

4 Vacuum Packed.

After studying this method of food packing, the Chinese librarian used this technique to pack rare books in libraries. We put those books which are seldom used or have already been microfilmed or have been scanned onto laser disks into a plastic bag, and seal it, and then put these plastic bags with books into camphor wood boxes in order to preserve the books safely. Nanjing Library had used this method and obtained very good results. The advantage of this method is that it does not cost too much. On the other hand, if a book needs to be consulted, it has to be taken out the plastic bag and the seal is broken.

5 Constant Temperature and Moisture.

Modern climate control equipment for air circulation, employing the air conditioner and the dehumidifier, creates a condition of constant temperature and humidity. Climate control systems create a very suitable environment in the stack room for storing the library's rare books and precious materials.

The Chinese librarian fully understands the advantages of this new equipment. Therefore, in the provincial level libraries, especially when new library buildings are designed and constructed, almost all of them are equipped with these systems. Such is the case in the Beijing Library (National Library), Shanghai Library, Nanjing Library, and Zhejiang Library.

D. Summary and suggestions

Protection against natural disasters is a common and not the least concern for librarians. Over the centuries librarians have accumulated a great deal of experience and have developed excellent methods for the preservation of rare books and library materials. Libraries constitute a precious heritage and the methods employed in conservation and preservation need to be well publicized. Therefore, I would like to make the following suggestions.

1 We need to be in constant communication on the subject of preservation of library materials, exchanging our experiences and techniques, especially between Western and Asian libraries.

2 We must publicize successful experiences in preservation and conservation of the library materials.

3 We should form a special research group for the preservation and conservation of rare book and precious materials. ■

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Métodos antiguos y modernos de conservación de libros raros y otros materiales preciosos en China

China se distingue por poseer una civilización antigua y una tradición de escritura milenaria. Durante muchos años se conservaron libros que fueron transmitidos de una generación a otra. Las estimaciones nos llevan a calcular que en China existen más de 2,2 millones de volúmenes publicados antes de 1794, sin hablar de los numerosos diarios, revistas, manuscritos y otros documentos preciosos antiguos y más recientes. ¿Cómo han logrado los bibliotecarios chinos preservar este patrimonio?

El autor de este artículo nos hace descubrir algunos de estos métodos.

La investigación de las decisiones adecuadas para una biblioteca parece muy importante y se debe reflexionar sobre ella. Las precauciones y las opciones arquitectónicas se deducen de las relaciones fundamentales entre los elementos: papel, fuego y agua. Así, las bibliotecas chinas antiguas generalmente están construidas dentro de un jardín botánico, cerca del agua, pero separadas de la sala principal por un muro (a fin de protegerlas de un incendio eventual).

Con el tiempo, para proteger los libros de los numerosos insectos, tales como el gusano del papel y las hormigas, se utilizaba el toronjil y el arsénico.

Los libros raros se conservaban entre dos planchas de madera, llamadas por los bibliotecarios antiguos *nanum*. Estas planchas protegían los libros de la deformación y de la humedad, así como el polvo.

Se utilizaba el olor fuerte de las bolitas de alcanfor para cazar insectos y, a veces, las cajas para ordenar los libros eran construidas en madera de alcanfor. Además, se utilizaba el olor e algunas hierbas medicinales famosas, bien fuera colocándolas entre las páginas de los libros (tabaco, loto) o bien incorporándolas a la fabricación del papel, como en el caso del papel Wangnien Hong (con arsénico) y el papel Jiao (con pimienta).

La ciencia moderna y la tecnología

Desarrollada a comienzos de los años setenta, la escanografía de libros y su conversión a discos láser se ha convertido en una técnica bastante común en el campo del libro.

Otro método, basado en las observaciones de los bibliotecarios chinos, consiste en congelar los libros dañados por gusanos a una temperatura de -40°C . Este método era aplicado en varias bibliotecas, incluida la Biblioteca Nacional.

Los científicos chinos habían descubierto que los insectos que se alimentan de papel mueren a temperaturas elevadas, utilizan hornos microondas, aun cuando esta técnica presenta algunas dificultades, ya que el calor es nocivo para ciertos libros.

Al igual que en la industria alimentaria, el envasado al vacío es también utilizado por los bibliotecarios chinos, quienes sellan los libros de poco uso o que han sido transferidos a otro soporte.

El papel que desempeñan los sistemas de control de las condiciones climáticas (deshumidificadores, sistemas de aire acondicionado) es también muy importante y la mayoría de las bibliotecas están en la actualidad equipadas con este tipo de sistema.

Surveying newspaper collections: a quantitative methodology

A quantitative method to carry out a condition survey of newspaper collections was tested at the two national libraries of South Africa, namely the State Library in Pretoria and the South African Library in Cape Town. From a managerial point of view this practical, cost-effective method enabled the researcher to assess and compare deterioration on a numerical scale per individual item.

The condition survey had as its aims to:

- identify particular issues needing attention;
- quantify deterioration per individual item;
- compare deterioration on a numerical scale and over a number of years;
- compare the deterioration status of identical items;
- determine the effect of different climatic conditions;
- set priorities for microfilming;
- decide on inclusion in a last-copy collection; and
- decide on possible restrictions of use.

Variables used

A comparison with other condition surveys served as basis for the design of a quantitative methodology: 22 different published and unpublished condition surveys, forms and questionnaires were analyzed. In total 25 different variables were identified, which can be roughly divided in chemical and physical tests, visual observations, environmental tests and other.

The design of a cost-effective method did not permit the use of specialized equipment, skills or processes which would take too long or needed laboratory-type conditions. External agents, e.g. environmental factors were also excluded, although humidity levels were measured. On the basis of these limitations and taking into account variables most frequently used, it was decided to include the following in the survey: acidity of paper, folding endurance, signs of air pollution (specific solid particles), the presence of micro-organisms, damage by insects and rodents, signs of colouring, water damage, and wear and tear.

For the measuring of acidity a flat glass electrode fixed to a pH-meter was used. The manual folding test was applied to measure folding endurance. The other observations were done by visual inspection.

Méthodologie quantitative pour l'expertise des collections de journaux

Une méthode pour expertiser l'état des collections de journaux a été appliquée dans deux bibliothèques d'Afrique du Sud : la Bibliothèque Nationale et la Bibliothèque d'Etat de Pretoria. Cette méthode, pratique et peu coûteuse, permet aux chercheurs d'évaluer et de comparer numériquement la détérioration de chaque exemplaire testé. Ceci est possible en calculant le coefficient de détérioration (CD).

L'expertise comporte des observations chimiques (acidité), physiques (résistance à la déchirure) et visuelles (pollution par l'air, présence de micro-organismes et d'insectes, état du papier). Les observations ont été conduites sur plus de 19 titres des journaux publiés entre 1860 et 1960, on a procédé par échantillonnage en prélevant un exemplaire de cinq en cinq ans. Au total 263 échantillons furent testés, dont 196 pris dans des numéros de journaux identiques mais conservés dans deux bibliothèques différentes sous des conditions similaires.

L'étude a démontré des différences importantes concernant l'état des deux collections, l'ensemble des journaux de la Bibliothèque Nationale d'Afrique du Sud s'avérant en bon état, tandis que la collection de la Bibliothèque d'Etat a révélé des signes de détérioration non négligeables. Les deux bibliothèques se situent dans des zones climatiques très différentes.

Pour simplifier les calculs on a élaboré un tableau d'évolution incluant les principales variables. Il comporte également une colonne indiquant l'importance de chaque élément étudié et pour chacun trois degrés d'appréciation (bon = 0; moyen = 2 et catastrophique = 4). Ce tableau permet de calculer le coefficient de détérioration (CD) et sa valeur maximale : plus le CD est élevé plus l'état des collections est critique.

Cette méthode permet d'effectuer facilement l'expertise des collections et ne nécessite qu'un minimum de formation de la part du personnel.

Assessment table

I Observation type	II Element	III Weighting				IV Assessment			V Maximum points obtainable	VI Total points obtained
		(0) Not applicable	(1) Partially applicable	(2) Important	(3) Critically important	0 GOOD	2 AVERAGE	4 CRITICAL		
Chemical	Acidity			X		- pH 5.4 - 7	- pH 3.8 - 5.4	- pH < 3.8		Column III x 4 Column III x IV
Physical	Folding endurance				X	- endures 5 double folds	- endures 3 double folds	- breaks before or with 3 double folds	8	
Visual	Air pollution (Solid particles)				X	- superficial deposits - dust only	- prominent deposits - dust, pollen, fluff	- permanent dirt - dust, soot, sand, soil, ash, iron or other solid particles	12	
Visual	Micro-organisms		X			- no signs	- suspicion - not wide-spread - signs	- prominent occurrence of mould, spots, speckles, stains - signs of pulping, pulverising - heavy mouldy smell	4	
Visual	Insects and rodents			X		- no signs of holes, tunnels, bites marks, grooves, smears, smudges, paper bits	- old damage - dead insects - text not damaged - no recent insect activities	- recent insect activities - signs of gnawing, urine, droppings, smears, eggs - parts of texts affected	8	
Visual	Paper condition				X	- no fading - flexible - no loose bits of paper	- edges deteriorated and rough - serious yellowing, browning - torn	- fading - solid stains - swelling, deformed, warped - visible crumbling - missing parts of pages	12	
TOTAL									52	

D. Drijffout 1999

Sample n° _____
 Library _____
 Newspaper title _____
 Publ. date _____
 Date of survey _____
 Surveyor _____
 Location _____
 Bound YES NO

Notes: _____

Calculation of DC-value

Total score (column VI) expressed as a percentage of the maximum possible score (column V).

$$= \frac{\text{Total column VI}}{\text{Total column V}} \times \frac{100}{1}$$

$$= \frac{\boxed{52}}{\boxed{100}} \times \frac{100}{1}$$

$$= \boxed{} \%$$

Assessment table

An assessment table was designed which included mentioned variables (figure 1). The table uses a three point assessment scale (good, average and critical) with a column for weightings for each element inspected. The assessment table calculates a percentage value for each item or sample being surveyed. This value is called the deterioration coefficient or DC value. The DC value is calculated as a percentage of the maximum value which can be measured on the assessment table. The higher the value, the more critical the condition of the item.

The assessment table consists of a check list on which only the applicable blocks are marked. This format is preferred to a questionnaire with open-ended questions, as data can be processed and analyzed with the minimum effort. Other data that are included are sample number, library name, newspaper title, publication date, date of survey, name of surveyor, location, and an indication of whether the item was bound, or not.

For each element one of four weightings is indicated which range from "not applicable" to "critically important". Chosen weightings are arbitrary but correspond to those values, identified from the literature, to be most critical. It enabled the researcher to minimize the influence of subjective values by distinguishing between soft (less accurate) and hard (more accurate) data. The weightings were kept constant during the survey.

For each element three condition gradings are defined, viz. good, average and critical. The numerical values of 0 (good), 2 (average) and 4 (critical) are kept low for ease of use and calculations. *Good* means that an item needs no attention. *Average* means that signs of deterioration are present. *Critical* is an indication of advanced deterioration that needs immediate attention.

The form was designed for easy handling and convenient use. All data and calculations are indicated and done on one worksheet. The various gradings of each element are also clearly defined on the form to prevent uncertainty or inconsistency. Minimum training is needed.

Test survey

In 1996 a test survey using the method described above was conducted on 19 newspaper titles published between 1860 and 1960 of which copies were available in both the State Library and the South African Library. Samples were taken at 5-year intervals. A total of 263 samples were tested of which 196 were identical issues. The survey showed substantial differences in the condition of newspapers in the two libraries. The results of the survey at the South African Library revealed newspapers in a predominantly well condition. Serious forms of deterioration were observed in the newspapers

housed at the State Library. The two libraries are situated in different climatic regions. The collections were for some time stored under similar conditions. ■

NOTE: This article is based on a study completed for a Master's degree in Library and Information Science at the University of Pretoria in 1997.

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Metodología cuantitativa para la evaluación de las colecciones de prensa

El método para evaluar el estado de las colecciones de prensa ha sido aplicado en dos bibliotecas de Sudáfrica: la Biblioteca Nacional y la Biblioteca Estatal de Pretoria. Este método, práctico y poco costoso, permite a los investigadores evaluar y comparar numéricamente el deterioro de cada ejemplar estudiado. Esto es posible lograrlo calculando el coeficiente de deterioro (CD).

La evaluación abarca las observaciones climáticas (acidez), físicas (resistencia a las rasgaduras) y visuales (contaminación por el aire, presencia de microorganismos e insectos, estado del papel). Se han realizado observaciones sobre más de 19 títulos de periódicos publicados entre 1860 y 1960, tomando como muestra un ejemplar de cinco en cinco años. En total, fueron evaluadas 263 muestras, de las cuales 196 fueron tomadas de números de periódicos idénticos (pero conservados en dos bibliotecas diferentes bajo condiciones similares).

El estudio ha demostrado diferencias importantes relativas al estado de las colecciones, el conjunto de los periódicos de la Biblioteca Nacional de Sudáfrica se encuentra en buen estado, mientras que la colección de la Biblioteca Estatal ha revelado signos de deterioro nada despreciables. Las dos bibliotecas se sitúan en zonas climáticas muy diferentes.

Para simplificar los cálculos se ha elaborado una tabla de evolución que incluye las principales variables. Incluye, igualmente, una columna que indica la importancia de cada elemento estudiado y para cada tres grados de apreciación (bueno = 0; medio = 2 y catastrófico = 4). Esta tabla permite calcular el coeficiente de deterioro (CD) y su valor máximo: mientras más elevado es el CD, más crítico es el estado de las colecciones.

Este método permite efectuar fácilmente la evaluación de las colecciones y sólo requiere un mínimo de formación por parte del personal.

Present strategies and future perspectives of conservation at the National Library of Brazil

Historical perspective

For many years, the National Library of Brazil had a very modest and amateurish department of restoration and binding and used outside services for more important work. From 1982 on with the institution under the Directorship of a librarian, a new preservation and restoration philosophy began to influence the decisions taken. These started with the reform of its structure and creation of a new integrated department combining preservation, restoration, binding and microfilming, following the practices of the more developed libraries in Europe. The maxim "preserve in order not to restore" led to a series of changes. The new Statutes of April 30th, 1982 created a department for conservation and microfilming, and in order to extend these benefits at national level, a National Plan of Preservation of Rare Documents (PLANOR) of the Ministry of Culture was also put in place. The National Plan for Microfilming Brazilian Periodicals (PLANO), established in 1979, was also absorbed in recognition of its importance in any preservation policy program.

As a sound basis to implement a conservation policy, it was considered necessary to create new facilities or re-structure the existing ones, to install newly-equipped laboratories for microfilming, restoration and binding. Since human resources were fundamental for these changes, it was essential to conceive a training program sponsored by national research agencies, which would result in one full academic trainee year in an English university and also, nine-month scholarships in Spain for three technicians. Later, these were followed by several shorter courses, conferences and seminars, which provided updated information on techniques, and kept permanent staff aware of developments in their field of specialization.

Framework for changes

The above-mentioned measures formed the embryo of future developments which brought a high standard professionalism to this department. Nevertheless, a 1996 analysis made it clear that a renewal of policies and the outlining of more consistent programs was needed to respond to urgent problems of the safeguarding of the collections.

As a result, changes made from July 1996 partially covered the infrastructure, but more specifically related to policies and programs aimed at solving the problems of the treatment of collections and obsolescence of equipment.

Among the major conservation problems in tropical climates we can list high humidity and the proliferation of insects and mould, damage to paper by intensive natural or erroneous lighting and possible water damage, all generally resulting from bad maintenance of buildings.

Even though the main building of the National Library was totally repainted, the problems of roof leaking were only partially solved and the internal condition of the electrical wiring, air conditioning and water-damaged stacks remained serious in 1996

This situation was aggravated by the lack of appropriate furniture for storage and neglect of good conservation practices. Measures to remedy these consisted of the prohibition of smoking in the building, using ball point pens or color pencils, carrying cutting instruments and eating on premises. The suspension of photocopying of any of the collection's items was another measure to prevent its damage by intense manipulation and light exposure, since no special reproduction cameras were available due to lack of funds.

The handling of collections is now the object of careful scrutiny. Gloves and other special cushions are used to prevent smears or binding abrasions and fractures resulting from heavy or careless use. All the above measures have now become routine and have been accepted by all users.

Another set of preventive conservation measures was the proper storage of collections forgotten on top of the shelves and on the floor in the stack rooms, as well as rearrangement and restoration of the original furniture to allow for the expansion of certain collections such as manuscripts, maps and illustrations in general. Also the maps, engravings, photographs and posters which were stored in paper packages (around 79,000 pieces) were transferred to new "vertical" archives and map cases, and can now be easily located and made available to the public. The reallocation of maps and posters, engravings and photographs was carried out to create a new space dedicated to the map library alone, housing 25,000 maps and 3,000 specialized books.

The same procedure was used for the storage of scores, records and musical scripts totaling 300,000 pieces reallocated during the refurbishing and modernization of the Music Department, which was also totally automated and today can serve a clientele with sound and image databases, available on the intranet and on the Web site.



Microfilming Laboratory.

From strategies to actions

After this general reorganization it was necessary to establish a plan of action taking into consideration the introduction of new technologies in all segments of information and library work with a fresh look at the present and future perspectives of the safeguarding of collections and their access.

This involved not only conservation procedures but the availability of collections through modern means of communication. Within the perspective of digitized collection and dissemination of the national intellectual production presented in all its forms and supports, it is extremely important to define clearly the process which will determine that collections have been adequately treated and stored.

One of the crucial concerns is the permanent involvement of the preservation staff in the work done by those responsible for storage and dissemination, in order to ensure that the rules of conservation are understood and followed to the letter.

With these new perspectives in mind, it was necessary to define strategies for the near future which encompass awareness of digital preservation and access. The aim is to create a better infrastructure with adequate space and equipment, taking into account future changes, to train staff capable of dealing with modern preservation techniques and to promote the use of digital archives and film as a support for preservation and access. One of the main objectives should be to coordinate conventional plans of preservation and conservation with new methods of optical and digital storage so as to maximize the creation of networking systems and to train professionals to carry out programs according to international standards.

Conservation policy

From 1996, important collections have been preserved. Most of the time the laboratory works with special projects financed by outside donors. Time and cost constraints in this meticulous work prevent our using any kind of outside help apart from those already trained by the Library itself or acknowledged free-lance experts working at international rates.

Most of the work being performed is prompted by the necessity to obtain the systematic treatment of collections and safeguard the rare collections in existence as a matter of urgency. It is important to note that 1995 was marked by an effort to clean collections in their entirety employing a large number of unskilled personnel. This resulted in a very large investment of time and money, but had negative results due to a lack of specialized internal supervision and reliance on outside help alone.

In 1997-98, with a task force of 40 specialized assistants 212,250 documents were cleaned and 5,329 preserved, besides preparing and applying 7,000 protective enclosures to documents. Special attention was also given to reshelving 6,400 works, cleaning and applying protective enclosures to 2,600 pieces of the collections housed at the Rare Books Division, which was successfully accomplished within 8 months. The same procedure was used for periodical collections a large number of which were cleaned (around 283,500 pieces) and received preventive enclosures, but a large part is still pending. It is the Library's intention to continue this work by using special storage boxes for periodicals and pamphlets and damaged books throughout the holdings.

An analysis of the leather used and the type of binding preserved gave rise to some modifications, since most of the 17th century documents were on paper that lasted longer than the original binding, thus restorations had resulted in its total replacement. To counteract this situation the policy today is to intervene as little as possible on the originals and to avoid replacements of the original cover.

Techniques of aqueous and non-aqueous paper deacidification are now a routine, and the acquisition of two leaf-casting machines has led to a permanent program for restoration of incunabula already accomplished on 40 out of the 50 volumes needing serious restoration. The project aims at preserving the whole collection consisting of 216 incunabula which were the object of an exhibition and a descriptive catalogue in 1998.

Another of our priorities was to restore the most important pieces of our iconographic collection, such as 123 engravings of Albrecht Dürer, the German engraver and painter of the late 15th century whose work was mounted on passe-partout and stored in acid-free tailored made boxes; 287 Italian drawings of the 17th century and the work of Gasper Van Baerle, Belgian historian of the late

*Restoration Laboratory**Conservation and Binding Center*

16th century. Two volumes with 112 engravings in color and black and white, will be displayed in an exhibition and included in a CD-ROM sponsored by a private company.

An important project involves the preservation of the Library's photographic collection, which portrays the economic, historical and cultural life of the nation. This preservation project has developed specific rules for the automated cataloging (MARC formatted) of photographic documents and also a specific system of storage that is in accordance with international standards. The project will now move to digitization of its collections and more than 300 are already available in digital form. Part of it appeared in a CD-ROM organized by ABINIA and sponsored by IFLA-PAC/UNESCO and will appear on the Web site of the Library. This project has identified the National Library of Brazil as an expertise center, possessing the most advanced treated photo collection in Latin America (see Preservation Info. News n.12 , June 1996).

Consequently, IFLA/PAC organized a Round Table on Preservation of Photographic collection of XIX century at the National Library, which provided an opportunity to discuss photographic conservation policies in the Region.

National plans and networking

In order to respond to the objective of coordinating national level preservation programs, it was necessary to revise and enlarge the two major national networking plans in the field of preservation and conservation.

PLANO -National Plan for Microfilming Brazilian Periodicals

The PLANO is devoted to identifying new serial publications at national level, copying the missing issues

from the main periodical collection at the National Library and providing the owner with a microfilmed copy while keeping the original master to produce multiple copies if necessary.

It operates through agreements with regional secretaries from all Brazilian states, providing technical expertise to install microfilming laboratories and offer technical courses for recycling personnel, while producing technical manuals to be distributed to students and collaborating institutions. Apart from regional agreements and individual requests for which 7,500 copies either in paper or microfilm were provided in 1998, ten of the major daily newspapers have a contract for current microfilming reproduction. The Library of Congress also launched a joint program for microfilming nine current titles of Brazilian newspapers.

In order to carry on with routine work, as well as with the national commitments, the microfilming laboratory has been totally remodeled to solve problems of faulty air conditioning, lighting and electrical wiring.

The existing equipment acquired back in 1982 underwent major repairs. Additionally, new equipment was obtained through donations from VITAE and the Catholic University of Rio de Janeiro.

The expansion of the Laboratory is considered as a major accomplishment: with a storage area for microfilm masters it houses an additional 20,000 rolls in 15 square

meters with compact shelving. Nevertheless, this expansion was restricted and though not ideal, it has solved the storage problems temporarily. This project received an grant from VITAE.

The old storage room was also equipped with new air conditioning and its capacity was enlarged to accommodate microfilm masters totaling another 20,000 rolls (100 linear meters each).

The above renovations carried out during 1998, jeopardized the production of the first quarter of that year, but statistics for 1996 show a production of 400 rolls and already in 1997 this grew to 900 rolls (totaling 1,800,000 pages), providing a basis on which to forecast microfilm production in the future.

Another important development is the availability on the intranet of a 5,000 titles database of the already microfilmed periodicals, making it possible to request copies while consulting the database. This database will be on the Web site shortly.

The systematic approach to microfilming of rare books, manuscripts, scores, maps, and illustrations has reached 300 rolls of microfilm (each containing approximately 900 pages).

This has generated a need for more microfilm readers in different reading rooms. In order to face the problem of storage space, a policy of digitization and CD-ROM or DVD storage in juke-boxes is under study.

Another important project worth mentioning is the exchange project between Brazil and Portugal devoted to the microfilming of manuscripts.

Already, 519 rolls of microfilms corresponding to 467,100 manuscript leaves or reproduction on paper are available for consultation.

PLANOR- National Plan of Preservation of Rare Documents

This Plan intends to identify rare works existing within national boundaries and help the institutions holding these collections to take measures to safeguard them either by creating conservation laboratories and/or by changing infrastructure. One immediate objective is to prepare union catalogs of rare books and to train the staff, but also to raise awareness on preservation and restoration issues on the part of institutional authorities.

This project has been very successful among institutions and government authorities and led to the preparation of several inventories, courses and technical visits. At present, it is being enlarged in order to provide technical advisory visits on a national basis and its periodical news bulletin will also appear in electronic format.

La préservation à la Bibliothèque Nationale du Brésil : stratégies actuelles et perspectives

Durant de longues années, le département de la restauration à la Bibliothèque Nationale du Brésil a eu un caractère semi-professionnel, voire amateur. A partir de 1982 ce service a été restructuré et un nouveau service combinant préservation, restauration, reliure et microfilmage a été créé. Il s'est orienté sur de nouvelles méthodes pratiquées dans des bibliothèques européennes. L'importance d'une politique de conservation a été reconnue.

Ces changements ont nécessité l'acquisition d'un équipement adéquat ainsi qu'une formation pour le personnel selon les champs de spécialisation.

Des nombreux problèmes ont surgi et des mesures de préservation préventive ont été prises: interdiction de fumer ou de manger sur les lieux du travail, réduction des photocopies, amélioration des conditions de stockage, déménagement d'une partie des collections dans des locaux appropriés, etc.

Les laboratoires de la Bibliothèque ont acquis une expérience et une renommée importante dans le domaine de la préservation grâce au travail sur de nombreux matériaux précieux comme les cartes et les photographies.

En 1997-1998 grâce à la participation de 40 assistants-spécialistes, on a pu procéder au nettoyage de 212 250 documents et à la conservation de 5 329 exemplaires. Un travail identique a été effectué sur la collection des manuscrits rares et sur les collections de périodiques.

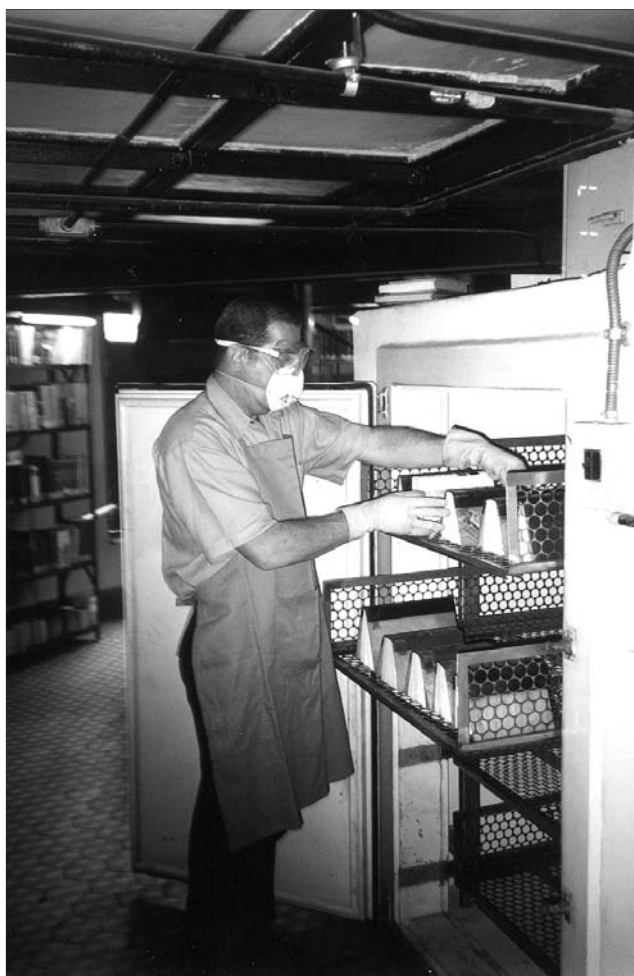
Une autre priorité a été de restaurer une collection iconographique comprenant des gravures anciennes (Albert Dürer) et une collection photographique, dont une partie a été numérisée.

Enfin, la réalisation du projet national de microfilmage des périodiques brésiliens a entraîné la rénovation du laboratoire de microfilmage et l'achat d'un équipement moderne. Dix des plus importants journaux nationaux ont été microfilmés. La base des données comptait déjà 5 000 titres.

La Bibliothèque Nationale du Brésil a réussi à sensibiliser à la conservation de nombreuses institutions possédant des documents rares.

Au cours des années 97-98, le personnel des laboratoires, archives et bibliothèques a pu suivre une formation grâce aux cours et aux stages organisés par la Bibliothèque.

D'autres projets concernant la préservation et la conservation sont encore en cours de réalisation, notamment la numérisation des documents et la création d'une banque d'images sur le web.



Fumigation chamber.

Training activities

In 1997-98 training programs were developed and 30 staff from laboratories, libraries and public archives were trained in addition to three month internship programs specially developed for staff from other cities.

Even though the conservation lab has continually organized specialized courses, it was only in 1997 that a manual on conservation procedures was published – the first one of a series of technical manuals of the Library. Other manuals of this series are under way. They deal with enclosures and storage of photographs, microfilming procedures and storage, rare book conservation methods and automated cataloging. These manuals are expected to be published before the end of 1999. Display of these publications can be found on www.bn.br.

Digitization project

The creation of image database for maps, photographs and manuscripts at the National Library is worth mentioning since it opened up horizons for a large-scale

Abstract del artículo

Un breve histórico de los servicios de preservación y restauración de la Biblioteca Nacional del Brasil y la evolución de las técnicas utilizadas y la formación de su personal.

Una análisis de los principales problemas de conservación y sus soluciones con la preocupación de crear una mentalidad de preservación en todos los seguimientos de trabajo de la Institución.

Los planos nacionales de preservación coordinados por la Biblioteca Nacional y sus objetivos y evolución.

Algunos aportes del futuro de la preservación y la metodología y política de digitalización planeadas para el avenir.

La adaptación de técnicas de preservación en los países tropicales.

Celia Zaher

project. The availability of these images connected to the bibliographical register at the Web site has created a new situation of providing remote users with material available only at the National Library. Nevertheless, a digitization project per se, implies a series of measures and a staff trained in selection, conservation, digital reproduction and a sound methodology for digitization, including metadata identification. A project for this is being studied and will be submitted to The Andrew W. Mellon Foundation for a possible grant.

Outreach programs

An expansion program to provide bigger facilities for binding and microfilming laboratories, including a training component has been outlined. It will occupy 1,200 square meters of the annex building of the National Library and will permit systematic microfilming of periodical collections for conservation purposes.

This project includes a large binding program for old and current collections, as well as the production of conservation enclosures for the 53,000 titles of periodicals with 257,000 volumes of holdings to be stored after microfilming. A large air-conditioned storage room will secure the microfilm masters, and the reconstruction of the other floors will offer better storage conditions, with temperature/humidity control and safety measures. Even though the proposal is under negotiation with donors, the National Library plans to implement it, at least partially. ■



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Libraries in

THE world media today focuses on the absence of effective governance and the deterioration of service networks throughout Afghanistan. These negative images ignore positive developments that have gone unreported and largely unnoted even by assistance deliverers.

Among these, there are abundant indications that a notable desire for reading materials exists not only in cities, where it might be expected, but throughout rural and urban populations as well. We learned that 1500 copies of one magazine were sold out in just one day in a small town in northern Afghanistan. The operative word here is sold, not freely distributed, but sold.

This intriguing information led us at the ACBAR (1) Resource and Information Centre (ARIC) to look deeper into available sources of reading materials. A number of important issues emerged. First, the pre-war network of libraries, although greatly depleted, still functions in many areas. Second, communities that were untouched by the pre-war formal education system are now asking for schools and educational materials, but very few school books exist and supplementary reading materials are even scarcer. Third, neither the production nor the distribution of reading materials is receiving adequate attention. It was obvious to us that a search for new approaches was needed.

Although Afghanistan has the lowest literacy rate in Asia, Afghans revere in memory the great libraries that once flourished at the courts. These collections, each in their turn fell victim to destruction and theft during Afghanistan's turbulent history. Despite this, respect for books remains an honoured legacy within Afghan society.

The modern scenario in Afghanistan

Public Libraries

In modern times, the first public library, the **Kitab Khana-i-Milli**, or National Library was established in 1924 when a discriminating collection of illuminated manuscripts collected by Prince Nasrullah was made available to the public. During the civil war of 1929, this library was looted and many fine folios were destroyed. A new Public Library

was opened in 1933 and over the next forty-five years a network of some thirty provincial libraries was set up under the Department of Public Libraries. These provincial libraries were of varying sizes and quality, the collections, except in large cities, consisted mainly of newspapers, magazines, journals and a few books.

In 1978 when the monarchy was overthrown, some 10,000 books taken from the homes of the former royal family and their associates were transferred to the central and provincial libraries along with thousands of books confiscated by the Kabul, many of the provincial libraries closed or functioned only marginally because of widespread civil disturbances. Nonetheless, the Department of Libraries continued to function.

In Kabul, of the five local branches, two were shut down completely and three others remained moribund in 1993. At the main library, after fifteen years of war and a year under the mujahideen regime, the Deputy Director estimated that of the collection's 30,000 titles in Persian, Arabic, Russian and English, 8000 were missing.

Most losses did not result from outright looting. At the time of change of government in April 1992, the grounds of the library was being used as a military post. Although some expensive volumes may have been lifted by knowledgeable individuals, most missing volumes had been used by the soldiers for fuel for warmth and cooking.

The condition of the remaining books was distressing for this collection included many rare English volumes, such as first editions of Sir Alexander Burnes (1842), Lt. Vincent Eyre (1843), Joshua Duke (1883), Dr. John Gray (1901) among others, as well as a set of Atchinson's prints (1842). There were no daily readers.

The periodicals room was housed in a separate adjacent building. Tables were piled high with a jumble of dust-laden newspapers and magazines. Four newspaper-size ledgers contained the complete handwritten record of the former holdings against which the staff were labouriously checking the current holdings. Three years of the 1920s newspaper *Aman-i-Afghan* appeared to have disappeared. The collection of seven and a half years of *Seraj-ul-Akhbar* (1911-1929), however, appeared to be intact. This section reported from 20-25 readers daily.

The Children's Library occupied a small room, which was crammed with books thrown onto the central table and haphazardly onto shelves. No estimate of what might have been taken was possible.

There has been a gradual return to order during the years of relative peace in Kabul since the arrival of the

(1) ACBAR is the Agency Coordinating Body for Afghan Relief, a group of non-governmental organizations assisting Afghanistan and Afghan refugees in Pakistan.