QUALITY DFA BINDINGS...

A Shared Responsibility Part II

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The article "Quality DFA Bindings … A Shared Responsibility" in the September 1997 issue of The New Library Scene was my most recent attempt at bringing to the forefront the limitations of the double-fan adhesive binding (DFA) process. Not counting the September article I have previously written three other articles on the same subject.

The selection of an appropriate title for this article was somewhat of a struggle. On one hand I was prepared to name it "1 hate to say it, but.. . I Told You So". Although this article is not meant to be controversial, it reminded me of the talk show host Rush Limbaugh, the author of a controversial best-selling book called, "See I Told You So". On the other hand, I was toying with the idea that a title such as "If you can't do it right. . . Don't do it at all" would be more suitable, but I soon dismissed it as being inappropriate and unfair.

To write a sequel to the last article was something that I did not foresee. At the 1998 ALA Mid-Winter Meeting in New Orleans, I heard additional comments and remarks regarding the use of the DFA binding process. Many of the remarks were made as a result of a summary of the University of California's (UC) very informal review of the performance of twenty high-use medical serials bound on the **ULTRABIND™** where a higher than normal failure rate was observed. As a result of this survey, UC decided that some of its medical titles should have oversewing be the designated leaf attachment method, rather than double-fan adhesive binding. It was pointed out to me that there were problems with inconsistency in data collection that made the survey results suspect. Plus, the high failure rate was also attributed to experimentation with different types of adhesives, as well as other problems related to the initial shakedown period of the **ULTRABIND™**.

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Most binders warn their customers that certain medical journals printed on cross grain coated paper with stiff glossy covers and art books with similar characteristics should not be DFA bound. Nevertheless, in spite of warnings, some bids call for the work to be DFA bound only. Also, for reasons of economy, many librarians have material bound 2 inches in thickness and more to avoid splitting it into two volumes.

In spite of the fact that the UC survey results were suspect, it nevertheless created an awareness for greater need to scrutinize the DFA binding process. Therefore, I felt compelled to write this article for the following reasons:

1. To reinforce earlier warnings on the limitations of the DFA binding process and to inform both the library and binding communities that DFA bindings should by no means be done indiscriminately. That it is in the interest of librarians and binders alike to identify those characteristics of volumes that can be bound best on DFA binding equipment, and those that should be bound in other ways, including oversewing, machine sewing through the fold, or even sewing by hand.

2. To dispel any negative perception of the **ULTRABIND™** in-line automatic DFA binding machine. Mekatronics is the major worldwide manufacturer and supplier of library binding equipment. In addition to machines such as the **ROUNDER & BACKER**, **VERSAMATIC™** Casing-In, **HYDROPRESS™** Building-In and others, Mekatronics supplies machines used for leaf attachment such as the **EHLERMANN** DFA binder, the **MEKANOTCH™** spine notching, the **MEKABIND™** DFA binder, the **MEKATWIN™** spine milling and notching and the **OVERSEWING** machine. These machines are in operation in binderies worldwide, in some cases performing for over 70 years. It is up to the binder to exercise proper judgment in choosing the most appropriate machine for the variety of books that are library bound. Even the Oversewing machine is not immune to failure if the machine is processing text blocks with brittle paper. A library

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When the Oversewing machine was introduced back in 1920, it was the first machine designed specifically for library binding. It was referred to as *the cornerstone of the library binding industry*. Over the ensuing years there has been virtually no significant development of equipment to accelerate industry growth. In the early 1950s Mekatronics began its program of developing self-adjusting standalone machines that would automate bindery operations. Many machines have been introduced that enable binders to offer affordable products to their library customers.

The introduction of the **ULTRABIND™** in 1991 marked the beginning of a new era in which the library binding industry began the transition from a labor-intensive, craft-oriented business to that of modern manufacturing. The **ULTRABIND™** integrated several binding operations into one productivity-boosting machine. It has eliminated the many variables associated with several operations performed on different hand-operated machines. The **ULTRABIND™** enables consistent quality and superior efficiency not to mention reduced risk of repetitive motion injury to bindery staff. The **ULTRABIND™** has been embraced by all the major North American library binders and has set the standard for mass-produced quality adhesive binding. To date, 17 machines are in service making the **ULTRABIND™** *the NEW cornerstone of the library binding industry*. Despite its many strengths, the **ULTRABIND™,** cannot process all volumes that require DFA binding. Volumes less than 3/8 inch thick or over 2-1/4 inch thick must be bound by hand techniques. The machine was designed for the majority of routine volumes a binder must process—not for exceptional or challenging volumes.

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Considering this background, it's not pleasant for a manufacturer to hear indictments of its machine. When librarians, who are experiencing problems with their DFA bound materials, ask their binders not to have their material processed by the **ULTRABIND™**, they are not addressing the source of their problem. No matter what make of DFA binding machine is being used, the risk of failure with difficult materials will persist.

Bindery	Annual quantity of DFA bindings	Number of returns	% of returns
1	~150,000	<50	0.033
2	447,000	~200	0.045
3	~500,000	<100	0.020
4	688,284	482	0.070
5	~600,000	~150	0.025
6	~450,000	~30	0.007

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We all strive for perfection, but nothing can be absolutely perfect. Library binding is a labor-intensive industry dealing with heterogeneous materials. It is a. very challenging process requiring over 40 operations performed by many staff on a production line. With so many involved, individual steps and so many people the opportunities for errors are huge. On any given day, for one reason or another, errors may occur in lettering, case-making, casing-in, building-in or any other operation that will affect the integrity of the finished product. For this reason binders strive to automate. The **ULTRABIND™** has de-skilled several operations to produce finished products consistently superior to work done by hand on other DFA machines. Yet, even with such an automatic machine, constant monitoring is required to ensure that the glue pots of the double-fan, notch filling and back lining stations are always filled to the proper level and that factory adjustments are maintained. An automated machine like the **ULTRABIND™** produces work very efficiently, increasing the burden of responsibility for the machine operators to monitor quality. Another factor, not to be forgotten or minimized, is the use of proper adhesives formulated specifically for the DFA process.

To learn more about the performance of DFA bindings, we conducted our own survey among several major binderies using the **ULTRABIND™.** The results of the survey are tabulated in the table on this page.

The push towards DFA binding came from librarians as a response to the common occurrence of narrow binding margins and a desire for better openability for photocopying. In 1986 the 8th edition of the *Library Binding Institute Standard for Library Binding* allowed binders and librarians a choice of leaf attachment options. As a result, binders and manufacturers of equipment acted to meet their customer's needs. In 1991 the **ULTRABIND™** was introduced. The **MEKABIND™** followed in 1994 and the **MEKATWIN™** in 1995.

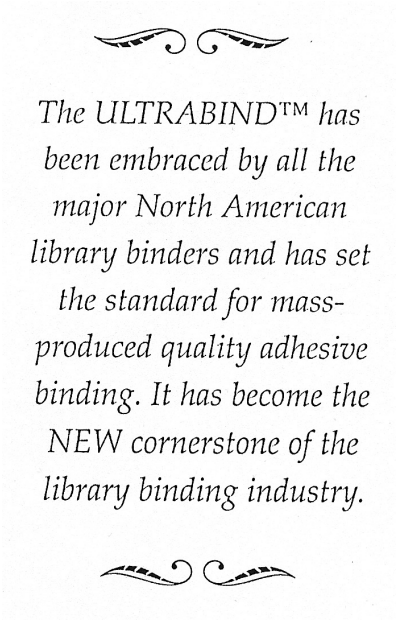
Often librarians insist that all of their materials, including journals with stiff-coated covers, be DFA bound. In such cases, binders have little choice but to comply with their customer's wishes.

Of course, binders can offer the alternative whereby the original stiff-coated covers are color photocopied on lighter stock or are hinged-in with a flexible paper stub. However, the librarian must then be prepared to pay more for the binding. As for text blocks that lack sufficient margins for oversewing, binders have no choice but to DFA bind them.

What it all boils down to is a matter of communication between binders and librarians. As seen from the results of the survey, many binders have attained extremely high levels of success with the DFA binding process. The success comes from the partnership between binders and librarians. Millions and millions of volumes have been DFA bound with extremely low failure rates—as low as the enviable record earned by oversewn volumes. It is important to recognize what is meant by failure. Unless poor judgment was initially exercised in the selection of the leaf attachment method, library bound volumes seldom fail. The low number of returns cited in my binder survey is remarkable considering that many failed volumes had been in circulation for ten or more years during which time they had been photocopied countless times.

No matter what make of DFA binding machine is being used, the risk of having some failure with difficult materials will persist.

One question in my bindery survey was whether all medical journals could be DFA bound. All have responded that, when allowed, they were selective in their choice of leaf attachment. Excluded from the DFA selection were heavy periodicals and books with clay coated paper in the medical, art and science/technical disciplines. Also excluded were periodicals with stiff glossy covers that customers wished to have bound in. When possible, all of the above material is oversewn.



Library binders have to constantly deal with heterogeneous materials and, therefore, it is not an exact science. However, from the results of my survey one can conclude that a judicious use of the DFA method of leaf attachment can only result in near perfect results.

It would be redundant to repeat the various reasons that make DFA bindings a delicate and a most unforgiving method of leaf attachment. I have discussed them in depth in previous articles. The method has been used successfully in Europe for over 75 years. What is important to remember is that if DFA binding cannot be done right, then it should not be done at all. Also, librarians and binders must be more selective in the type of materials they choose for DFA binding and be prepared to pay more for oversewing, which is more labor intensive.

This article is the personal opinion of the author and does not necessarily represent the policy of the Library Binding Institute or its members.

Biography

Author Jack Bendror, president of Mekatronics, Inc./Bendror International, Ltd. and an Associate Member of the Library Binding Institute, holds Bachelor's and Master's degrees in Mechanical Engineering. He has devoted a career of over 45 years to designing and manufacturing machinery for the library binding industry. His efforts at automating, what were formerly hand operations to improve the quality of library bound books and the productivity of library binders, have resulted in pioneering many automation breakthroughs. Among them, the self-adjusting Rounder & Backer, HYDROPRESS™ Building-In Machine, MD-1 7™ (computerized book measuring unit), RB-7™ and GEM™ (computerized cover lettering systems), ABLE™ (Advanced Bindery Library Exchange), a hardware/software product that provides both the bindery and the library with

means of communicating binding/rebinding information more quickly and accurately. His most recent accomplishments are the ULTRABIND™, self-adjusting in-line adhesive binding machine and the MEK-A-CASE™, self-adjusting case-making machine. He and his wife Gloria, have a daughter, Deborah-Joy, and a son, Steven-Abraham.