CAMF 2005 at the section's meeting in Oslo during the summer. Connections will be made with bodies looking at cellulose acetate affecting other information formats, such as photographs, sound and moving images.

By implication from the above, a number of potential actions are not highlighted in the Round Table's plan for 2005-06, in reflection of progress made since the first action plan in 2003-04, and some second professional thoughts. New scientific research and development is not being prioritised, for the reasons already given. Within the Round Table's current membership, we do not see a great deal of further surveying taking place. Most of them have completed investigations during the past two or three years and feel that they are in possession of sufficient local management information to shape their own institutional plans and actions. That will, of course, not be the case with the wider professional community represented at the Forum, for whom baseline survey data are still required. Reformatting of cellulose acetate microfilm will still be going on among the Round Table institutions, but on a dramatically lesser scale than we initially anticipated when we first met in 2002. Similarly, with work on enhancing the microenvironment, which is now viewed as a relatively modest contribution to the management of acetate microfilm. Enhanced priority

is likely to be given by the membership to the sustainability of our own cellulose acetate microfilm masters over the matter of service copies, especially where the masters for the latter are believed to be secure. The Round Table is likewise scaling down expectations about the prospect of a fairy financial godmother solution, whether from public, charitable or private sector funding sources, to tackle the problem on a worldwide basis. It is not easy to dress the challenge up in exciting and attractive clothes for possible benefactors, and the containment effect which assiduous attention to cold and cool storage will bring means that the 'ticking time-bomb' card is harder to play. While there is clearly scope for continuing dialogue with commercial publishers, it seems unrealistic to expect any large injection of capital from this quarter, since there is no viable commercial proposition to underpin a business plan and ensure an adequate return on investment.

TO CONCLUDE

This synthesis of the Forum's key messages, and explanation of the Round Table's action plan for 2005-06, received the overwhelming endorsement of delegates of the Forum at their final session. In this way, both the Forum (conceived at the second Round Table in March 2004, and brought to fruition through the efforts of The British Library in association with the LIBER Preservation Division) and the Round Table ended up in perfect alignment with each other. Each has demonstrated that, through international collaboration, and the application of scientific research and development, a way can be found to solve the problem of cellulose acetate microfilm and, with it, at least one of Nicholson Baker's dragons may perhaps finally be slain.

REFERENCES

Baker, N. Double Fold: Libraries and the Assault on Paper. New York : Random House, 2001.

WEB SITES REFERRED TO IN THE TEXT

ANICA - Australian Network for Information about Cellulose Acetate. <http://nla.gov.au/anica>

FRBR - Functional Requirements for Bibliographic Records. <http://www.ifla.org/VII/s13/frbr/frbr.pdf>

IFLA newspaper section. <http://www.ifla.org/VII/s39/>

IPI - Image Permanence Institute. <http://www.imagepermanenceinstitute.org/index.html>