



National Preservation Office

Understanding and Caring for Bookbindings

NPO Preservation Guidance
Occasional Papers

BRITISH
LIBRARY

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The production of this leaflet has been supported by Collections Link www.collectionslink.org.uk

ISBN 0 7123 4982 0

Design The British Library Design Office

November 2006

Understanding and Caring for Bookbindings

Developing expertise in recognising and dating bindings is largely a matter of experience, of looking and handling, and many people with responsibility for historic book collections will readily admit that bindings is an area in which they feel they would like to have more detailed knowledge. The key message is that all bindings, however unspectacular they may look, are potentially of interest to historians of the book and cultural historians. Vast quantities of evidence about the ways in which books were sold and circulated in the past has been lost or compromised through the entirely well-intentioned repair work of previous generations, and some of the cheapest and simplest kinds of early bookbindings are now the hardest to find. Provincial collections may contain the work of local bookbinders which will survive nowhere else. Bookbindings are worth preserving not only for their aesthetic qualities but for their value as an intrinsic part of our documentary cultural heritage.

Decisions on the care and repair of bindings can be complex and involve many considerations – use, function, rarity, structural issues. We outline here some of these and suggest sources for further research. Above all we emphasise the need to respect the artefact, the historical evidence which has survived and which we must preserve for the future.

The significance of bookbindings

Our libraries, museums and archive repositories contain a great wealth of books of all kinds which have come down to us from previous generations. They include medieval books and modern ones; grand or famous books and simple or cheap ones; books which are rare or unique and books which are common. They all contribute to our shared documentary heritage, and all may have value to researchers, now or in the future. Something else which most of them have is some kind of binding, an outer cover and a mixture of thread and adhesives to hold the leaves of the book together in the right order, and protect them from damage. Here again this summary covers a vast range of possibilities, including simple paper wrappers, elaborately decorated luxury bindings, and

everything in between (the great majority of the bindings we find in our collections are not from either of these extremes, but somewhere in the middle). Each and every one of these bindings is potentially of interest and worth caring for, not only for its function of holding the text in place but also for its artefactual value, its contribution to the individual history of the book it covers.

The interest of bookbindings has traditionally been thought to lie primarily in their external appearance. Each generation, going back to the early middle ages, has had master craftsmen capable of producing handsomely decorated bindings – gilded, painted or bejewelled – which have adorned the shelves of wealthy collectors and subsequently found their way into exhibition cases or published catalogues. They are self-evidently beautiful objects, works of art in their own right, and looking after them needs little justification. Such bindings constitute only a tiny proportion of the total output of binders over the centuries, and we are increasingly coming to recognise that this purely visual approach to the subject is too narrow.

Before the early nineteenth century, when mechanisation began to be introduced, every bookbinding was an individually handmade object, whose making reflected a series of choices which became part of a book's history. Bookbinders offered their customers a range of options on quality, both structurally and aesthetically; a book might be quickly stitched in paper or vellum wrappers, or it might be fully bound in decorated leather-covered boards. The covers might be decorated simply with a few blind lines, or extravagantly with lots of gold tooling. The choices exercised in each case may tell us something about the ways in which individual books were owned, circulated and regarded. A fine binding may have been put on a book for a variety of reasons, including respect for the text, a wish to impress friends and visitors, a wish to influence a potential patron with a noteworthy gift, a wish to create a handsome presentation copy of an author's own work, or a pure and simple love of nice objects. A cheap and basic one may likewise signify various motivators: a perception of a text as ephemeral, to be read and discarded, an intention to rebind later, an attitude eschewing unnecessary luxury, or plain economic necessity. School books, student textbooks, books for everyday household use, children's books and books for nonconformists are often found in cheap bindings for one or more of these reasons.

An average historic collection will contain a range of bindings from many

periods, some in better condition than others, some in contemporary bindings and some in later ones. Good condition of contemporary bindings may be a sign of a text which has been of less influence and interest than one which has had to be rebound through wear and tear. Rebinding may also be a reflection of changing values; the texts which have come to be most revered and collected, like incunabula or early literature, are the ones which are now least likely to be found in contemporary bindings. There are around 230 copies of Shakespeare's First Folio (printed in 1623) extant today, but only about 7% of them survive in seventeenth century bindings, as the great majority have been rebound by later collectors who felt something better was called for. This is not least because contemporary bindings on Shakespeare are likely to be plain and simple, in line with the status of literary texts in the judgment of his time. A seventeenth-century theological text is much more likely to be found in a fancy binding than a book of plays or poems.

Historic bindings may also hold other kinds of evidence about their previous ownership and use. They may be stamped with the names, initials or armorial bearings of former owners, and they may carry library markings showing how and where they were once stored. They may contain within them fragments of other books, used as endleaves, spine linings, or other structural strengthening devices. In an age when plain paper was relatively expensive, it was common practice to cut up discarded vellum and paper books or documents for this purpose, and many bindings, particularly of the sixteenth and seventeenth centuries, contain such fragments. Countless medieval manuscripts were subjected to this treatment, and all kinds of very rare items – Anglo-Saxon manuscripts or fifteenth-century printed ephemera – are known about only through snippets surviving as binders' waste.

It is often said that one should not judge a book by its cover, but it is increasingly recognised that the reception of a text is influenced by the physical form in which it is experienced; a reader's expectations or perceptions of a book may be conditioned by the quality, permanence or other features of its exterior. Modern bindings are by their mass-produced nature less likely to be unique than hand press period ones, but more likely to be designed with audiences in mind. Putting pictures and text onto covers to reflect a book's contents is a nineteenth-century development which followed on from the invention of cloth casing, and many Victorian publishers' bindings are now valued for their place

in the design history of the period. The introduction of paperback binding and dust jackets, and the rising exploitation of the pictorial possibilities of outer covers, are significant elements in modern publishing history and in the spread of books to ever wider markets during the twentieth century.

Every binding tells a story and the less disturbed its evidence is, the more chance we have of interpreting its story today. Books need to be in a condition in which they can be used, but before applying any kind of repair or conservation treatment to a book, it is important to consider what that use is likely to be. Books which are liable to be heavily used and studied, primarily for their textual content, need to be in sound condition, so that they can be read without disintegrating or suffering damage in the process. However, as texts become increasingly available in surrogate form, digital or otherwise, users are likely to approach the originals with growing interest in their physical, copy-specific aspects, especially in historic collections where books will be seen to have significance in their wider collection context, and not just on their own. The value, both economic and intellectual, which has been placed on books in unrepaired, unsophisticated condition has steadily grown during recent decades.

Binding structures

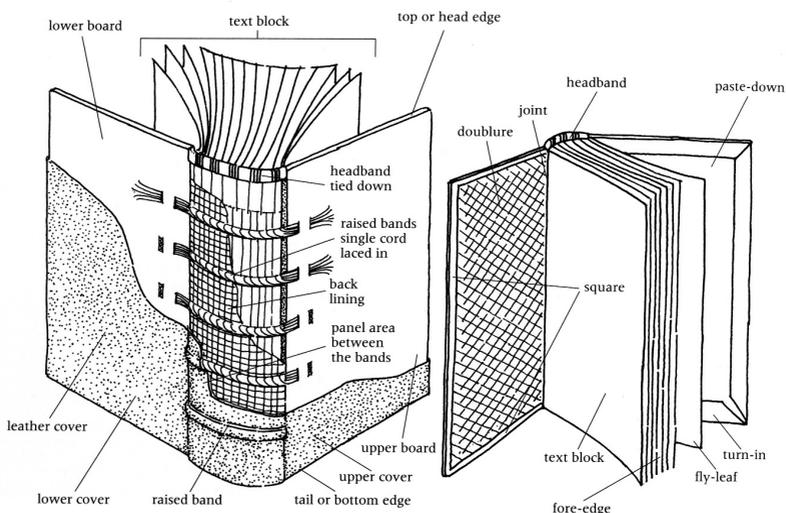
The scope of this leaflet allows only an outline discussion of binding materials and structures. For further information the reader is referred to more extensive works¹.

Our focus is on the types of Western European, principally British, bindings from the hand press period (before c. 1830) which are most commonly found in libraries in the United Kingdom and Ireland; those which were often the everyday bindings of their time. Our aim is to give the reader sufficient information to recognise aspects of book structures and bindings which should be considered when planning for their care and survival. It is assumed that exceptional items such as very early codices, papyri, jewelled, embroidered or elaborately tooled bindings, will generally be well-recognised as treasures and will already receive appropriate care.

¹ For example, David Pearson, *English Bookbinding Styles 1450-1800*, chapter 2, or PJM Marks, *The British Library Guide to Bookbinding: History and Techniques*. A comprehensive glossary by Don Etherington and Matt T Roberts, *Bookbinding and the Conservation of Books* can be found in Conservation Online <http://palimpsest.stanford.edu/don/don.html>

Most books from the hand press period that are found in libraries are made by folding the printed paper and sewing the spine folds onto cords or thongs. The cords or thongs are laced into boards and the boards covered with leather or other material. Books were either sold in loose sheets and bound for the purchaser, or bound for the bookseller and purchased already bound². Other binding structures were meant to be temporary, for example stitched pamphlets or paper covers on cheap boards. Like the loose sheets, the purchaser would have been expected to have these bound. These temporary forms of sewing and binding are now uncommon in libraries, since most owners or libraries would normally have had them bound, but are of interest as a record of the book's history, and as illustrations of the range of physical formats in which books circulated.

The illustration below shows the principal parts of a book and its binding. For definitions of the terms used please refer to the online glossary, *Bookbinding and the Conservation of Books* by Don Etherington and Matt T Roberts.



From PJM Marks, *The British Library Guide to Bookbinding: History and Techniques*, London: British Library, 1998

² For the types of bindings offered by booksellers, see Stuart Bennett, *Trade Bookbinding in the British Isles 1660-1800*, London: British Library; New Castle, Delaware: Oak Knoll Press, 2005

Sewing and sewing supports

Sewing holds the leaves together and attaches the text block to supports which in turn are used to attach the cover. The sewing structure is not normally visible unless the spine has been damaged or detached. The forms of sewing used are complex and produce structures of varying robustness. The supports when covered normally take the form of raised bands (visible ridges on the spine). Alternatively the supports may be recessed into the folds, giving a smooth spine. False raised bands were sometimes used to give the impression of a more solid structure. The supports in early books are commonly strips of leather or tawed skin, and from the mid-seventeenth century cords, made of cotton, linen, hemp or silk were used.

Temporary or cheap forms of sewing are less elaborate, and may not be sewn through the folds of the leaves at all. 'Stab-stitching', passing a thread through the whole block near the spine, is found in pamphlets or other thin volumes. It holds the gatherings together fairly well but because the pages do not lie flat when the book is open, and because the stitches are not within the fold but only close to it, there is much more risk that the pages will tear at the stitches. Stab-stitched pamphlets might be issued either without covers, or with covers of cheap material such as paper or limp vellum, sometimes re-used from other documents. Later printed books, from the second quarter of the nineteenth century onwards, were commonly sewn onto flat fabric supports which are either sandwiched into a split board construction or adhered between the endleaves and board (case bindings). Machine sewn books tend to be sewn without any supports.

Boards

The supports are generally inserted into a rigid material which gives protection for the text block. Wooden boards were used for mediaeval bindings and in the early hand press period, often oak or beech. From the first half of the sixteenth century pasteboard was used as an alternative. Made of sheets of paper pasted on top of one another, pasteboard is greyish-brown in colour if made from coarse plain paper but may be made from printed or manuscript waste. Pulpboard is of similar appearance but was made by pressing together wet sheets of paper to bond the fibres. Millboard, made by pulping and compacting old rope, sailcloth or other similar hemp-based materials, is firmer and stronger than pasteboard, and was used from the late seventeenth century.

Covering materials

Tanned hide or skin was the covering material of choice for permanent bindings over many centuries. In the British Isles, the varieties most commonly used were calfskin, sheepskin and goatskin. Tawed skin (the result of a different chemical process) was also sometimes used, particularly during the middle ages. Vellum and parchment (the former derived from the skins of calves, the latter from sheep, but without tanning) provided another alternative. Textiles were used on a large scale from the nineteenth century and later but do occur earlier. Plain paper covers were used for cheap bindings, particularly from the eighteenth century onwards, but embossed or decorated papers are also found, particularly on continental books.

- Calfskin, or calf, was the most frequently used tanned skin, and is found plain, or stained with paint or acid to produce a patterned effect. Calf may be used with the suede side outwards; this is known as ‘reversed calf’. This is often associated with certain sorts of bindings – ledgers, account books, service books – and is very susceptible to abrasion.
- Sheepskin is less hard wearing (although cheaper) than goatskin or calfskin and less suitable for tooling. The grain layer tends to delaminate from the lower corium layer, leading to the surface being easily torn.
- Goatskin was used for the best quality work, being hard-wearing, shiny and well-grained, and capable of being dyed in a range of colours. It is often referred to as ‘Morocco leather’.
- Vellum / Parchment is made by soaking, dehairing and stretching a skin. It is light-coloured and sometimes shows distinct textures depending on the part of the animal used. It was used over boards, or in limp bindings. When used over boards it may be tooled like leather. Limp vellum bindings provided an alternative to leather covers on boards. The supports are often laced through the vellum cover, but a variety of alternative methods of fixing are found. Such bindings may have been cheap, and may have been meant to be temporary, but vellum is a long-lasting material and many such bindings are still found in libraries. Vellum bindings often have ‘yapp’ edges, (named after the nineteenth century bookseller William Yapp, who described this type of structure) which fold over to protect the text block on the head, tail and fore-edge. Vellum and parchment bindings are sometimes titled in carbon black on the spine.

- Alum-tawed skins are prepared by immersion in an aqueous solution of potash alum. They are often white, lighter in colour than vellum or parchment and thicker in texture, with a more distinct grain.
- Cloth bindings became standard only in the nineteenth century, but velvet was used earlier as a luxury material, sometimes embroidered. Small prayer books and other devotional literature may be bound in velvet. Cloth may be decorated or embossed in many ways. Interest in Victorian cloth bindings, particularly those with pictorial or decorative covers, has grown considerably in recent years.

Tanning

Tanning converts skin or hide into leather by steeping it in an infusion of an astringent. Pre-industrial artisanal tanning methods generally produced long-lasting leathers. However, from the late eighteenth century a number of factors, including agricultural improvements which led to larger animals with poorer quality skins, the increased use of condensed vegetable tannins, and mechanised production methods, resulted in the production of bookbinding leather with poor ageing properties. These leathers often develop a powdered outer surface known as “red rot”, which can transfer to the readers’ hands and to adjacent volumes.

Clasps and other fittings

Metal clasps (usually brass) were widely used with wooden boards until the fifteenth and sixteenth century to hold books shut and thus avoid distortion or cockling of the parchment text block. Later their use became a decorative feature as the use of paper superseded parchment in the text block. This evolved into the use of cloth or silk ties, mainly during the sixteenth and seventeenth centuries. These forms of closures are vulnerable to damage, and often survive only as stubs of cloth, fragments of metal, or holes indicating where clasps were formerly attached. Other forms of metal furniture were used to protect volumes in use, for example bosses and metal corner pieces designed to reduce damage when books were used on a lectern. Occasionally the remains of furniture used in a chained library may be found.

Endleaves

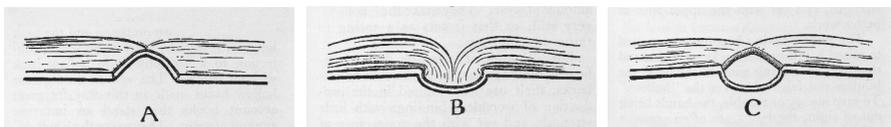
Additional or integral folios are used at the beginning and end of a book, whether pasted down or loose between the board and the textblock, in many different ways. In early books they may be plain, or of waste printed or manuscript material. From the seventeenth century marbled paper began to be used for endleaves. Endleaves often carry important provenance information or annotations, but are vulnerable to damage in use.

Headbands or endbands

Originally endbands were sewn with a strong linen thread onto a round hemp core and were a structural feature of bindings. The cores were laced into the boards for extra support, and for decorative purposes a secondary sewing was carried out over the primary sewing with coloured threads. However, with time, their purpose became more often purely decorative. They were made with narrow strips of leather, paper or other material covered with coloured threads. These endbands can easily become detached from the binding with use and age.

Hollow back and tight back bindings

Flexible leather bindings allowed books to open well (example A, below), but the leather tends to crease. Rounding and backing, as in B, provides a more rigid base for gold tooling on the spine, but causes the pages to fan out rather than lie flat. The hollow back, as in C below, first used in England around 1790, in which the covering material is not glued to the text block, opens well and protects spine decoration, but does place more strain on the joints.



Decoration

Decoration was most commonly applied to leather bindings using heated metal tools, either with gold leaf (gold tooling) or without (blind tooling). Bindings may also be found decorated in a variety of other ways such as painting, embroidery, patterns cut into the surface, or the addition of jewels and other

precious objects. The techniques, and the designs and layouts characteristic of different times and places, will be found described in more detail in any of the standard works on the subject, listed in the bibliography.

Caring for bindings

Damage to a binding threatens the survival of the text it contains. Detached boards or broken sewing mean that pages become loose or torn. In cases of severe damage there may be no alternative but to rebind the book in order to preserve the text. Some awareness of the types of damage that typically occur, and their causes, will help you decide what steps to take. Rebinding may not be the only solution, and alternatives may offer more opportunity for retaining the original structure. Some of the commonest forms of damage are:

- Broken joints: the boards have become detached from the thongs or cords. The cord may be broken, leaving only a stub.
- Broken sewing: the sewing and cords may be broken and the text block in several pieces.
- Physical damage or abrasion to the cover. Some leathers, such as sheep and reversed calf are particularly vulnerable to this sort of damage.
- Detached headbands. Headbands are often only decorative but have a structural function in earlier bindings.
- Broken or detached clasps and bosses.
- Vellum bindings may suffer dimensional change. Typically, vellum on boards, if subject to warm dry conditions, will contract and cause the board to spring outwards. The joint frequently breaks as a result.
- Limp vellum binding covers can become distorted. Moisture can sometimes be the cause.
- Leather degrades. The causes are complex, but common contributory factors are poor tanning, atmospheric pollution, and warm, dry storage conditions. The leather may develop 'red rot', disintegrating into a red-coloured dust.
- Cloth bindings may discolour, fade or abrade.
- Paper bindings, often made of acidic materials, become brittle and fragmented.
- Alum tawed covers are very sensitive to water and can discolour and lose flexibility if the soluble salts are removed with moisture.

Causes of damage

Physical damage may be caused by normal use: books are read, handled and moved. Sometimes they are photocopied. The type and quality of the shelving they are kept on may contribute to damage. Environmental conditions may cause deterioration: overheating, atmospheric pollution, whether current or historical, or a damp storage area all encourage or increase the rate of degradation of binding materials. Some materials have internal, chemical qualities which lead to degradation whatever the storage conditions; nineteenth century condensed vegetable-tanned leather and paper bindings both fall into this category.

Preservation

Damage can be minimised by good preventive care:

- Good handling can be encouraged through the provision of printed guidance notes for users and supervision of those using fragile or sensitive materials. The use of gloves gives a good message, reinforcing the need for care, but cotton gloves are generally not recommended for books due to loss of sensitivity and the risk of abrasion. Vinyl or nitrile gloves may be used if needed. Gloves are recommended when handling textile bindings or bindings with metal furniture. Staff should receive training in handling books as poor practice in removing books from shelves and transporting them on trolleys can cause a great deal of damage.
- Book supports, whether of the foam wedge or cushion type, protect bindings by ensuring they do not open to too wide an angle. Weights, usually in the form of book snakes, can be used to hold the pages of tightly bound volumes in place for reading.
- Storage and shelving. A great deal of damage to bindings is caused by unsuitable storage. Shelves must be of the right size, allowing books to stand upright without projecting beyond the edge of the shelf. Large volumes (over 400mm tall) should be stored horizontally, no more than three high. Books of the same size should be stored together. If small and large books are shelved together neither will be properly supported. If they cannot be separated, suitable bookends should be used between them to support the taller items. Books with clasps, bosses, straps or ties should be placed in an enclosure

before being placed onto a shelf, to protect the projecting parts, and to prevent damage to adjacent volumes.

- Photocopying and flatbed scanning can cause damage to bindings. The sewing and joints are at risk if books are placed face down at 180° for copying. 'Book-friendly' copiers with an angled platen edge allow copying with the book open at a lesser angle. However, the binding will still suffer a degree of stress by being placed face down. An overhead scanner or digital camera, which allows the book to be copied face-up while supported by a cradle, will avoid this stress.
- Appropriate environmental conditions. British Standard 5454:2000, *Recommendations for the storage and exhibition of archival documents* does not make explicit recommendations concerning the optimum storage environment for leather, but in general, the environmental needs of leather are not significantly different from other organic materials. The recommendations of BS 5454:2000 should be followed for bound volumes. Leather bindings are particularly susceptible to damage caused by high relative humidity (which leads to mould growth) and rapid or extreme changes in relative humidity (which may cause shrinkage or expansion of the material). Low relative humidity (below 40%) may cause leather to lose flexibility and lead to cracking or splitting. Vellum and parchment are particularly sensitive to extremes of temperature and relative humidity, and can suffer noticeable dimensional change.
- Protection from light. All light is harmful to leather, cloth and paper, causing discolouration and weakening of the chemical structure. The use of blinds and shutters, and ultraviolet filtering film on windows, provides protection. A box or other light-excluding enclosure is even more effective. When light is not required in the storage or exhibition area, lights should be switched off, either manually or automatically. Ultraviolet filters should be used on internal lights. BS 5454:2000 provides recommendations on light levels for material which is on display either temporarily or for longer periods.
- Keeping material clean. Dust and other detritus provide food for mould and pests, abrades the cover and can present a health hazard. Simple brushing at regular intervals is recommended. The use of leather dressings is not recommended since they can cause a sticky residue build-up and discolouration of the leather. Historically, milk has been used to clean

vellum; this is not good practice since any form of liquid is likely to roughen the surface and make it more vulnerable to dirt and poor handling³.

- The creation and use of surrogates for fragile material, whether microfilm, digital copies or facsimiles, can reduce damage due to handling.
- If books are displayed as part of an exhibition, they should first be formally assessed by a conservator to ensure they are sufficiently robust, and treated if necessary. While on display they should be appropriately supported. They should not be displayed for long periods. Changing the opening page periodically may be appropriate⁴.

Protection

Boxes can be used to protect bindings. They will support weak structures, prevent abrasion or the transfer of red-rot dust, protect from light and, to some extent, from fluctuations in temperature and relative humidity. In the case of fire or flood, a box can delay the impact of the disaster. Moving boxed material is quicker, easier and safer than moving unboxed items.

For bound volumes, boxes should be made to measure to avoid damage from movement within the box. BS 5454:2000 paragraph 10, *Packaging for storage* outlines a specification for containers. Some types of protective enclosures are listed below:

- Phase boxes are light-weight folded boxes generally made of acid-free card. They may be hand-made or machine-made.
- Drop-back boxes are more substantial, made of heavier board and often covered with buckram. They may have internal padding or support to protect metal furniture.
- Bookshoes, made of light-weight card, do not cover the spine, and may be used in libraries where the visual effect of a box would be inappropriate. An insert is used to support the text block within the shoe.
- Solander boxes made with a formaldehyde-free plywood frame and buckram covering, are used for large volumes or collections of papers which are to be stored horizontally.

³ See Caroline Bendix, *Cleaning Books and Documents*, London: National Preservation Office, 2005 www.bl.uk/services/npo/pdf/clean.pdf

⁴ See Northeast Document Conservation Centre leaflet *Protecting Books and Paper Objects During Exhibition* www.nedcc.org/plam3/leaf25.htm

- Flapcases, generally buckram-covered, have four flaps attached to rigid board, which fold to enclose the item. They may be used for thin volumes or pamphlets.
- Slipcases enclose the volume on all sides except for the spine. A book may be published with a slipcase, which will itself need preservation. Publishers' slipcases are generally not acid-free and may be stored separately from the volume. Slipcases are not used for preservation because of the risk of abrasion in removing the volume.
- Polyester jackets can be used to restrict direct contact with damaged reversed calf or bindings with red rot.

Acid-free paper envelopes and open-ended polyester sleeves may be used for very slim items or single sheets, but are not appropriate for most bound volumes since they will not support the volume on the shelf and may even cause distortion.

Conservation

Preventive measures and physical protection will prevent future damage, and should mean that condition does not deteriorate. However, some forms of damage are unstable and the items will continue to deteriorate despite preventive measures, or are at risk of further damage if used. Volumes which have mould or pest damage or badly broken sewing are likely to be unstable. Interventive conservation treatment may be needed to stabilise the volume's condition, but it is best practice to retain as much as possible of the original structure. Full rebinding is an option but may not be the best one and other options should always be considered first.

The book's structure may be conserved in a variety of ways. Even when sewing is broken and the cover is detached, or leather is detached from the boards, much of the original can usually be retained:

- The volume may be re-sewn and the original cover re-used.
- Boards may be re-adhered by attaching linen hinges to the spine then slotting them into the boards.
- New joints may be made of thinly-pared leather or of Japanese paper tinted to match the leather.
- Cloth bindings may be repaired with an unbleached linen toned to match the original.

- Some forms of degraded leather may be treated with a consolidant.
- The broken sewing structure can be consolidated with linen thread.
- The endbands can also be consolidated with new thread.

After conservation treatment the book may be boxed to prevent future damage. When commissioning conservation treatment it is important to ensure the quality of the work carried out by employing an accredited conservator. The Conservation Register www.conservationregister.com should be consulted to identify a suitable conservator or conservation practice.

Deciding what to do

One of the purposes of this leaflet is to indicate options for preserving bindings. In principle, original, early or historic binding structures should be retained if at all possible. A binding may be contemporary, i.e. of the same date, with the production of the book, or it may be later, but either way it will be part of the book's history. Books of the hand press period were sometimes bound soon after being printed, but sometimes remained as loose sheets, or circulated in a temporary covering, for some years thereafter (dirt on the titlepage and last leaf may be an indication that it was not bound immediately). Many books have been rebound, rebacked or repaired more than once during their lives, and interesting evidence (such as endleaves, which may be annotated) has often been lost in such processes. Whenever carrying out preservation or conservation work on a binding, it is important to try to retain or record as much of the original material and structure as possible, and commission work with care.

It should be noted that with the exception of preventive measures, most of the actions described below should only be undertaken by a professional conservator:

- **Prevention.** Damage should be prevented, by using protective enclosures, good storage and good handling.
- **Stabilisation.** If the binding is actively deteriorating (if, for example, there is pest infestation or active mould) or if it is so fragile that use and handling would cause further damage, it should receive treatment designed to arrest deterioration. Mould and pests should be removed; this may involve freezing or the use of anoxic (oxygen-free) treatment. If portions of the binding have become detached they should be collected up and safely housed, and options for re-adhering them explored. If the book cannot be opened

without further damage to the binding, treatment will be needed.

- Future use. The way in which the book is to be used influences the choice of treatment. If it is to be regularly used, read and handled, a robust binding may be needed, and if the binding is fragile, rebinding may be justified. If the text is available in another format there may be less need to embark on rebinding, and the binding may remain fragile but stable and well protected, while users who are primarily interested in the text can be directed to the alternative format in the first instance. The options for creating a surrogate, whether microfilm, digital, photocopy or facsimile, should be considered. The more unique features a binding has, which are likely to be of interest in their own right, the more important it becomes to strike a balance between preserving the artefactual qualities and maintaining usability as a text.
- Detached or ancillary parts. If detached parts cannot be reattached, or it is inappropriate to do so, they can be housed separately, perhaps in an envelope or sleeve, which may be kept in a box with the book. If the book is rebound, or if endleaves are replaced, any labels on the cover or endleaves should be retained. If the endleaves have markings or manuscript notes, they should be retained. Clasps, bosses, ties, page markers should all be housed separately.
- A condition report should always be carried out before any treatment commences and all conservation treatments recorded, supported by images where necessary.

Bibliography

- Douglas Ball, *Victorian Publishers' Bindings*, London: Library Association, 1985
- Stuart Bennett, *Trade Bookbinding in the British Isles 1660-1800*, London: British Library; New Castle, Delaware: Oak Knoll Press, 2004
- Don Etherington and Matt T Roberts, *Bookbinding and the Conservation of Books. A Dictionary of Descriptive Terminology*, Washington: Library of Congress, 1981 <http://palimpsest.stanford.edu/don/don.html>
- Edmund King, *Victorian Decorated Trade Bindings 1830-1880*, London: British Library; New Castle, Delaware: Oak Knoll Press, 2003
- Marion Kite and Roy Thomson, *Conservation of Leather and related materials*, Amsterdam: Elsevier 2006
- Margaret Lock, *Bookbinding Materials and Techniques 1700-1920*, Toronto: Canadian Bookbinders and Book Artists Guild, 2003
- PJM Marks, *The British Library Guide to Bookbinding: History and Techniques*, London: British Library, 1998
- Bernard Middleton, *The History of English Craft Bookbinding Technique*, London: British Library; New Castle, Delaware: Oak Knoll Press, 1996
- Bernard Middleton, *The Restoration of Leather Bindings*, London: Adamantine Press, 1984
- Howard Nixon and Mirjam Foot, *The History of Decorated Bookbinding in England*, Oxford: Clarendon Press, 1992
- David Pearson, *English Bookbinding Styles 1450-1800*, London: British Library; New Castle, Delaware: Oak Knoll Press, 2005
- JA Szirmai, *The Archaeology of Medieval Bookbinding*, Aldershot: Ashgate, 1999

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