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Housing single-sheet material: 'Fisherizing' at the Bodleian Library, Oxford

'Fisherizing' is one approach to the housing of single-sheet material that has been adopted at the Bodleian Library, Oxford.[1] It is a system of binding modern papers of predominantly uniform format, typescripts for example, which are unsuitable for either fasciculing or other binding methods and which require more protection than that offered by archive folders. The technique was named after H.A.L. Fisher, a twentieth-century Oxford historian, whose papers were donated to the Bodleian Library in 1958.[2] Fisherizing was developed between 1985 and 1987 when Fisher's papers were treated. The original fisherizing technique has recently been reviewed and further refinements have been introduced.

History and development

The housing of single-sheet material at the Bodleian was reviewed in the early 1980s following the arrival of Christopher Clarkson as Conservation Officer. The use of guard books and skeleton guard books had been the predominant housing method for a variety of single-sheet material at the Bodleian from the late nineteenth century until this review. The arrival of Clarkson led the library to adopt many approaches to the preservation of their collections which were fundamentally different to past practice. The development of a fascicule system was one of these major changes in approach and was introduced to deal with early collections of letters and single-sheet material of differing format.[3]

The early success of the fascicule system led to its wide adoption within the library. One type of single-sheet material that could not be accommodated happily within fascicules was large quantities of modern papers of a uniform size, for example typescripts or their carbon copies.[4] These typescripts when fasciculed required many fascicules and were perceived as being wasteful of precious library space. The Fisher papers were the first major anomaly of this type encountered by the fasciculing programme and fisherizing as a technique was developed to provide a suitable storage method for the large groups of uniform material that this collection contained. The early fisherizing technique was described in a talk given by Judy Segal in 1989. Although the talk mainly concerned fasciculing, a section of it described the advantages and disadvantages of unsupported binding and storage methods for housing single-sheet material:[5]

> We have developed a method to get around this problem [bulking] called by us 'Fisherizing'. We had a large collection of typescripts which were likely to receive quite heavy use. Unfortunately Fisher wrote in many cases to the edge of the spine margin. To alleviate the problem of the guards causing bulking Chris[topher Clarkson] developed the method whereby every third spine edge was trimmed back ⅛ inch and a further third, by ¼ inch. This enabled us to throw out the folios without the bulking and either fold the guards to make a sewn binding or side stitch using compensation when necessary. This method is quite quick and does not cause extra bulking but does not give the protection of support sheets and is only suitable when the paper is reasonably robust.

The Fisher manuscripts treated in this way had every second leaf trimmed by ¼in and every third leaf trimmed by ⅛in at their left-hand edge. All the leaves were then pasted individually to Japanese paper guards. The guarded leaves

1 This paper is in many ways a continuation of the work of Helen Lindsay and Christopher Clarkson, 'Housing single sheet material: The development of the fasciculing system at the Bodleian Library', *The Paper Conservator* 18 (1994) 40–48, and should be read in conjunction with it. I would like to thank Joan Lee and Alison McKay of the Bodleian Library and Christopher Clarkson who read and commented on drafts of this paper.

2 Herbert Albert Laurens Fisher (1865–1940), historian, statesman, and Warden of New College, Oxford.

3 The problems of earlier housing systems at the Bodleian Library and the development of the fascicule system are described by Lindsay and Clarkson 40–42. Guarding and filing is another method of housing single-sheet material, this has never been used at the Bodleian Library though. For a description of the technique, see Wardle, D.B., *Document Repair* (London: Society of Archivists, 1971) 47–54; and Jones, M., 'Guarding and filing – the assemblage and binding of miscellaneous documents', *The Paper Conservator* 2 (1977) 24–35.

4 This was first identified in 1983 in a meeting held between the Bodleian Library departments of Conservation and Western Manuscripts to review the first year of the fascicule system. The minutes of this meeting recall that 'collections of modern papers presented different problems, and it was felt that we need to look at alternative methods of protecting them in use by readers', 'Notes of an informal meeting between Western MSS, and Conservation staff', unpublished minutes, 23 Mar 1983.

5 Segal, J., 'The storage of single sheets – adapted from Chris Clarkson's notes', 5. Transcript of an unpublished seminar given at 'The Society of Archivists Annual Instructional Meeting of Archive Conservators', Aberystwyth, 5–9 Sept 1989.

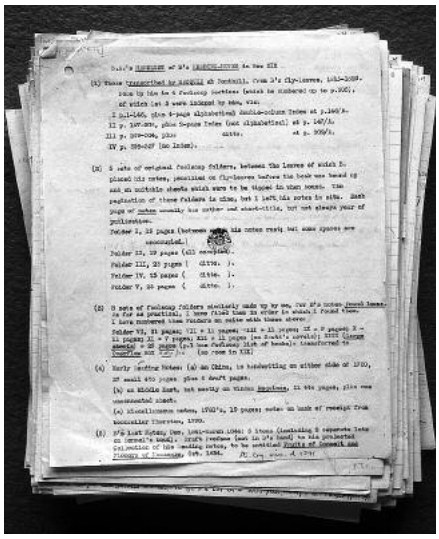

Fig. 1 Uniformly sized manuscript before treatment.

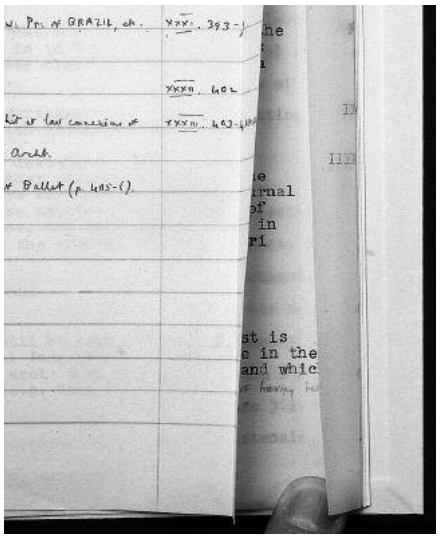

Fig. 2 Case-bound modern manuscript with oversize leaves folded at the fore-edge.

were then knocked up at the fore-edge and trimmed to an even width with a power guillotine. The leaves were split into smaller groups of approximately 50–100 leaves and compensation guards of Archive Text were added to each group to bring the guards to the thickness of the manuscript leaves. These were then side-stitched into double endleaves of Archive Text, with a medium-weight wrapper of the same paper adhered to their spine. The bound booklets in each manuscript were then housed in standard sized commercial archive boxes. The work on the Fisher manuscripts took place between 1985 and 1987. Further work on Boyd Alexander's papers was undertaken between 1986 and 1989, though in this case the guarded leaves were cased as single volumes into stiff-board cloth-covered bindings. The earlier technique was briefly mentioned by Lindsay and Clarkson in 1994.[6]

Review and further developments

No significant quantity of material was fisherized at the Bodleian Library during the 1990s and with the turnover of staff the technique quietly died. New material was listed for work in 2000 which required fisherizing and for this the early method needed to be resurrected. To re-learn this technique I reviewed both the Fisher and the Boyd Alexander manuscripts that had been treated in the 1980s and with some further refinements the technique has now been reintroduced.

Reviewing the Fisher manuscripts I realized that they had fared well in the intervening 15 years and had been well served by their housing method.[7] Each manuscript had been split into smaller groups which were then bound. The size of each bound booklet was dictated by the size of the manuscript papers with final protection being provided by a commercial box for each manuscript.[8] The individual leaves had not suffered any damage. In contrast loose manuscripts of carbon copies kept in archival folders are often difficult for readers to use. Though foliated, they often get out of order and their very lightweight paper means that they easily become a confused pile leading to creasing and edge damage (Fig. 1). The Boyd Alexander manuscripts, though provided with external protection by their case bindings, did not seem to be satisfactorily housed. Although they were guarded in a similar way to the Fisher manuscripts, each manuscript was then treated as a single volume irrespective of the paper sizes it contained and many leaves had been folded (at least once) so as not to project beyond the binding (Fig. 2). This reinforced for me the underlying message of the fascicule system, namely that the bulk binding of single-sheet material of differing formats has never been successful.

While the overall concept of the early fisherizing technique was sound, some of the details now seemed to call for refinement. The inevitable bulking caused

6 Lindsay and Clarkson 43.

7 Although usage records for individual manuscripts are not kept they seem to have received moderate use.

8 In many ways both the fascicule system and fisherizing mirror Chinese bookbinding methods in which 'the text was separated from its protective cover' and was 'very light to hold and easy to open', see Martinique, E., *Chinese Traditional Bookbinding: A Study of its Evolution and Techniques*, Asian Library Series No. 19 (Taipei: Chinese Materials Center, 1983) 39.

by guarding in the early fisherizing method had been countered by trimming every second and third leaf to slightly stagger the leaf width within the text-block. As mentioned above, these leaves were then guarded, knocked up to the fore-edge, the guards were trimmed at the spine and strips of Archive Text introduced as compensation. The leaves had been side-stitched into endleaves and glued into wrappers. The trimming of original material did not allow for annotations extending to the spine edge and required the material to conform to the housing method rather than vice versa. I also noticed that the introduction of a compensation material (Archive Text paper) stiffer than the original manuscript leaves and of a constant width led to an abrupt rather than gentle opening of the booklets. Finally the fisherized booklets could not be easily dismantled if necessary without totally destroying them. These four areas required change, I felt, and improvements in the method would now require that original material would not be trimmed.

A new technique has now been developed that uses staggered guards rather than staggered leaves. Using a standard width of guard paper which is then folded back on itself also provides staggered compensation. This has led to a gentler opening characteristic and the inevitable bulking is spread as a gentle bulge. This is not too pronounced if thick manuscripts are broken into smaller parts. The folded self-compensation from the Japanese guard paper also seems to give better leaf flow and ease of opening. Finally the major bulk of protection is still provided externally in the form of archival boxes for each manuscript's bound booklets.

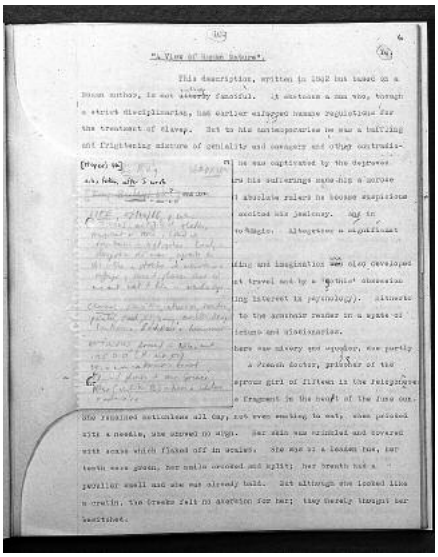

Fig. 3 Shaped guard for a smaller leaf.

Scope of fisherizing

Fisherizing has proved to be a useful tool in our approach to housing single-sheet material at the Bodleian Library, but it is only one technique and should be viewed alongside both our fascicule system and less interventive protective measures. Unlike the fascicule system, which is suitable for material of differing sizes, fisherizing is only suitable for collections of single-sheet material that is predominantly of a standard size. Its success depends on the homogeneity of the manuscript both in size and type of paper. However, the system can allow for limited numbers of smaller leaves scattered throughout a manuscript, or differing sized blocks of leaves (Fig. 3). Limited numbers of items that are bifolia or single sections, or 'difficult' items such as photographs to be encapsulated, can be accommodated but again only when they are few and scattered throughout the manuscript. Larger single leaves, either by height or width, are more difficult to deal with. The fisherized booklet can be made to the size of the largest item but folding individual leaves should be avoided. As with fasciculing, fisherizing will always be a technique reserved for manuscripts that demand the greatest protection and security.

Method

1. Check that all leaves are foliated and in the right order. Note any 'awkward' leaves, which may require special treatment.[9] Note leaves to be repaired or flattened.
2. Repair damaged leaves and humidify and lightly press crumpled leaves.
3. Determine the size of the booklets, both width and height, and number of leaves in each booklet. If the manuscript leaves are of a standard size then it should be broken down into manageable groups (for paper of average thickness approximately 50 leaves per booklet seems to work). If the manuscript falls into blocks of different-sized leaves these may provide their own groups. Accurately measure the leaf size in each booklet before the leaves are guarded.
4. The width of guard depends on the weight and flow of the paper. Lighter paper, i.e. carbon copy typescripts that flex easily can have a narrower guard, i.e. 20mm, but heavier or stiffer paper will need a wider guard, i.e. 25mm or more. Guards are usually cut from a light-weight Japanese machine-made *kōzo* paper bought in roll form, such as RK-17 (19 g m^{-2}, 1 x 61m roll) from Paper Nao.[10] The width of the guard paper equals twice the width of guard plus the width of the

9 Awkward or difficult leaves include small leaves, bifolia, or items, for example photographs, that require encapsulating in polyester.

10 Paper Nao RK-17. This is our standard guarding paper and is also used for the fascicule system. It works well with lightweight typing papers; different weights of guard paper may be required for other manuscripts.

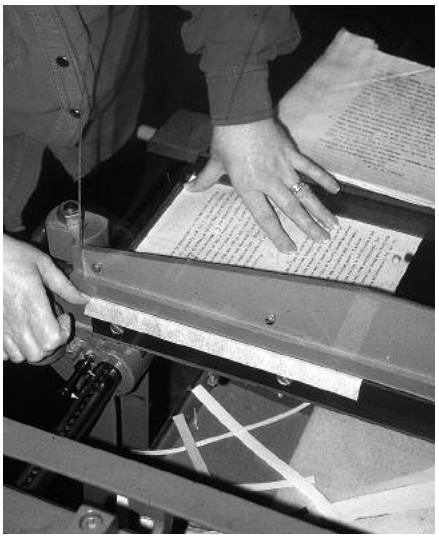

Fig. 4 Folding guards.

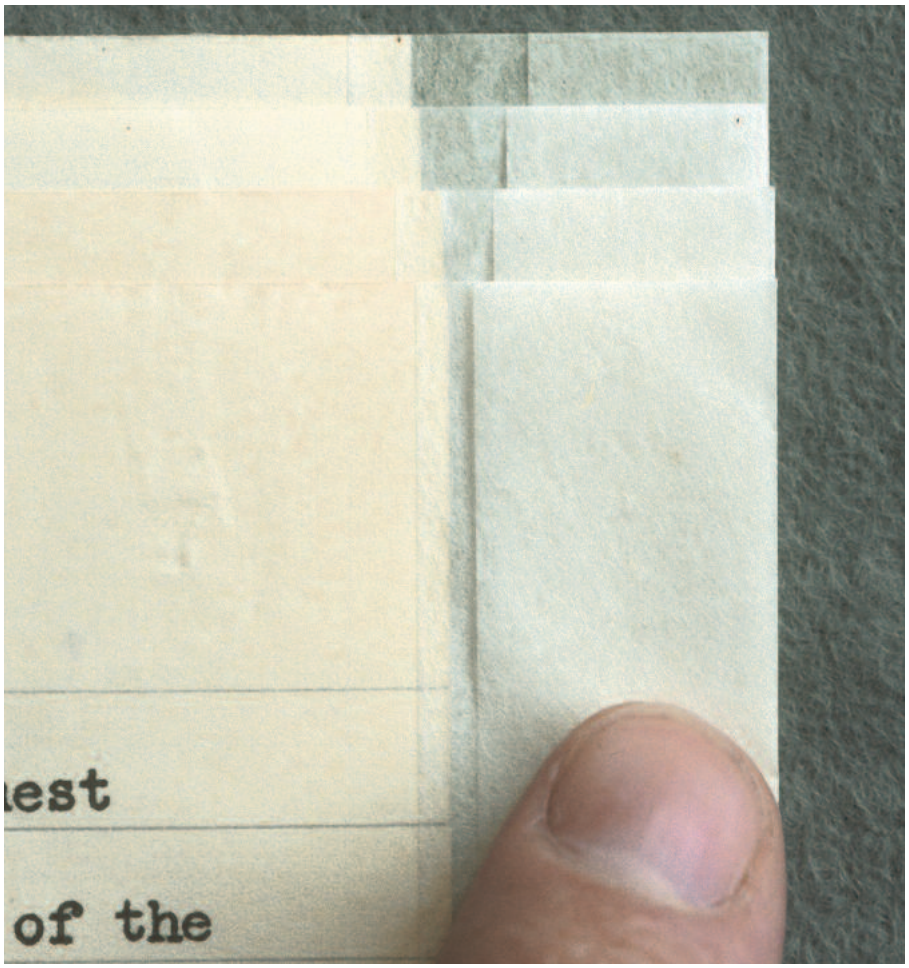

Fig. 5 Staggered guards folded to provide inversely staggered compensation.

smallest guard overlap. For example, a guard of 20mm with 2mm as the smallest guard overlap requires a guard paper 42mm wide ((2 x 20) + 2).

5. Guards are accurately cut, long grain, to the chosen width on the board chopper. As the paper is in roll form I have found it useful to cut guards long enough, with a slight allowance, for four leaves. A length long enough for four guards is cut from the roll and then individual guard strips are cut to the set width. As the guard paper is specific to each manuscript both in width and height it is worth cutting only enough guards for each manuscript.

6. Guarding of leaves follows the technique used in the fascicule system with some slight variations.[11] Leaves are guarded in order rather than sorted according to size. They are taken up in groups of four and placed overlapping each other at the spine edge, with the verso up. Unlike fasciculing, where the overlap is constant, here the overlap of the four items is varied between 2–5mm in one millimetre increments. They are brushed out with reasonably heavy paste and the guard is applied to the pasted area, smoothed down and placed between silicone release paper and blotters. These are left under weight overnight. This staggering of guards in groups of four is carried out in sequence throughout the manuscript, except for those leaves whose annotations dictate minimal guards. Shorter leaves receive guards of standard leaf height.

7. The double width of guard paper allows the guards to be folded to provide not only the guard but also its own compensation. This requires them to be accurately folded and I have found that a board chopper with a cast-iron bed works well as an accurate folding jig.[12] Set the back gauge of the board chopper to the width of a standard leaf plus the chosen width of guard. Line the fore-edge of the manuscript leaf to the back gauge of the board chopper and run your thumb over the guard along the base cutting edge, folding the guard to the verso (Fig. 4). Fold all leaves individually to the set width. Because the leaves have

11 Lindsay and Clarkson 45 and Figs. 9, 10.

12 Schimanek Type 10 cast table board chopper.

Fig. 6 Inserting a double-pointed paper twist.

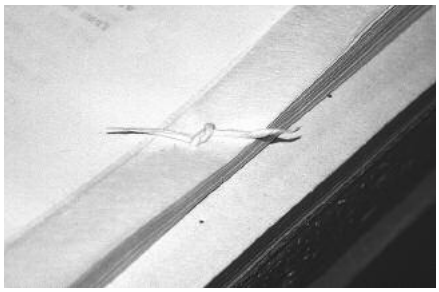

Fig. 7 Double-pointed paper twist beaten flat.

Fig. 8 Five-hole side-stitched fisherized booklets.

been guarded with a staggered overlap, the width of the compensation stub will be inversely staggered (Fig. 5). Knock up the spine of the text-leaves and leave under weight.

8. The folded guards of the leaves of standard height are carefully trimmed at head and tail to the height of the leaf. Guards of shorter leaves are trimmed to the height of the standard leaf.

9. Two single bifolium endleaves are folded for each booklet.[13] They are the height of the standard leaf size plus 2mm to give 1mm protection at head and tail. I leave the endleaves wider at the fore-edge and trim after sewing.

10. Using a paper template, mark the sewing holes on the upper endleaf. I generally use five holes equally spaced and approximately 5–7mm from the spine-edge. The outer holes are approximately 10mm each from head and tail.

11. At this stage the text-block of each booklet can be held together with a double-pointed paper twist.[14] Two holes are punched through the guard paper away from the sewing holes and a paper twist is inserted, tied, and then beaten flat (Figs. 6, 7). This will hold the text-block of the booklet together whilst the endleaves and cover are attached.

12. The text-block and endleaves are carefully lined up on a soft board and weighted securely. The five holes are either made with a Japanese awl or with a flexible-shaft needle drill. The text-leaves and endleaves are five-hole stitched with linen thread, finishing with a knot at the centre hole (Fig. 8).[15] Trim the fore-edges of the endleaves to 1mm wider than the text-block.

13. The cover of the booklet is folded from archival manilla.[16] First, a strip of Japanese paper is pasted to the upper endleaf covering the sewing thread. It is then wrapped around the spine and pasted to the lower endleaf also covering the sewing thread. This is not pasted to the spine and it provides a barrier layer, keeping subsequent adhesive from the guards (Fig. 9). If the booklets ever require pulling, the cover can be pulled off and the thread cut, releasing each leaf with its reusable guard. A cover is folded for each booklet. They are the height of the standard leaf height plus 4mm, to give 2mm protection at head and tail. I leave the covers wider at the fore-edge and trim after they are attached. Accurately measure the spine width and then fold the cover. A joint-fold, slightly wider than the distance of the sewing-thread from the spine edge, is then

Fig. 9 Pasting a barrier layer of Japanese paper to the stitched booklet.

Fig. 10 Finished fisherized manuscript.

Fig. 11 Opening characteristic of fisherized manuscript.

Fig. 12 Treated manuscript, a mixture of fasciculed and fisherized papers housed together in an archival box.

13 Archive Bookend Cartridge 140g m^{-2}.

14 For a detailed description of the technique, see Helliwell, D., 'The repair and binding of old Chinese books, translated and adapted for Western conservators', *The East Asian Library Journal* 8:1 (1998) 96–8.

15 Linen machine thread 20/3 from Barbour Campbell Textiles Ltd.

16 Archival neutral grey manilla cover paper 225g m^{-2}.

folded.[17] Brush EVA onto the cover between the joint-folds, insert the sewn booklet, rub down well, and leave under a weight overnight. When dry, trim the fore-edges 2mm wider than the text-block (Figs. 10, 11).

14. Check the finished booklets, complete documentation and box the booklets (Fig. 12).[18]

Time estimate

The estimates below are based on time needed per 100 fisherized leaves (two 50-leaf booklets) and were calculated when fisherizing Bodleian Library, Oxford, MS. Eng. Misc. d. 1291, a manuscript of 252 leaves. This was a mixture of typescript and manuscript leaves of mainly standard size (approx. 254 x 201mm) which was fisherized in November 2000. Note that this does not include pastemaking, cutting guards, paper repair or boxing of finished booklets.

Collation of loose leaves	10 mins
Guarding of leaves	1hr 50 mins
Removing leaves from blotters	15 mins
Folding standard size leaves	35 mins
Trimming and folding small leaves	55 mins
Checking leaves and dividing into booklets	10 mins
Stitching booklets	15 mins
Assembling booklets	20 mins
Documentation	20 mins
Total	4hr 50 mins

17 For a description of the term 'joint-fold', see Clarkson, C., 'Limp vellum binding and its potential as a conservation type structure for the rebinding of early printed books' ICOM-CC: Preprints of fourth triennial meeting, Venice, 1975, 75/15/3.14–15.

18 They are now housed at the Bodleian Library in a measured Kasemake box. Earlier fisherized booklets were either housed in standard size die-cut commercial archival boxes or in tailor-made phase boxes.

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