Library Bookbinding in Greece

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1. Introduction

Contrary to the widespread belief among laymen that nowadays all necessary information can be found through the internet and that all the information resources are online, there is still an enormous amount of material, including books and scientific journals that are kept in libraries in traditional paper-based formats. In most cases, this material is bound and its usability and preservation depends heavily on the condition of the binding. Librarians have always strived to save resources and to maintain the usability of their library assets in favour of the users. Thus, bookbinding has been widely utilized in libraries as a means for maintaining usability, increasing the circulation and enhancing the preservation of bound material. According to Rebsamen (2005a): "Library binding is confined to the maintenance of printed and bound materials, for a reader's usability and the maximum number of circulations, uses or withdrawals". It has been stated by Susan Swartzburg that "...library bindings need to withstand 100+ circulations" (quoted in Rebsamen, 2003b, p. 1).

With the advent of the digital era, traditional activities in libraries are expected to have given way to more modern solutions. For example, digitization and digital preservation are the contemporary buzzwords in libraries and archives, while traditional activities seem to lose ground (Troll, 2002). Digitization has understandably changed attitudes towards preservation, but at the same time it has given rise to discussions and controversy concerning the need to preserve the physical form of digitized library material (Feather, 1996; Adcock, 1998; Edbon and Gould, 1998; Banks and Pilette, 2000; Lusenet, 2006; Pilette, 2006; Mackenzie Owen, 2007). According to Kahle (2011), some libraries discard the books they find digitized in Google, in order to save space. The degree of abandonment of traditional activities, such as bookbinding, remains overall unknown.

The situation in Greece is obscure, not only concerning the extent of bookbinding utilization in libraries, but also regarding other aspects such as the specifications set by libraries for library binding and the use of relative standards, the procedures and the criteria for assigning bookbinding work to freelance bookbinders, etc. With regard to standards for library binding, there has been one attempt for standardization in 1985, which unfortunately did not lead to a national standard, and since then nothing. Concerning library binding standards worldwide, the picture is quite different. Even from the beginning of the 20th century, bookbinders unions, manufacturers of books, standardization organizations, librarian and library associations have produced instruction guides, manuals, standards and relevant material, and individuals have published detailed books and papers on the subject. With the lack of Greek standards, the extent of the integration of this international experience into the Library practice in Greece is unknown.

The research presented here aims at determining the current status of library bookbinding in Greece, and more specifically to:

- Determine the attitude of librarians towards bookbinding
- Determine the extent of the use of bookbinding as a preservation practice in Greek libraries
- Determine the relationship between bookbinders and libraries, especially concerning:
 - the assignment of bookbinding work
 - the degree of outsourcing
 - the criteria and the procedures for choosing a bookbinder
 - o the specifications set by libraries
 - excising issues concerning the above
- Record the opinions of librarians and bookbinders about the necessary characteristics of a durable bookbinding, suitable for libraries

- Establish quality criteria for the assessment of bookbinding work based on international standards
- Propose a set of necessary features for a durable bookbinding, suitable for libraries, for the binding and rebinding of books with no historical and/or artistic value (nonrare books, mainly commercial bindings) and serials
- Propose solutions to existing issues in the cooperation between libraries and bookbinders

The research objectives were pursued by means of a double survey, one among librarians and the other among bookbinders. Details about the surveys will be presented in the Methodology section.

2. Literature Review

There are many resources on Library Binding and Conservation Binding (see for example: Johnson, 1992; Grandinette and Silverman, 1994; Swartzburg, 1995; Banks and Pilette, 2000; Pilette, 2006). The following literature review focuses on library bookbinding standards and relevant publications, and includes national and international contributions. First, the only worth mentioning national attempt towards standardization and rules setting for the assignment of bookbinding work in Greece is the "Report on the Cooperation Between Librarians and Bookbinders for the Assignment of Bookbinding Work". This report was the result of three meetings of the committees formed by the two parties involved: The Bookbinders Union (B.E.K.B.A., Chairman Andreas Ganiaris, and Secretary General Dionisis Valasis) and the Association of Greek Librarians (E.E.B.) in June and July of 1984. This initiative was undertaken in recognition of the problems caused by lack of standards, and was mainly triggered by the discontent concerning the lack of rules for the assignment of bookbinding work to freelance bookbinders. The report was published in the "Libraries and Information" journal of E.E.B. (1985) and suggested 10 bookbinding types. Each bookbinding type was recommended for the binding of specific material, and was described with regard to technical details and material specifications.

The following list presents the most influential standards and relative documents concerning library binding:

- "Suggested Recommendation for Ordinary Library Binding", published at the beginning
 of the 20th century by the British Royal Society of Arts as an answer to the *destructive*form of library binding suggested by bookbinders in the United States of America
 (Silverman, 2007). This publication supports traditional bookbinding, suggests paper
 repairs where necessary, and rejects *overcastting* and *oversewing*.
- "Development of Performance Standards for Library Binding, Phase I: Report of the survey team, April, 1961" and "Development of Performance Standards for Binding used in Libraries, Phase II: Report on a study conducted by Library Technology Project", published by the American Library Association and Library Technology Project (1961; 1966), where the durability of various bookbinding techniques is examined.
- American National Standard for Fabrics for Book Covers (ANSI L29.1), in 1977.
- "Performance Measures for Library Binding", by Barclay Ogden and Bob Strauss for LBI, published in 1995. It refers to the ANSI/NISO/LBI Z39.78 standard, and aims at examining various quality attributes of library binding, such as the openability, the durability of the sewing and the joints, etc.
- "Information and Documentation: Requirements for Binding Materials and Methods Used in the Manufacture of Books", International Standard, ISO 11800:1998 (ISO, 1998).
- "American National Standard for Library Binding, ANSI/NISO/LBI Z39.78", approved by the American National Standards Institute and developed by the National Information Standards Organization and the Library Binding Institute. The Bookbinding Committee of

the American Library Association (ALA) was established in 1905 and in 1915 they published the "Guidelines for Quality Bookbindings", which formed the foundation of the standard. In 1923, the "Standards and Specifications for Binding" was issued as a collaborative effort of book manufactures, publishers, bookbinders, librarians and schoolbook administrators. The first standard for library binding was the fruit of the collaboration between libraries and library binders and was published in 1934 by ALA as an answer to the publishers' demand for a cheap and consequently technically poor bookbinding. In 1935, book manufacturers and library bookbinders went their separate ways, and were officially represented by different organizations, the first by the Book Manufacturers Institute (BMI) and the latter by the Library Binding Institute (LBI) (Kyle, 1984; NISO, 2000; Rebsamen, 2003b; Rebsamen, 2005a). Since the establishment of LBI in 1935 and in cooperation with ALA, 8 editions of the "Library Binding Institute Standard for Library Binding" have been issued, "each emphasizing quality of workmanship and materials and a discriminating approach to decision making. In 1986 the LBI Standard was substantially revised to acknowledge changing practice within the industry. Where strength was once the only vardstick against which library binding was measured, openability became equally important, as did conservative treatment of volumes with fragile paper. To address redefined objectives, sewing through the fold, double-fan adhesive binding, and recasing—once reserved for exceptional volumes were incorporated into the LBI Standard as mainstream techniques. This broadening of the Standard, bolstered by improving technologies, maximized the binder's ability to take into account the structure, size, age, and condition of a volume when selecting a treatment method. The ANSI/NISO/LBI Z39.78-2000 standard builds on the previous LBI standard." (NISO, 2000, p. 6). The 2000 revision includes technical details and materials performance benchmarks and specifications for the binding and rebinding of books and multi-volume periodicals. The standard recommends the casing technique, which is suitable for books published after 1850; otherwise the book may lose its historical value (Kyle, 1984, p.19).

- "Information and Documentation Requirements for Binding of Books, Periodicals, Serials and Other Paper Documents for Archive and Library Use - Methods and Materials", ISO 14416:2003 (ISO, 2003).
- "Guide to the ANSI/NISO/LBI Library Binding Standard: ANSI/NISO/LBI Z39.78-2000", by Jan Merrill - Oldham and Paul Parisi for ALA, in 2008. This comprehensive guide serves as a more detailed and illustrated addendum to the ANSI/NISO/LBI Z39.78-2000 standard.

3. Methodology

The research was conducted over a six-month period beginning in late May 2010 and ending mid-November 2010 using questionnaires, sent by e-mail or administered in person to the randomly selected participants from among the statistical populations. It included two surveys, one distributed to libraries with twenty questions and the other to bookbinders, which contained eighteen. The surveys were structured so that they started with generic questions and became more specific.

The contact details of the Greek Libraries were retrieved through a systematic internet search. Valuable information was collected from the websites of the Hellenic Literary and Historical Archives (ELIA, elia.org.gr), the Benaki Museum (benaki.gr), the National Book Centre of Greece (EKEBI, ekebi.gr), the Ministry of Education (minedu.gov.gr), the "Public Libraries Gateway" (infolibraries.gr), the Hellenic Academic Libraries Link (unioncatalog.gr) and the National Documentation Centre (EKT/ARGO, ekt.gr). Finally, a list containing 1045 libraries was compiled. To our knowledge, this is the approximate total number of the Greek Libraries. There are 499 school libraries that are not included in this figure. School libraries were excluded from the survey from the beginning, because they do not employ librarians

but school teachers, who lack the required training to understand the technical details involved in the survey. In order to have an acceptable statistical error level of 10% (at 90% confidence level), a statistical sample of 64 libraries out of the 1045 in total had to be randomly chosen. Supposing a 30% participation rate, questionnaires were sent to 213 libraries, of which 56 responded. With this response rate, the error level rose to 11% (at 90% confidence level). The overall category distribution of Greek libraries and the distribution of the surveyed sample are shown in Figure 1.

Compiling a list with all the Greek bookbinders was a difficult task. We started with the help of the yellow pages and relevant business listings. We also gathered useful information from the records of relevant professional schools, and by asking the bookbinders we managed to locate in the first place. With little exception, we chose to interview the bookbinders in person so that we could elaborate more on technical details, and therefore needed them reside in the Attica district, which is where Athens is located. Those few who we could not interview in person - because they resided elsewhere - answered our email questionnaire. There are approximately 80 hand-bookbinderies in Greece, 40 of them in Attica. At the same error and confidence level (10% and 90% respectively), 37 bookbinders had to be reviewed. Despite our efforts, only 17 bookbinders agreed to participate to the survey. This raises the error level to 17.8% (at 90% confidence level). While the results concerning the bookbinders survey should be interpreted with the relatively small sample size in mind, the trends are apparent and may be more important than precise qualitative results.

4. Results and Discussion

The results of this research showed that 73% of the libraries that participated in the survey use bookbinding as part of their preservation strategy, indicating its overall importance to Greek libraries. Despite the seeming prevalence of modern digitization practices, traditional activities such as bookbinding still hold. The already high percentage found would be even higher if not for the economic crisis, since according to free text comments, most of the libraries that do not give books for bookbinding cannot do so because of budgetary constraints. Figure 1(a,b,c) shows that the distribution of the libraries that implement bookbinding is not significantly different from the overall distribution of the Greek libraries, indicating that the extent of bookbinding utilization is independent of the type of library. Bookbinding is used for periodicals (42%), monographs (37%) and newspapers (21%). In the above generic categories the following were also namely included: music scores, the Greek Government Gazette, conference proceedings, manuscripts, computer print-outs and worn out volumes.

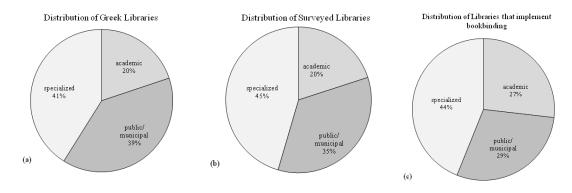


Figure 1: Distribution of Greek libraries (a), distribution of surveyed libraries (b) and distribution of libraries that implement bookbinding

Despite the need for bookbinding services, only a small percentage (21%) of the libraries have an in-house bindery and the rest (79%) outsource the process, as shown in Figure 2.

This makes sense, because with the exception of a few large libraries, including the National Library and a few academic libraries, most libraries have limited personnel and limited budgets.

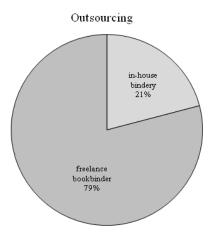


Figure 2: Outsourcing concerning bookbinding in Greek libraries

The majority of responses indicate that the decision to send material for bookbinding is made by trained personnel. The assignment procedure is not the same in all libraries. Important factors that affect the choice of the suitable procedure are the quantity of the books, the available budget, the type of the library (public, private) and the kind of the required bookbinding work (mass, artistic, etc).

It would be expected that according to the standing rules, public libraries would assign bookbinding work by sending it out to bid. The typical procedure would be that the library announces the specifications and after receiving at least three offers from freelance bookbinders, it assigns the work to the lowest bidder. Private libraries have their own criteria and usually contract the bookbinder of their choice directly. Nevertheless, the results of the survey indicate that competitive bidding is not the most common method of assignment and that most of the public libraries directly contract with the bookbinder of their choice (Figure 3).

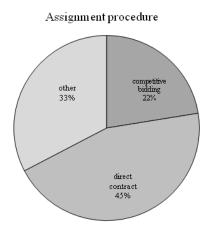


Figure 3: Assignment procedure of bookbinding work

As to the criteria used by the libraries for the choice of bookbinder, 48% of them rank first the previous successful cooperation, 41% economic criteria and 11% the good credentials given by third parties. The main reason put forward by the librarians for not going through competitive bidding is that if a different bookbinder is chosen every time, this would result

in inhomogeneity and variations in the appearance, style, craftsmanship and materials of the bound volumes, which is unwanted especially in book series.

A question addressed to both librarians and bookbinders concerned their impressions about cooperation. Almost all librarians answered that they were satisfied with the level of cooperation (Figure 4), but expressed the wish that some bookbinders "should take their job more emotionally and professionally and not consider the financial outcome so important" (sic). On the other hand, 50% of the bookbinders answered that they were not satisfied (Figure 5), suggesting that the source of their discontent was the librarians' lack of understanding of their work, which makes communication very difficult. Some also added that the terms of the competitive bidding should be revised, because they are unrealistic and inexpedient and keep many binders from participating. Binders suggested that the available budget should be distributed better and that this could be accomplished by setting priorities differently. Finally, they also suggested that bound material should be treated and stored appropriately and according to relevant standards.

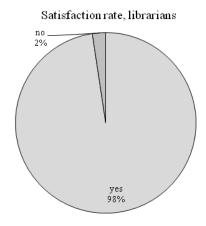


Figure 4: Satisfaction rate concerning cooperation with bookbinders, according to librarians

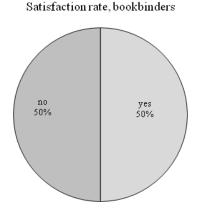


Figure 5: Satisfaction rate concerning cooperation with librarians, according to bookbinders

In response to a question concerning the essential characteristics of a bound volume, the librarians gave the rankings presented in Figure 6.

The majority of the librarians ranked high strength and durability characteristics, such as the sewn spine and the reinforcement of the spine with gauze, and low decorative elements such as false raised bands on the spine and gold tooling.

The bookbinders answered similarly, emphasizing technical characteristics, which offer strength and durability and ranked them in the following order:

i. Sewing through the fold on tapes

- ii. The grain of all the materials must be in the right direction
- iii. Use of three sewing stations for a regular sized volume (octavo, 22x14 cm)
- iv. Use of spine reinforcement (gauze, paper)

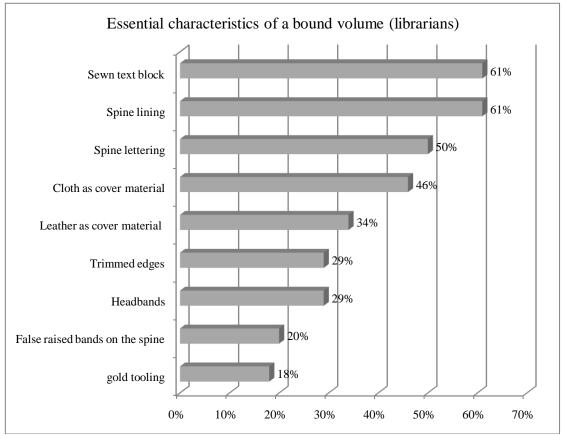


Figure 6: Rankings of the essential characteristic of a bound volume according to librarians

The majority of the bookbinders recommended *case binding* as the most suitable library binding method and *sewing over tapes*. There were also other suggestions, such as *case binding on sunken cords*, *in-boards binding* and *cased-in binding with French groove*.

The main distinguishing feature of *case binding* is that "the book cover is made separately and put on to a book after the book has been forwarded to a point where it must have a cover" (Diehl, 1980, v.2, p. 266). The respondents say that this technique enables the book to open more freely because of the grooves that are left, contrary to the *laced-in boards* method of binding. Case binding is cost-effective and offers durability, especially because it allows the spine reinforcing lining material to extend to both sides of the book block.

In a common question to both librarians and bookbinders regarding bookbinding quality criteria, we received the following responses, which are listed below in non-hierarchical order:

Aesthetics

- Rebinding should not alter the identity of the book, the original characteristics should be preserved
- Correct and distinct spine lettering
- Well-balanced and appropriately sized elements (e.g. squares proportionate to the size of the book, symmetric construction for half and quarter bindings, etc.)
- Functionality and performance, ease of use.

- Openability, which refers to the ability of a book to open freely and remain open without exerting damaging strain to the joints and the back, so that the book can be photocopied
- Durability, ability to open without damaging the spine
- Permanence, able to withstand many years of use
- Responsibility and professionalism on behalf of the bookbinder, so that
 - The terms of the contract are respected
 - High quality standards are employed in both materials and craftsmanship
 - o The original is not damaged
- High quality materials
 - Archival quality materials, papers and boards with alkaline reserve

It would be interesting at that point to discuss some important features found in the literature survey that affect the construction quality, the performance and the aesthetics of the bound volumes, and analyze relevant technical details alongside with the findings of the research.

To start with, both the ANSI standard and the responders propose *case binding* over *in-boards binding*. Diehl (1980) suggests that *in-boards* binding does not allow the book block to open freely since the back is "moulded into convex surface" and the covers are "laced tightly onto the sections". Furthermore, *case binding* can compensate for the lack of quality characteristics of paper and construction (sections against the grain, thick and stiff folds, inferior paper) of the edition bound books today (Diehl, 1980, v.1, p. 75-76).

According to Diehl (1980), one of the most important performance features of a bound volume is openability. Silverman (2007, p. 299) compares a book that doesn't open easily and tends to close back to a mousetrap. The most important factor that facilitates openability is the book construction - sewing on tapes and hollow back (Diehl, 1980, v.1, p. 178; Maralyn, 1993) can make the difference. Factors that may impair openability and performance such as paper quality (thick and rigid clay filled paper) or wrong grain direction are inherent qualities of the book that the bookbinder cannot improve. Openability was quoted by most respondents as one of the most important performance quality of library bookbinding, since it is important for photocopying.

The durability of the binding is another performance feature of utmost importance according to the literature and the results of the surveys. It depends on both material quality and sound construction. Strauss (2007) emphasizes that the connection of the covers with the body of the book is critical and should be reinforced, especially for oversized and heavy volumes. According to Diehl (1980), leather should not be over-pared, especially at the joints and sewing band cords should not be over-frayed at the ends.

Concerning the construction of the body, sewing through the fold is the preferred solution for best performance and durability (NISO, 2000; Rebsamen, 2001). Over sewing and especially adhesive binding cannot be avoided in case of loose leaves, but signatures should never get milled off to expose the individual sheets in order to apply such leaf attachment techniques (Rebsamen, 2003a, p. 3). It has been proposed that the most durable sewing method is sewing on sunken cords, but according to Ganiari (1987, p. 41) this technique impairs openability. She suggests sewing on tapes instead, which offers both durability and enhanced openability, an opinion shared by many bookbinders that participated in the survey.

Endbands used to be important functional features of bookbinding, which are absent from the ANSI standard. Today they primarily play an ornamental role, but can also contribute to the better joining of the cover with the body of the book if they are properly constructed (Rebsamen, 2005b).

Aesthetic characteristics, although not required since they do not affect performance, are certainly desirable, according to both the literature survey and the results of the research. They include pleasant color matching, even and inconspicuous seams at the joints of adjacent materials, centered and well aligned spine lettering, absence of air or glue bubbles under the cover material, equal squares, etc. (Rebsamen, 2008, p. 6). Both librarians and bookbinders indicated the importance of aesthetics.

The NISO standard covers most issues pertaining to material quality. It provides detailed specifications with regards to composition, basis weight, mechanical strength and other important characteristics of paper, board, lining materials, thread, sewing tapes, covering material and adhesives that should be used in library bookbinding. The literature review also brought out some important issues concerning the most suitable materials for library bookbinding. According to Cockerell (2005, p. 111-114) and Diehl (1980, v.2, p. 117-118), single or double hemp cords should be used, or if tapes are preferred, they must not be bleached. The thread must not be bleached also, it should be chosen according to the size and the weight of the book, and for valuable and heavily used volumes *surgeon's silk* is proposed. Most of the bookbinders that participated in the study recommend tape or a fivefold linen or hemp cord as sewing support and the use of good quality linen thread.

The Buckram F-Grade is the cover material recommended in the NISO standard, but also the cover material of choice for most respondents and authors (Strauss, 2007). According to Kyle (1984, p. 43, 119), the *pyroxylin-impregnated buckram* can be cleaned by wiping with a wet cloth and should be preferred, while the *starch-filled buckram* is sensitive to water. Also, the former is easier to handle and needs less adhesive. Rebsamen (2005a, p. 7) recommends the use of *polyester laminated resin reinforced paper cover*, because it is cheaper and behaves equally well as the F-Grade buckram. Respondents believe that leather is more expensive and sensitive and should not be preferred.

5. Conclusions

This research has shown that bookbinding is extensively used as part of the preservation strategy for the majority of the Greek libraries. Most libraries resort to outsourcing, either by direct assignment or competitive bidding to freelance bookbinders. The specifications set by libraries are usually minimal, and it is left to the bookbinders to recommend the best solutions. Both librarians and binders emphasized openability and durability as the most important qualities of the bound volumes, and quoted several relevant technical details.

The results of the survey and the literature review highlighted the important features of library binding and as a result a model library binding technique is suggested with the following main characteristics:

- The recommended library binding technique is case binding
- Case binding is suitable for the binding or rebinding of books with no historical and/or artistic value (non-rare books, mainly commercial bindings) and serials
- Case binding is durable and relatively inexpensive and can counterbalance most common mistakes in book construction made by commercial publishers
- Sewing through the fold on tapes is the recommended method for leaf attachment
- Trimming the fold in order to create loose leaves is unacceptable
- The spine must be reinforced
- Flyleaves should be used
- The thickness of the boards should depend on the thickness of the book and must contribute to both an aesthetically pleasing result, and to support the weight of the body
- Buckram F-Grade is recommended for covering material
- The spine lettering must be centered and well aligned

Concerning the other research objectives expressed in the introduction, the results of the surveys suggest that:

- The Hellenic Organization for Standardization (ELOT) should develop a formal standard about library binding based on NISO standard which would resolve most relevant issues
- Librarians and information scientists must receive formal training in preservation and conservation of books and archival material, including bookbinding techniques
- Specifications for the competitive bidding should be set by individuals or organizations with the necessary scientific and technical background
- Libraries must be able to differentiate between the types of binding available and the binding needs of the documents
- Bookbinding must be seen as part of the preservation strategy plan of libraries and archives
- Libraries should keep a record (preferably electronic) of all previous conservation interventions including bookbinding
- The terms of the competitive bidding should be revised, because they are unrealistic and inexpedient

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