This presentation attempts to provide a general overview of the many popular bookbinding formats available to artists for making edition bookworks. We are living in an experimental time for bookmaking -- painters, sculptors, printmakers, writers, poets, and publishers, are all being drawn to the book as a form for expression. As these people have 2,000 years of materials and techniques to draw from, the physical options are endless. However inspired the artist/publisher may be by the many options available, he/she should remember that two crucial factors in the designing of an edition are the selection of a suitable binding structure, and the appropriate use of materials. These choices will effect the artist's ability to communicate his/her intentions to the viewer, and to a large extent will determine the success of the object as a work of art and craft. Limited to bound and unbound editions and enclosures, the presentation omits one-of-a-kind books, as they comprise a category of bookbinding which make different demands of an artist. In creating an edition of books, the artist/publisher must adhere to these criteria -- regardless of the size of the edition, a consistent quality of design and craftsmanship must be achieved; and the edition should be as cost-effective as possible. It is also understood that an artist/publisher should place as much creative effort in the design and construction of the page and binding as they do in the creation of text and images. An effort has been made to include a full range of bookbinding and enclosure options. The size of the editions illustrated are from 5 to 500, although the majority are in editions of 20 to 100. The formats are arranged from simple to complex, followed by unbound editions and boxes/enclosures.

FASTENERS, FINDINGS, AND BOOKBINDING SYSTEMS

Many artists use commercially available binding materials such as ring binders, screw posts, and staples, in surprisingly creative ways. The advantages of utilizing fasteners, findings, and binding systems are many. They are easily acquired, inexpensive, take little time to assemble, and require little technical skill. These materials can be used to create either flexible or constricted structures. Whether designing for flexibility or rigidity of structure, an artist must select a suitable format and materials for his/her purpose. One way to achieve a flexible structure is to use only one fastener, which will function as an axis for the pages, allowing a broad opening, similar to that of a fan. Other commercial binding systems that will allow for good openability are individual rings, loose leaf ring binders, spiral, O-ring, and plastic comb bindings. Commercial binding systems which will result in a constricted structure with poor openability include the use of two or more fasteners of any kind (e.g. screw posts, grommets, pop-rivets, staples); or any constricted style of binding system (e.g. Velobinding, spring clamps, report covers and plastic spines). An exception to this is that some constricted binding systems are inflexible in their bound state, but can be easily disbound if required.

THE "ORIENTAL-STYLE" STAB-SEWN BINDING

The Oriental-style of stab-sewn binding has been used continuously since the 12th century and is most popular today with artists who are looking for a simple, strong hand-bound structure; which can also be decorative, requires little technical bookbinding skill, is cost effective, and easily duplicated. Traditionally, the Oriental-style stab-sewn binding has these features -- the sewing (usually four sewing stations) passes through the book; the leaves are made with flexible text paper with folds at the foredge; the covering material is flexible, and usually made of paper or silk. A common error made by artists when using this structure is the use of heavy or inflexible Western text paper, which results in a book which will not easily open. Stab-sewn bindings do not lend themselves toward the use of complex page formats.
PAMPHLET OR SINGLE-SECTION BINDING

A pamphlet is usually defined as a small, unbound, single-section book, which is either stapled or sewn through the fold, and has either a paper cover or none at all. Pamphlets have traditionally contained short treatises on a subject of contemporary interest and have always been intended as an expedient and inexpensive way to disseminate timely ideas to a wide public. Pamphlet bindings can be made easily by hand, or they can be commissioned from job printers and commercial binders. A pamphlet binding is appropriate for small, thin works. It will open flat and lend itself to a conservative variety of page formats, including fold-outs, pop-ups, pockets, or other thin inclusions. Many decorative techniques can be easily applied to pamphlet binding, and artists often use two or more pamphlet bindings bound together to form visually dynamic books. Pamphlets can be bound by hand or by commissioned from an edition, or library binder.

PAPERBACK BINDING

Paperback bindings are meant to be inexpensive and can be made commercially or by hand. They are usually flat back books with paper covers that are mostly, but not always, of a heavier stock than that used for the leaves of the text. Paperback textblocks can either be adhesive bound or sewn through the fold. The choice of paper, paper grain, and method of leaf attachment, will determine the flexibility of the book. If adhesive binding is the method of leaf-attachment selected, the text paper must be fairly thin and flexible, in order to ensure good openability and to keep the textblock from "breaking". Paperback binding does not lend itself to complex page structures or materials.

CASE BINDING

Case binding is also referred to as edition binding or publishers' binding. Although hand-bound paper-case and limp-vellum cases have been used for centuries, it wasn't until the 1830's that publishers' cloth case bindings began to replace in-boards bindings as the predominant commercial binding format. Whether bound by hand or machine, case binding remains the most efficient and flexible method for binding and decorating a book. A flat-back or round-back case binding can be made to cover many styles of textblock, including books which have been adhesive-bound or sewn, albums, moveable books, and a variety of other complex page formats. Case bindings can be made commercially for a reasonable price, or made by hand, requiring a moderate level of technical skill.

Variants of the modern case binding are hand bound, limp-vellum and paper-case bindings. They were used profusely from the 14th-17th centuries in Europe, for thin blank books and revived by the private presses of the late 19th century. These bindings are aesthetically pleasing and extremely durable, however, the materials can be expensive, and the bindings are labor intensive, requiring advanced bookbinding skills.

LIBRARY BINDING

The primary function of a commercial library bindery is to rebind and recase individual and sets of books, of a variety of formats and sizes, in a durable, expedient, and inexpensive manor. Although most library binders work exclusively on library materials, some are also edition binders, binding editions of books for publishers. Binding for a library must take into consideration the use patterns of the books, as well as the variety of book formats found these collections. These formats include paperback books, newspapers, maps, plate books, and mixed media publications -- all of which have features similar to those found in artists' editions. The nature of commercial library binding lends itself to the needs of many small press and artists' book publishers.
In addition to a variety of library-style bindings, many library binderies provide other services, including small edition binding and custom-made enclosures (e.g., drop-spine boxes, portfolios, and folding boxes).

**EDITION BINDING**

An edition bindery can produce many varieties of cost-effective, machine-made bindings, boxes, and slip cases, in substantial quantities of a title, for supply by a publisher to the trade. Binding formats commonly available through edition binderies include flat- and round-back case bindings; as well as paperback, spiral or wire, plastic comb, and loose leaf bindings in cloth, paper, and natural and synthetic leather. Some contemporary edition binderies are accustomed to working with small press publishers and artists and will bind small editions (100+ copies). When collaborating with an edition or library binder, the artist/publisher should consider providing the binder with an accurate prototype for the book, and communicate all physical and financial specifications in writing.

**FINE BINDING**

Fine bindings require the skills of a group of talented artisans for their design and manufacture. They can be commissioned from a small group of trade binders, or from individual fine hand-bookbinders at great expense. Fine bindings are traditionally hand-bound in leather, and decorated with gold- or blind-tooling; and have additional functional and decorative elements, including leather mosaic inlays or onlays, elaborate doublures and endleaves, embroidered endbands, gilt or painted edges, insets of gemstones, and metal bosses and clasps. Some contemporary fine binders not only bind the texts of others, but also create bound editions of their own artwork and/or texts; others work in close collaboration with artists’ book publishers to produce deluxe edition bindings. Popular variations of fine binding are the stub- and the tongue-and-slot bindings. In these styles, the front and back covers are constructed off of the book, eliminating the need for strong pressure, and therefore providing an opportunity to create three-dimensional covers from fragile materials.

**EXPOSED SEWING AND SPINES**

The recent appreciation of ancient, medieval, and Renaissance binding structures has made a great impact on the work of today’s book artists. Contemporary bindings using exposed and decorative sewing have been inspired by early Coptic bindings, and medieval and Renaissance blank-book and account-book bindings, which include limp vellum, paper-case, tacketed, and long-stitch methods. These structures have excellent openability for these reasons -- the signatures are sewn through the fold; and no adhesive or spine linings are employed. Exposed sewing and the fact that the covers can be made in an endless variety of styles, provide the artist with many aesthetic options. These bindings can be labor-intensive, and require a moderate to high level of technical skill to produce. The exposed, delicate materials used in these bindings leave them vulnerable to damage, and artists should design protective enclosures for them.

**ACCORDION FOLDS AND PLEATS**

Simple to construct and visually dynamic, the folding book (also called a concertina, accordion, or pleated book) has been a popular book format for centuries. Any material with good fold endurance can be made into a folding book; and wood, bark, bone, vellum, textiles, and paper have all been used. The folding book format has many variations and can be used to create a wide range of structures, some of them quite complex. In the traditional accordion book, the pages can be viewed in two ways. They can be folded in a codex-like fashion and viewed sequentially, or the entire book can be pulled open, exposing the whole text/images at once. Another style of the accordion format is the pleat or concertina, where small folds can
be used as stubs for attaching additional pages. Pleats are used in making expandable structures, like tunnel books, and can also be used for making albums-like bindings, where the pleats are sewn through the fold to and function as a "guards" or packing for the book. Accordion folded books can get quite complicated and will require much planning and skill.

ALBUMS, COMPLEX PAGE STRUCTURES, AND EXCEPTIONS TO THE RULES

Artists are drawn to dynamic structures, techniques, and materials. To express their ideas through the form of the book, they are using albums, scrapbooks, movable books, shaped books, small and large formats; as well as unusual page formats such as pop-ups, fold-outs, overlays, envelope pages, and matted pages. Artists are often utilizing materials and adhesives which may be unfamiliar to them, and they should be aware that these materials could be physically incompatible and have questionable permanence. Some factors to take into consideration when selecting a format and materials for your book are: the cost and availability of materials; the ability to make multiple copies of the book; the compatibility of materials and structures; the need to protect the exterior and interior surfaces from handling and abrasion; the ability of the structure to compensate for inclusions and unusual page formats; and the stability of laminates. To ensure the success of a physically complex structure, the artist/publisher should make a prototype of their book, using the exact materials and dimensions as the desired product. No one can estimate the problems inherent to a bookbinding without making an exact prototype, and all problems should be worked out before materials have been purchased and work has begun on the edition.

UNBOUND EDITIONS AND UNUSUAL FORMATS

Traditional unbound editions in signatures and/or individual plates need to be packaged in some type of enclosure, and these are reviewed below. Today, artists/publishers are using many unusual book formats in the production of editions. These include variations on traditional forms of the book, as well as the use of familiar and "found" objects for making bindings and containers. Some popular familiar formats include the scroll, tablet, game board, and folding screen, among others. In addition to these, we can rely on contemporary artists and binders to adapt almost any object or material to binding and boxmaking. When traditional views of the book are abandoned, the artist can employ sculptural principles for bookmaking. In sculptural books, traditional book values -- openability, protection, permanence -- are not always relevant; however, if they are, the artist must not sacrifice the book's ability to function and be read.

WRAPPERS, BOXES, AND ENCLOSURES

Wrappers, boxes, and other enclosures are very effective in the presentation and preservation of a book. Traditional enclosures include the glassine wrapper, dust jacket, chemise, slipcase, folding box, drop-spine box, and drop-spine box. Custom enclosures can be commissioned from either a hand binder, or a library/edition binder. Enclosures can be made simply, covered in paper or cloth, or they can be of elaborate design, incorporating the materials and decorative elements of a fine binding. Some contemporary fine press publishers commission custom-made boxes in wood, plexiglas, and metal; which are an integral part of the design of the book. Many imaginative uses of enclosures can be seen in the inexpensive artists' editions, where commercially available, and eye-catching wrappers and enclosures are being used in humorous and effective ways. These enclosures include bags, envelopes, recycled boxes and containers, movie film cans, tape cassettes, and much more. As the role of an enclosure is to protect the book, the artist/publisher must give protection high priority when designing or selecting an enclosure. This means that the enclosure should fit the book well and not cause any damage to the book. Slip-cases are dangerous, and if a slip-case is to be used, the book should have a jacket or chemise to protect the spine and covers from fading and abrasion.
USING JIGS FOR MULTIPLE BINDING

From the beginning of the binding process, books to be bound as an edition must be approached differently than the individual binding. To overcome problems presented by multiple binding and to increase speed, it may be necessary to use guides or setups called jigs to assist in production. Jigs insure accuracy when a binding operation is to be repeated consistently. They can be very simple and may become general tools used in the workshop such as joint jigs for making case covers or punching jigs for hand sewn editions. Or, they can be specific to an edition where the structure, design or materials may require special handling and creative jig-making.

Jigs can be made easily and inexpensively with binders board, cut or laminated, and covered with clear packing tape in order to clean and to keep edges sharp while in use. If a jig becomes a standard shop tool, it may be worth the extra expense to make the jig in wood or machined in metal. Time spent making the jig should be considered and prove time-saving in the long run during production.

Following are some diagrams and description of jigs which binders may find useful in handling their editions. While some are basic and serve multiple functions, most of the jigs presented here are oriented to the case binding structure, flat or rounded, since it is most frequently used in edition work.

JOINT JIGS: Hand held joint jigs are basic tools for the workshop. They can be made by simply laminating various thicknesses of binders board until the desired joint width is achieved. For easy handling, cut the board to 3" x 12" before laminating. Production of large books or boxes may require longer jigs. It is helpful to have sets of joint jigs in a range of joint widths from 3mm to 9mm. Clamshell box cases may only require 3mm, 4mm, or 5mm joints depending on material and board used; book cases need larger joints if pressed between brass edge boards from 6mm to 9mm, with 8mm the average.

PARALLEL JIGS:

These jigs are useful for scoring or creating off-center folds such as hinges for photo albums, turn-ins for paper cases, as well as scoring leather on 1/4 case covers to indicate placement of side covering material.

1) Scoring 1/4 leather case: Make jig base length 1" longer than the book case board for ease in working with jig. The width of the jig base is critical and should be determined by the amount of side material required on the case cover. Add 5/8" to this measurement to allow for a 5/8" strip of board adhered to the base edge to create a stop.
To use, place jig face down and butt against assembled leather case fore edge (covered on spine only). At opposite jig edge, score leather to desired depth with bonefolder. Excess leather can be beveled off with a knife at scored edge allowing the side covering to butt against scored line.

2) For general scoring: Make base jig length longer than object for ease in running bonefolder tip along metal ruler. Cut a strip of board equal to base length by 5/8" to make a stop for the object. Adhere to edge. Draw a line parallel to the stop, the distance of width of score desired. Make two outer stops by laminating 5/8" square pieces of board. Attach to base edges just inside the drawn parallel line. Protect the jig by placing clear tape along the area where scoring will occur.

To use, position object against stop and place metal ruler over object against outer stops. Score along ruler with point of folder. Afterwards, lift scored area underneath with folder and work against ruler.

For paper cases or dust jackets, repeat above steps but move outer stops further left to width of cover. If paper is cut accurately with spine width considered, it is possible to score one side and then flip around and score the other side. The spine is created by the space between scores.

RIGHT ANGLE JIG: This is an all purpose jig useful for different set-ups, especially if combined with secondary jigs for specific jobs. It can assist in the alignment of separate objects for off-center tipping by simply marking positions on the jig.

The right angle jig can also be adapted for making cases by making a secondary jig equal to turn-ins and marked to indicate spine positions. The glued covering material is placed in the original R/A jig at the square, while the second turn-in jig is placed over the cloth against R/A jig edge in order to set case boards and spine in position.

To use for tipping plates on flat sheets, cut a secondary right angle jig of 20 pt. card to the margin widths required for positioning of plate or label. Place sheet into original R/A jig and then the second jig over it. Set tipped plate against the secondary jig.

THREE- SIDED JIG: This jig is designed for attaching side covering material for 1/4 case bindings where side material is to overlap the spine material. It is not necessary to trim spine material with this jig.

Cut jig base larger than the book case board to allow for stops and an area to secure jig to bench when in use. Draw a parallel line 1" from bottom edge for placement of stop.
(Three-sided jig continued)
Set fore edge of assembled case (cloth on spine, sides not covered) against stop. Comfortably attach side stops by head and tail of case board with adhesive or double-stick tape. All stops should be equal to turn-in width to help in consistent placement of side material, making uniform turn-ins. Make two double laminated 5/8" square stops. Draw a parallel line from bottom stop to designated position where cover material should overlap case cloth. Attach stops above line on each side, just away from the case. Once the uncovered case is in position, the glued side material is butted against these back stops and rubbed down along the spine overlap. Remove the case from the jig, cut corners and finish turn-ins. Repeat for other side.

CORNER JIGS: These jigs are used to attach corner material in the correct position for 1/2 case binding. They can also be used for scoring leather corners to indicate trim edge. Cut a squared board to a 45-degree triangle, equal to the size of cloth corners which includes turn-ins. Two stops are cut to the turn-in width and glued at right angle edge of corner piece. To attach cloth or leather corners to the case board, place the corner jig underneath the case with stops face up. The glued covering material can be lined up to square of jig. Remove jig, cut corners and turn in material. It is not necessary to trim out these corners once on the board unless a beveled edge on leather is desired. Otherwise, an overlapped edge is created when the side material is applied. Another jig could also be made of litho tin with stops attached with double-stick tape for direct trimming of covered corner (see litho tins).

PUNCHING JIG: When there are many sections to be sewn for an edition, it is time saving to construct a special jig such as this one made from a cardboard box. Find a box in proportion to sections to be punched. Cut a "V" (90-degree angle) on two sides. Cut a separate sheet of cardboard larger than an open section. It should extend beyond the box edge for easy attachment with brown paper tape. Lightly score and fold in half, then set it into the 90-degree cut-out. The scored center can be reinforced with paper tape and then punched with an awl to correspond with punching holes on hand jig. Place stops at one end to line sections up consistently with punching holes.

The hand jig is made of laminated board for strength, with the last laminate shorter in width to act as a stop for the needles. An extending stop is applied at one end to align the hand jig with the box. Metal pieces can be set behind needles for reinforcement. Score a slight recess where needles are to be positioned, making sure needles extend out only 5/16" for strength. To use, set open section in box groove with head against stop. Punch with hand jig, with stop at head.
TINS FOR JIGS OR TEMPLATES:
Litho tins are great for making jigs that require trimming or templates for trimming out shapes.

Pick up used litho tins at most commercial print shops. They are usually oversize but can be easily cut down on a board shear or by scoring with a utility knife against a metal straight edge.

It is only necessary to score the metal and then bend until it breaks. For detailed areas when cutting templates, use a needle-nose plier to work the scored area until it snaps off. Beware that these tins are sharp. Using a face mask, sand or file the edge after cutting.

Trimming out template for case fills: Cut a piece of tin as a guide for trimming uneven case turn-ins. This eliminates the traditional use of marking up with dividers. Line the tin up to the inside edge of case board at spine edge. Secure with small weight. If the case is set on a board while trimming, it is possible to spin the case around as the turn-ins are trimmed around the tin. Remove excess turn-ins and drop in fills cut to the size of the template.

These are just a sampling of possible jigs that can be constructed to assist in the production of book editions. Jigs can be a challenge to the edition binder as a creative means to solve a problem with specific materials or constraints caused by the format of a particular book design. They can insure accuracy of repetitious steps throughout the binding process. Perhaps most important, they speed up production. Whether you are an individual working on small editions or working in a large bindery, the jig can be an essential tool for edition bookbinding.