



A Division of Library Binding Service

News

Problems Encountered in the Preservation of Record Jackets [Imagery, Photographs and Notes]

by Gary Jones

With the advent of new technologies in sound recordings, specifically compact discs [CDs], and the steady "phasing out" of long playing phonograph recordings [LPs], an extremely valuable primary source of imagery and information is being lost. The imagery, photographs, and liner notes produced for LP record jackets are not created in a comparable manner for the 4" x 4" inserts included with most CDs. This information, an important source for scholarly research, is frequently abridged. This is especially the case when considering digital remasterings of LP recordings. Images and photographs are reduced to almost unrecognizable blurs of color; notes of any consequence are frequently lacking altogether.

Considering the preservation of extant LP jackets, the holders of both small and large collections must be aware of the issues and methods available for preserving them. I intend to examine these issues and offer solutions and recommendations for implementing preservation practices and policies. Searching for documentation in preserving the disc or sound recording, more important from a historical and preservation point of view, I found more than adequate coverage.¹

When I began a methodical search of the literature of preservation of sound recordings, I expected to find little documentation on the record jacket. What I did find were several histories on the record jacket as an art form.²

Authority lists for controlled vocabulary such as **Library of Congress Subject Headings** and **RILM Thesaurus** offered nothing concerning record jackets and preservation. A search of periodicals and journals dealt with preserving sound recordings, not the jacket. A search of music reference sources such as **Duckle's**, **RILM Abstracts**, and **Music Index**, including a number of discographies, was a dead end as well. It appears that the problem surrounding the preservation of record jackets, once musicologists, archivists and librarians recognize that they are worth saving, will be addressed. Considering the acute problem in the preservation of books, record jackets will take a back seat. Unfortunately, time is running out, record jackets are being ignored, and a valuable source of imagery and information is being lost.

Searching the existing literature regarding record jackets (the British often use the term "sleeve"), an in-depth search of the **Official National Gazette for United States Issued Patents** along with the **Abstract Bulletin of the Institute of Paper Science and Technology** provided much needed information regarding the basic material composition for record jackets. The term paperboard (pbd), including chipboard, as used by abstracters and patentees in describing the material of composition, allows further definition regarding preservation.

Preservation of Record Jackets *continued from page 1*

According to the **Abstract Bulletin of the Institute of Paper and Science Technology**. Vol. 46:7, Jan. '76 7495. Garrod, NJ Improvements in and Relating to Sleeves for Gramophone Records.

Brit. Pat 1,403,346. Issued Aug. 20, '75. Filed: Brit. appln. 36055/71 (July 30, '71) the phonograph record sleeve is described as:

"This invention relates to a phonograph record sleeve formed from a single blank and including two main panels connected along three edges by a hinge line on one edge and glued flaps on the other two closed edges. According to invention, a reinforcing sheet of pbd is glued to the inner face of one of the panels."

As defined by D.J. Hine in Properties of Boards Required for Folding Cartons in Paper and Board in Packaging. New York: Macmillan Co., 1961. 143, pbd

"...has a ply structure that a range of qualities can be made by ringing the changes in the composition of the piles. Thus unlined chipboards, with all piles of repulped waste, through lined chipboards and duplex boards to fully bleached solid white boards made wholly from new pulp can be used as cartons. Other variations are coated boards with improved printing surfaces and boards laminated to papers, plastic films or metal foils to give special properties such as moisture resistance."

Retrievable standards for pbd, imposed on record jackets, result in recommendations for subsequent preservation.

Exact physical profile is difficult to synthesize lacking industry standards for record jackets such as composition, measurements, quality, and use of permanent, durable paper. Using simple measuring techniques and a sample of 10 LPs from my own collection, the following observations may be made, averaging sample measurements: dimensions: length 31.5 cm, width: 31.5 cm, thickness of single layer: 0.05 cm, weight: without disc: 87.92 gm, pH range: pbd: 5.15 laminated paper for notes and imagery: 5.34, paper and inserts: 6.2, fold endurance: pbd laminated paper: 850. The period of this sample of record jackets was drawn in the early '70s when LP production was at its "zenith."

Of the 10 record jackets tested, 5 were printed in Europe and 5 in the United States. The average pH range is 5.323 and 5.28 respectively. [pH tests were made using "colorpHast pH indicator strips non-bleeding, pH 4.0-7.0, manufactured by EM Science.]

Acidity may be influenced by a combination of manufacturing materials and techniques, environmental factors, or storage conditions. The author is the original owner of the records; storage conditions are relatively stable. Records are stored in cabinets with doors keeping light and dust exposure to a minimum. All plastic coverings are removed after purchase and recordings are not loaned.

Definitions and standard test for pbd have been taken from: **Paper and Paperboard Characteristics, Nomenclature, and Significance of Tests**. 3rd edition. Philadelphia: American Society for Testing and Materials, 1963.

"Paperboard is, in general, the heavier, thicker types of fibrous products generally classified as paper and paperboard. Sheets with thickness greater than 0.010 inches usually fall into this class."

Record jackets fall into category V. Other specialties¹. Laminated: Boards made for special purposes by pasting together two similar or dissimilar sheets with starch, resin, asphalt, or other binder; parchment paper to paperboard; glassine paper to paperboard; and colored paper to paperboard under General Classifications of Boards. The pulp to be made into paperboard is prepared of virgin wood fibers, by chipping, cooking by the sulfate process, washing and fining. In the final stages, water is added to a consistency of about 99.5% water to .5% pulp as it is pumped to the paperboard machine. Rosin sizing is generally added or, for wet-strength grades, certain resins are added. In some cases, wood fibers are separated by mechanically grinding the wood rather than cooking. Paperboards may be made on a Fourdrinier or cylinder type machine. The pbd is passed around a series of drier drums in the drier section. After most of the water is dried out of the sheet, it passes through the calendar stack where the desired finish and density is reached.³

Various tests used by both the Technical Association of the Pulp and Paper Industry [TAPPI] and American Standard Testing Methods [ASTM] for determining standards for pbd include: Blocking Resistance of pbd, defined as the ability of a given sheet material to resist the cohesive or adhesive effects of temperature, pressure, and relative humidity on contiguous layers, whether in roll or sheet form. Blocking is undesirable since it prevents or hinders the

Retrievable standards for pbd, imposed on record jackets, result in recommendations for subsequent preservation.

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Conservation Cloth by Fritz James

Several years ago we received a call from Bill Minter asking about the availability of starch-filled buckram. He said his two suppliers and manufacturers of the material had stopped stocking the material and that he and many others were running out of usable material, adding that the manufacturer would make 2,500 yards on special order. We checked and found that Bill was right—the manufacturer dropped the product because they didn't feel there would be enough sales to justify the inventory investment.

We at LBS had been interested in just such an opportunity and took the challenge to develop a new version of starch-filled buckram. Calling it "Conservation Buckram," we decided that to be developed correctly it needed to be a product specified by conservators.

We first hired Bob Strauss to be our consultant and asked him to involve 20 or so conservators for their collective opinion of the need for book fabrics. The results of a year-long study and information gathering was that a substitute for starch filled buckram was needed and that a market existed.

We also found the need for a strong, attractive book cloth that took into consideration the interest of historic cloth users and the broad application of a new material. The material had to be compatible with historic book cloth and still work for hand bookbinders. It had to have the working properties of a modern book cloth.

The desirable traits of the Conservation Buckram, as well as the book cloth, were that it have a workable hand and be dimensionally stable. It had to be strong and waterproof. This new material had to adhere well and work with PVA and PVA/methyl cellulose mixtures.

To develop Conservation Buckram we looked at modern fabrics and chose a poly-cotton (65/35) for the base. This gives the fabric strength, relative thinness and stability. We specified the coating to be acrylic. Several samples were made before we felt we had something to show. The results of our two-year search and research and development resulted in a product that was universally accepted.

Last month we produced our first manufacture run of the material which was very successful. The color is dark navy blue and has a linen finish. Tests by conservators show that it glues well and works to their satisfaction. We are in the process of producing three other colors and these should be ready by

December of 1998. Early in 1999 we will add two more colors. The results of this two-year effort are very rewarding. We have developed a successful new product that fits the needs of conservation and hand bookbinders.

The project also produced interest in a lighter weight book cloth and more natural, uncoated binding fabrics that can be used for binding and box making.

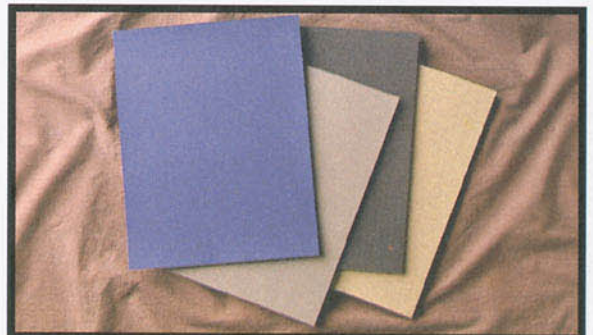
All of these projects are nearing completion and the cloth will be available in January 1999. The three additional fabrics will be poly-cotton based. The book cloth is acrylic coated and meets the specifications of C-1 binding cloth. This book cloth is in stock in 16 colors and has both vellum and linen finish. The natural book fabric will be available in two weights and a wide variety of colors. It is paper backed for ease of gluing and workability.

We have enjoyed the development of the cloth because of the positive feedback we have received. This is a project that was truly a collaboration of the end user and the manufacturer. The result is a product that meets and exceeds the users requirements. As the additional products are developed and stocked, we will send samples and specifications—expect to hear more and see the samples in January 1999.

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efficient use of the material.⁴ Ring Crush Stiffness Test is a measurement of the edgewise resistance of pbd to compression.⁵ Puncture and Stiffness Test measures the resistance of pbd to punctures which might result from contact with outside solid objects, and is a measure of the energy required to force a puncture head of designated size and shape completely through the specimen.⁶ Scuff (Peeling) Resistance Test measures the ability of pbd to resist lifting of the surface of the paper formation and its subsequent rolling into a quill rather than the production of ground or powdered fibers.⁷

Methods of Test for Rosin Size in pbd include two standard tests described in **ASTM Method D549, Test for Resin in Paper**, and **TAPPI Method T 408 m, Resin in Paper**. By itself, rosin is not an effective sizing agent until treated with papermaker's aluminum sulfate (alum). Sizing may be defined as the resistance of pbd to aqueous liquid penetration, obviously a necessary and wanted trait for pbd.⁸ The problem is the alum which causes an acidic condition presenting a serious preservation problem.

Preservation techniques available for paper and paperboard should apply to the preservation of record jackets. Reformatting such as microfilming is perhaps the single most effective means. A separate storage area to prevent damage to disc with the attached label for control is necessary during processing of the record jacket. The advantages of using microfilming as a preservation technique include: it is a durable and stable technology in which the film, properly handled and stored, can be reproduced indefinitely and at low cost (especially implementation of a national effort). The unit cost of a record jacket for a quantity of 150 jackets would be around \$.50 per jacket.

Photocopying record jackets, using buffered paper (7.5 pH, with a rag content around 25% and using dry toner) is a possibility. Estimates for longevity, using paper which meets preservation criteria, are around 100 years. According to Ed Phillips, a member of the music faculty at the University of Guelph (in 1990), "At one point Ottawa University was going to have the record jackets in its collection photocopied. Given the unusual size of the jackets, a special machine was needed. (This probably does not apply today.) I don't think the project went anywhere..." Photocopying may not be the most efficient, permanent, or practical means for preserving jackets.

One method of preservation which might prove

viable is encapsulating the record jacket in a synthetic polymer or plastic. The record jacket could be split in two, deacidified using a spray method, and encapsulated. A feasible polymer, discussed in M.W. Pascoe's **Impact of Environmental Pollution on the Preservation of Archives and Records: A RAMP Study** (PGI-88/WS/18) Paris: UNESCO, 1988., is Poly (ester) (PET), described in the study as follows:

"Poly(ethylene terephthalate) is the main example, a successful fibre and polymer film with a small water absorption. Though subject in principle to hydrolysis, its crystallinity and low water absorption give it stability. As such it normally contains no additives but films may be coated with other substances to improve the adhesion of inks and glues. Because of its strength, clarity and stability it is widely used to encapsulate documents...So far no problems with pollution have been found in archival uses, though it is known to break down in ultraviolet light."

What is currently available commercially (1990) is primarily geared for protection of the disc. A clear vinyl record sleeve holder available from Brodart, costing approximately \$0.45 per unit, is on the right track but I would like to see those in positions to effect preservation policy contact distributors with specifications for the manufacturing of protective PET encapsulating sleeves. This would definitely be an important step in the implementation of record jacket preservation, a step making materials available on a large and economically feasible scale.

The Wei T'o® process could be adopted for preserving record jackets using a liquid gas process for deacidification (see Richard D. Smith's, Design of a Liquid Gas Mass Deacidification System for Paper and Books, in **Preservation of Paper and Textiles**, chapter 11.) Liquid deacidification gases basically dissolve, transport, and deposit deacidification agents in paper more effectively than vapor phase systems. However, tests that analyze printing inks for running must be carried out prior to implementation. On the whole, this process is time consuming, requires trained technicians, special equipment and is expensive... probably too expensive for individual institutions to implement.

In many university libraries, using pressboard record holders, especially those with a double cloth adhesive strip running down the center, is a common process commercially available and used to protect discs. These might appear initially to protect jackets but they actually do great damage. The strip often covers imagery and notes on the

Preservation techniques available for paper and paper board should apply to the preservation of record jackets.

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jacket, and jackets are frequently trimmed to fit the dimensions of the holder. For over three years, while working in the music department at Bird Library, Syracuse University, I processed hundreds of records using these holders. I can personally attest to the damage caused by these holders and vehemently object to their use.

The organization of a national concerted effort between large holders of collections to organize a reformatting project makes good sense. Bird Library at Syracuse University holds approximately 20,000 LPs in its collection (1990). Focusing primarily on classical, ethnic and jazz, this collection is a representation of other major educational institutions. These institutions might undertake the reformatting (microfilm) of their individual collections, and not duplicate work undertaken by another institution. A database similar to a National Union Catalog or MARC could be set up for this purpose, perhaps through the Music Library Association, with regional depositories created to store the microfilm for preservation. This database would allow for a retrieval system similar to inter-library loan.

A database retrieval system I have designed would lend itself for this purpose.⁹ I hope to generate an interest among librarians and archivists with my proposed database for imagery/not retrieval, in turn stimulating an interest in preservation. This database utilizes a commercial software package, is capable of free text searching, uses Boolean logic operators, and hypertext searching. I believe that implementation on a large scale would work. When I contacted various music librarians and archivists regarding the preservation of record jackets the subject is met with cool enthusiasm. The response is usually, "I realize this will be a major issue in the next ten years. I've considered doing something myself." When told about my feasibility study and sample database, I observe a marked rise in enthusiasm. Perhaps the necessary support for record jacket preservation can be solicited if there is a cogent article addressing the problem promptly disseminated to university music librarians and archivists interested in preservation. Chris Patten at Georgia State (1990), one-time head of the Sound Archivists Association (SAA) suggests the problem of preservation will be a major issue in the years to come. Craig A. Summerhill, Assistant Systems Librarian, Washington State University (1990) stated, "I am interested in the work you are doing and would appreciate more

information as it proceeds." With the possibility of NEH funding and commercial funding, especially from record manufacturers, record jacket preservation might not have to wait until professionals realize that record jackets are being discarded at an alarming rate. A historically important and aesthetic source of information and imagery will be lost.

ENDNOTES

¹Excellent research can be found in the following books and publications: **Phonograph Bulletin**. Utrecht, Netherlands: International Association of Sound Archives, 1971, and McWilliams, Jerry, **The Preservation and Restoration of Sound Recordings**. Nashville: American Association for State and Local History, 1979.

²Some of the best examples include:

Phonographics: Contemporary Album Cover Art & Design. New York: Collier Books, 1977; Dean Roger. **Album Cover Album, Volume 3**. 1st US edition. New York: St. Martin's Press, 1984; and Herdeg, Walter. **Record Covers: The Evolution of Graphics Reflected in Record Packaging**. Zurich: Graphis Press, 1974.

³American Society for Testing and Materials, Committee D-6 on Paper and Paper Products. **Paper and Paperboard: Characteristics, Nomenclature, and Significance of Tests**. 3rd Ed. (Philadelphia: ASTM, 1963) 28-32

⁴ASTM67, ⁵ASTM 102, ⁶ASTM 103,

⁷Williams 151

⁸Gary H. Jones. **Iconography: A Feasibility Study Concerning the Cataloging of Record Jackets** [images and notes] in the Collection at Bird Library, Syracuse University.

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The acrylic coated .058 grey/white archival board is manufactured from cellulose fibers that are free of groundwood. The manufacturer removes any traces of lignin during manufacturing and adds a 2% calcium carbonate reserve. pH of the board is 8.5.

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Hinged board covers offer alternatives to three-ring binders that do not provide a tightly constructed binding. Materials that are over 1/2 inches thick are too bulky to fit properly in other types of enclosures. Government documents, financial reports, hard copy data bases — anything that consists of numerous pages — would be well protected between hinged board covers. Side binding offers limited openability but is often a better solution for otherwise loose-leafed materials.

Definition of Terms:

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Archival Boards

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Various tests are conducted to designate pulp content for the board. The board meets ATM D 1030x5 spot stain tests. To demonstrate the adequacy of bleaching or lignin removal, the board gives a negative reading, and has a kappa number of 5 or less when tested according to the Technical Association of the Pulp and Paper [TAPPI] T-236. High Density Acrylic-Coated Pamphlet Board is manufactured to a pH of 8.0 to 9.0 according to TAPPI T-509, and no sizing of any kind is used in manufacturing.

Friction wheel tests show a total weight loss of less than 2%. Tests for stiffness show at least 1800 Tabor stiffness in the machine direction and 800 in the cross direction. The board is .050 in thickness and measures 27 x 40 inches, grain long.

Archival Products uses the High Density Pamphlet Board exclusively for Spine Wrap and Quick Bind Pamphlet and Music Binders. Other uses for the board are three-ring binders, protective enclosures, and bindings.

Manufacturing specifications of our **Grey/White Archival Board** are similar to the High Density Acrylic-Coated Pamphlet Board except that board is compressed to a lesser density. This board is .058 thick and measures 38 x 50. Archival Products uses Grey/White Archival Board for our archival folders and hinged board covers. Other uses are phase boxes or other book storage enclosures.

Our **Dark Tan Archival Board** is available in four thickness and measures 40 x 50 inches. The .010 [10 point caliper] tan board is single-ply and the .020 is a double thickness of the .010 board. The .040 tan board is a three-ply board made with a museum quality .020 alpha cellulose core laminated between two pieces of .010 stock. The four-ply .060 point board is constructed in the same manner, using two pieces of .020 alpha-cellulose core stock. The lamination process slightly decreases the stiffness and abrasion resistance of the tan board but independent tests show that these boards meet museum and library standards.

Archival Products uses the .060 Dark Tan Archival Board for music score enclosures, newspaper and map folders, four-flap and custom four-flap enclosures folders, and manuscript folders; .040 is used for academy folders; .020 for custom four-flap enclosure pockets; and .010 for four-flap enclosure pockets and acid-free file folders.

Davey Acid-pHree™ Binders Board is used to construct book blocks, cloth cover boxes, and temporary brittle book covers. Available in three thickness: .074 (74 point caliper), .082, and .098 the overall size measures 26 x 38 inches. Davey Acid-pHree™ Binders Board contains a 2% calcium carbonate reserve.

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