International Round-Table
Report of Findings

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Introduction

The first Round Table was held in London in December 2002 at the British Library. It established an international forum/platform for the discussion of issues surrounding microfilm and, more particularly, the problems associated with cellulose acetate microfilm. Major research libraries producing and/or holding significant quantities of microfilm were invited to the round table, together with leading microform publishers, to address concerns about the quality and quantity of the microfilm in library and archive collections. A second Round Table was convened in March 2004, hosted by the Library of Congress in Washington. The outcomes from these first two Round Tables are summarised below.

1. Call to collate Cellulose Acetate Survey Data

Most institutions represented had surveyed their microform collections, to identify parts that may be on cellulose acetate film base and to ascertain the film condition. Relatively few results have been published so far, due partly to the fact that much of also to the fact that many surveys have been commissioned for internal use only.

It became apparent that microfilms on an acetate base were able to be identified by some institutions just as readily by a knowledge of the collections· development and records of filming as by conducting a full survey. The most commonly used form of film base · a tri acetate · was introduced in the late 1940s and used until the mid 1980s, when it was superseded by polyethylene terephthalate (PET; a polyester). Institutions purchasing/ producing/acquiring microfilm between these dates are likely to find that such film is cellulose acetate. It is commonly accepted that, as a rule of thumb, no film produced after 1990 will have an acetate base.

All contributors at the meeting were actually producers of microfilm and their experiences varied. Many had been filming in bulk since the 1930s when microfilming first gained popularity. Some had begun in a small way and expanded their operations over time, while others had begun microfilming relatively recently and had only ever produced polyester based film. Those who had not produced large quantities of acetate film had nonetheless

acquired considerable amounts from other producers. Consequently, acetate film could equally comprise entire collections or their various constituent parts. However, those institutions that had carried out large-scale microfilming from an early date and those that had purchased significant amounts of microfilms were found to have the largest collections of cellulose acetate film.

2. Preservation microfilm - present and future

Most libraries and archives are still committed to producing a preservation surrogate in microform rather than in digital form, digitization still being seen primarily as an access tool. This was supported by the general agreement among participants that although digitization is increasing at the moment, microfilm production was not seen to be declining. It was felt also that opportunity might be made of the fact that it was easier to attract funds for digitization projects than for preservation filming initiatives by incorporating the transfer of the film base into a broader digitization project.

3. Quality and standards

It was agreed that the most common issue concerning quality was the poor quality of the service copy. This was, in fact, the main focus of user complaints · particularly physical condition, most often caused by poor/excessive handling. Although it was accepted to a degree that service copies are working copies made to serve the master negative in preserving the original and, as such, their condition will always ultimately be compromised by use, it was agreed that this should not detract from the need to ensure good handling procedures. A poor quality positive is of more pressing concern when the quality of the duplicate (print master) itself is spurious; or a duplicate does not exist and the master is utilized in its stead. Instances of poor past practice impacting on the quality of the service copy were highlighted, including one where the master negative itself had been made available to users as a service copy. There was acceptance among participants that the concerted effort seen in the last twenty years to improve microfilming standards had, in fact, been principally driven by user concerns.

Additionally, it was acknowledged that initiatives such as the National Endowment for the Humanities (NEH) Brittle Books programme and wide-ranging projects funded by the Andrew W. Mellon Foundation to preserve Western European heritage have also succeeded in raising awareness of and standards in microfilm production.

Those attending the meeting who had been involved in these or similar collaborative projects spoke highly of their benefits. Not only did such projects enable them to microfilm to high standards, but they also generated benefits in other areas, such as cataloguing. The opportunity to work with partners in other institutions was also felt to be of value.
In summary, there was overwhelming acknowledgement around the table that preservation microfilming is now being carried out to very high standards on a safe film base, and that microfilm is widely accepted as a suitable preservation surrogate for the intellectual content of the original collection item.

4. Microfilm generations

Current preservation standards require the production of three generations of film - a master negative (also known as the archive master or 1N), a duplicate negative (also known as the print master or 2N) and a positive copy (also known as the service copy or 3P). The master negative is the preservation copy· Once it has been used in production to

generate the print master it is permanently ·archived. All subsequent service copies are generated from the print master. Only where damage occurs to the print master, or the print master is lost (for whatever reason · usually extreme and unavoidable circumstances), is the archive master used, and then only to generate a new duplicate. In keeping with today's standards, it should never under normal circumstances be used to make a new positive.

The master negative is still sometimes found to be the only generation in existence and, consequently, must be used to produce a print master if the surrogate is to fulfill its purpose and be made available. Although any use of the master negative carries with it a risk of damage, it is generally accepted that with today's advanced equipment and skilled operators/processors, a single-use post production to generate a print master (be it a new one or the very first one) and make the surrogate accessible is unavoidable. Concerns should arise only with inappropriate use of the master (such as that already highlighted) or inappropriate handling during duplication.

5. Purchased positives

It was pointed out that microfilm purchased from a bureau was (and still is) often only purchased as a positive copy. Given the changes in the commercial microfilming sector over the years - some companies have merged and others closed · It was widely recognized that there is a significant risk of institutes not being able to obtain another copy/copies of the microfilm from the original vendor or any other. Some libraries in possession of purchased microfilm that has become degraded indicated that they have attempted to obtain new copies on a polyester base, only to find that the negative was often no longer available for reproduction.

6. Storage

It is recognized that microfilm, in line with all photographic materials, needs to be stored in specific conditions. However, many microfilm collections have often been, or continue to be stored in less than ideal conditions. There was consensus that this is in part due to the fact that institutions often found it difficult to priorities microfilms above other parts of the collection when looking at storage issues.

The importance of storing microfilm collections in optimum conditions and the role that reduced temperatures and relative humidity can play in extending their useful life was emphasized by all. It was noted that where a suitable environment cannot be established or maintained locally, storing the material in a specialist storage facility may need to be considered. It was acknowledged by participants that there is a general trend towards the sharing of such facilities - and of course, their cost.

There was general agreement that it was preferable to store acetate collections separately from polyester as excessive acids can affect emulsions on any film. There was consensus also that, where cold storage was an option, acetate should be given preference over polyester.

Many institutions, particularly in the USA, had made plans to move their collections to cold storage already or had always stored their film at low temperatures.

Collections that had been stored in cold temperatures were generally in a better condition than those stored in more conventional Library environments, highlighting the importance of this preventive approach.

7. Condition surveys

Most institutions represented had carried out surveys. Those that had not, indicated that they regularly check the condition of film as it is requested for use. In almost all cases some evidence of acetate decay had been discovered, but this appeared not to have reached the auto catalytic stage.
Of those who had surveyed their collection, the collated findings indicated the following, that:
app. 59% of acetate films within collections were judged ·good- no deterioration·
app. 40% were judged ·fair to good · deterioration started·
app. 1% were judged to be ·actively deteriorating·

Overall, participants agreed that the majority of microforms within their collections were found to be in relatively good condition.
Subsequent testing appears to be validating previous results rather than adding to them, and there was good correlation between results derived form different survey methodologies.
In addition to providing quantitative and qualitative information on acetate holdings in film collections, many institutions also used the survey to record other findings adversely effecting their film and/or not in keeping with current standards. These included inappropriate housing, unsuitable cores, unsuitable film ties or no film ties at all.

The enclosures in which microfilms were housed were, in fact, seen by most institutions that had carried out surveys as one of the more serious problems. Poor quality housing materials (especially those of an acidic nature) were recognized as a contributing factor to the acceleration of film decay and it was deemed of paramount importance that they be replaced as a matter of priority.

8. Bibliographic control

There was consensus at the roundtable that the application and maintenance of correct bibliographic controls by institutions (particularly those producing their own microfilm) is essential for managing film collections. All expressed concern about the perceived gaps in bibliographic control, where information was wonting in critical areas such as records of titles filmed, dates of production, the type of film base used, and master storage location (particularly important where the master is known not to be held by the institution).
Some participants also indicated that the survey process had enabled them to identify catalogue microfilm entries for which no corresponding film could be found; microfilms with incorrect catalogue entries; and microfilms that had never been catalogued in the first place.

9. Remedial Action

There was consensus that microfilms found to be actively deteriorating should be transferred to a new film base (by duplication) or the original refilled. However, it was felt that, due to cost and the projected likely quantities involved, the wholesale duplication of degraded microfilms was, in most cases, an unrealistic option. It seemed clear that the prioritisation of titles would undoubtedly underpin any duplication programme undertaken.
In practice there is little evidence of large-scale programmatic transfer, with most members intending to duplicate or refilm ·on request· or as required.

With this in mind, it was acknowledged that a strategic retention policy on microfilm was a vital resource in planning the long term preservation of film collections, in particular with regard to storage. It was clear that life cycle cost calculations are as important for surrogates as for the originals that they serve to protect.
Most institutions attending the first meeting had begun to take some action to address concerns about cellulose acetate decay. These included prioritising the collections that may need refilming/transferring to a new film base, conducting condition surveys and making plans to store microfilm in better conditions.

It became clear at the second meeting that institutions had further developed strategies for tackling the issues raised by their collection condition surveys/and or audits and that common themes existed. Emphasis was on making improvements in the following areas:

10. Storage Environment

Most institutions either had/or could make use of cold store facilities, or were undertaking improvements to their existing storage facilities to provide better conditions for their microfilm collections. Appropriate long-term storage was seen to be the area that would have the single biggest benefit in terms of preservation.

11. Micro Environments

The process of condition surveying had brought to light many instances of microfilm stored in boxes that were chemically and/or physically inappropriate. The need for suitable micro environments was reinforced, particularly given the drive towards improved storage environments generally. The importance of re-boxing film has been noted and is being addressed.

12. Refilming/duplicating

Film is being duplicated or refilmed as required/on demand. The principal drivers are gaps in collections where masters are found to be missing; or where masters are found to be actively decaying.