

Preservation Education in Southeast Asia

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I am speaking on the subject of education in preservation, a subject to which I have given much thought over the last several years. To provide a background for my remarks on education, especially in Southeast Asia, it is necessary to briefly review some of the main events and developments in preservation over the last fifty years.

My own introduction to conservation was as a pupil at the Oldham Municipal School of Arts and Crafts, an extended outpost of the Manchester Royal College of Art in England. The text books for the standard courses in craft bookbinding included Douglas Cockerell's *Bookbinding for Schools* Dryad series. At twelve years old, although I was aware of Douglas Cockerell's landmark work *Bookbinding and the Care of Books* (1), I knew little then of his innovative conservation treatment of the *Codex Sinaiticus*, nor his pivotal role as a member of the Society of Art's Committee on Leather for Bookbinding, whose report of 1901 was the first systematic analysis and standardization of binding materials and structures. I was then more concerned with the arcane mechanics of the craft and mastery of the basic, but manually challenging, techniques.

When I began my six year bookbinding apprenticeship three years later, I was to encounter Cockerell again and would learn much more of his ideals and those of his master, Thomas James Cobden-Sanderson. Bookbinding or conservation training was based entirely on a traditional Guild concept but brought up to date by the guidelines established by Cockerell and his fellows. There was a striving for excellence in materials and structure, and although much of the binding restoration of the day was based only on experienced observation and immediate practicability, there was always a sense---sometimes illusory --- that the results of our labor would last for hundreds of years beyond our time.

My training consisted of work at the bench on bindings and paper problems of increasing complexity for 45 hours per week with an additional 10 hours per week spent in the evenings at the Manchester College of Science and Technology, now the University of Manchester Institute of Science and Technology or UMIST. There I took classes leading to the City and Guilds of London Institute certificate. Unfortunately, even in England, downturns in trade and falling demand have severely weakened this form of education and training.

Accountability for preservation then, was essentially individual, in that librarians and bookbinders took it upon themselves to select worthy books and manuscripts for the best treatment that could be afforded, with binders getting quite rigorous training based on the old Guild system of lengthy apprenticeship.

Development of the Field of Preservation

The concept of individual accountability seemed to become less realistic as library collections grew in size and complexity. The steady and exponential growth in library collections as a result of increases in knowledge and scholarly output, brought about a dramatic change in our approach to the care of library materials. The traditional individual conservation treatment of carefully selected books and manuscripts seemed less relevant and as a result became almost completely ignored. Preservation seemed to have been given a back seat during this period of rapid and somewhat frantic growth in collections and library buildings beginning in the early 1960s. In the race for bigness, concerns about preservation were simply set aside, and the concept of individual accountability for preservation became unfashionable.

By the mid-1960s in the United States, concern was being expressed about the lack of preservation activity in research libraries and increasingly questions were being asked by librarians about the large numbers of books with deteriorated paper in their collections. It wasn't that this problem was only newly discovered---reference had been made to brittle paper a century before---but for the first time there seemed to be a realization of its enormity of scale. A number of strategies to address the problem were discussed, and a few institutional preservation programs began to appear. However, the majority of these programs were quite weak and underdeveloped, and the Warren Haas report to the Association of Research Libraries of the United States in 1972 helped greatly to legitimize and shape them in a national context.

The Haas report (2), is an eminently sensible articulation of the needs for a nationwide program for the United States, based on individual institutional effort and coordinated through yet-to-be-established InterNet and interactive bibliographic systems.

Clearly, the report boosted the development of institutional preservation programs among major libraries. Most of Haas's specifications for a national program have been met in some way, and his call for the creation of a graduate program to educate preservation administrators was eventually met by the establishment of a program at the Columbia University--- now located at the University of Texas--- although his recommendations for a national apprenticeship program for conservators and technicians has still not come to fruition.

The many reports of what soon became known in America as "the national brittle book crisis" and the widespread alarm that these caused in library and archives circles helped to stimulate the drive towards the creation of preservation programs, especially those featuring microfilm. The combination of the identification of brittle paper as the common enemy, the formation of consortia, and the availability of grant funding, lead directly to cooperative preservation programs based on microfilm, a technology that was familiar to most librarians.

Although a great deal of work was needed before preservation librarians could be satisfied that the quality of microfilm could reasonably be declared archival, the programs that developed to capture brittle materials threatened with extinction are impressive and ongoing. The use of the interactive bibliographical utilities suggested by Haas made cooperation on preservation possible,

and in combination with the strict technical and bibliographic requirements of the funding agencies, helped to distribute accountability among a group of libraries.

So successful has this model of cooperative action been over the last twenty years or so, that programs in other parts of the world have sought to emulate it, including the formation of the European Commission on Preservation and Access and the Southeast Asian Commission for Access and Preservation (SEACAP).

As we will hear during the course of this day, it is indeed a changing world. The age of digital technology is upon us and we must all learn to change our ways, because events in our institutions, society at large, and more particularly, in Southeast Asia, are moving inexorably in this direction.

At Cornell University, digital imaging technology was first investigated at the end of 1989 by my own unit, the Department of Preservation and Conservation, with experimental work sponsored by the Commission on Preservation and Access and the Xerox Corporation. In all the publications that emanated from this continuing research, we insisted that digital imaging is not preservation, and that the preservation of deteriorating material can only be by the creation of archival microfilm. After all, we know that microfilm can last for five hundred years, if the appropriate film base and chemicals are used, the processing carefully controlled, and the resultant storage standards are met. We film, we process, we store, and forget about it. The work of preservation is accomplished.

However, the practicability of reformatting forces us to reconsider our strictures on digital technology as a preservation tool and revise our systems of education and training in preservation.

Like many of you here today, I have devoted much of the last twenty years to working in Southeast Asia, establishing preservation programs, setting up operations, training staff in conservation and collections care, designing facilities, searching for funding, in fact a wide variety of preservation-related efforts, averaging two months out of every year.

A significant part of our efforts have involved setting up microfilming operations and training staff to ensure the preservation of deteriorating collections. When we were able to manage and control microfilming projects, we created film based on the concept of lodging the camera negative with the host country and bringing back to Cornell positive copies of the film.

We were always aware of the problems of microfilm storage, and in 1991 I had proposed that a Southeast Asia regional center be established that would provide training and technical expertise in preservation and establish a central microfilm storage facility. In subsequent meetings at Chiang Mai University these issues were discussed but we were not able to arrive at a satisfactory conclusion or plan of action. Even when the Southeast Asian Consortium for Preservation and Access—SEACAP--- was formed at Bangkok in 2003, we found it difficult to progress beyond the point of producing a statement of intent that, though valuable--- did not lead to the necessary funding.

Thus the storage of negative microfilm in Southeast Asia has always been a significant weakness, and when Roger Tol's survey report to the Ford Foundation on the condition of master negatives in Indonesia was produced in 1998 (3), we had confirmation of our worst fears. Microfilm negatives are vulnerable when stored in Southeast Asia and patently do not last for five hundred years, in fact, most of the negative film examined by Tol were illegible after only twenty years. Of course, we do have the positive copies of the film produced by projects going back to the beginning of the 1980s, but to ignore the problem of film deterioration in the countries of origin seems like one of the worst forms of cultural colonialism.

In recent research at Cornell on the hermetic sealing of negative microfilm, we felt that we had come up with a viable solution to the storage of film in tropical climates (4), but there are other, perhaps more pressing reasons why microfilm is being largely abandoned in Southeast Asia.

Despite the provision of microfilm cameras and processing equipment to Southeast Asian institutions in the past, few institutions can afford to buy the film stock and chemicals to sustain viable programs, let alone upgrade their equipment, and most of the programs I have seen recently have quietly moved to some form of digital imaging to reformat deteriorating materials. One of Cornell University's strategies is to work with institutions to establish viable scanning units and then to ensure that the images continue to survive by archiving them at Cornell. We are negotiating with a foundation right now to establish such programs in Viet Nam.

Education

As may be noted by my remarks thus far, the field of preservation is complex, involving as it does an array of strategic and political challenges. In most Southeast Asian countries, preservation as a professional field of study does not exist, and where efforts have been made to establish or upgrade conservation facilities, the organizational context in which they function is weak, with conservation tasks being relegated to low-paid staff. As long as this low status for preservation continues--- with no discernable career path for ambitious librarians--- the field will not make any advances in the region. As a prerequisite for education in preservation management, the individual should have a high level of related general education prior to entering the library profession. Education in librarianship generally involves:

Developing a familiarity with computer systems; learning about the various interactive bibliographic systems; learning about the global availability of library resources via electronic means; learning about the broad range of specialized databases; learning about what will be needed to gain access to these resources; understanding meta-data issues and the application of world standards such as Z39.50.

Developing an understanding of the interdependent nature of libraries, and that no library needs to invent new ways of doing things; developing a feeling for the underlying philosophy of libraries; developing the concept of service to all users, those in the present and those in the future.

Understanding the nature of preservation in terms of the tools and technologies available to us and their most appropriate use; developing a sense of priority, understanding that some things are more important than others; developing a sense of local, regional, national, and international preservation needs and solutions; understanding the importance of preserving entire collections rather than individual pieces; understanding that decisions that are made on the physical structure of library buildings, forms of storage, the mechanics of climate control, and the politics of funding priorities, strongly influence the lives or deaths of collections; developing the ability to assess and articulate the preservation needs of collections.

Training builds upon the understanding and learning methodology that education brings, and involves the acquisition of specific skills to accomplish an institution's objectives. The building of skill through training can be accomplished in a variety of ways: through basic training by an expert followed by careful practice, through lengthy apprenticeship and internship, and through a series of concentrated training sessions. However, one of the most important factors in both education and training is the need to be current in the field, to be constantly informed of technical developments and research, and to have the knowledge to access up-to-date information when the need for change arises.

In Southeast Asia, large amounts of staff training and education are needed if libraries are to take their place among the best in other regions of the world. Library schools in Southeast Asia seem to concentrate on teaching basic library skills, but do not seem to have addressed some of the philosophical underpinnings of libraries nor our collective responsibility to ensure the continued accessibility of our collections. To my certain knowledge, based on my observations in libraries and archives throughout the region, there are very few comprehensive preservation programs, in the region, only a handful of microfilming programs, and few effective conservation programs.

This lack adversely affects the establishment of a new preservation program in a number of ways (a), there are no national preservation experts to serve as mentors and consultants (b), there are no educational or training programs in any branch of preservation (c), there is no national published body of knowledge (d), there are no ready supplies of conservation materials and equipment.

There are a number of approaches to education and training for preservation, ranging from one-day workshops to lengthy academic or internship programs. All of them have their advantages and disadvantages.

Workshops and seminars can be an excellent way to help raise awareness of some of the challenges in preservation and to identify some of the general areas where particular attention should be concentrated. These affairs---usually of a few days duration---are helpful in demonstrating special techniques or in introducing new approaches to old methods. They can be valuable to administrators, as they often engender ideas, and valuable to preservation professionals, especially if they are used to add information. For example, disaster response exercises are useful in that they add to the existing skills and experience of preservation professionals.

However, they tend not to be useful in fostering the establishment of preservation programs through the development of staff skills and knowledge, which require substantially more training and experience.

Academic programs can be valuable in that they can combine a more scientific approach to preservation combined with one that is more generally managerial. Clearly, this approach seems most useful to preservation administrators, as classroom work is designed to build theoretical knowledge rather than technical skills.

A major disadvantage is that very few such programs exist anywhere in the world, and this form of education tends to be lengthy, especially if extended from courses in library science.

Apprenticeship programs are based on the long-term acquisition of skills and knowledge by serving a formal, usually hands-on, schedule of training by working in a facility where a high standard of work is being performed. For conservators and technicians, this is probably the most effective way to develop high levels of skill.

However, for apprenticeship programs to succeed, there needs to be a network of model preservation programs in place, and the training is lengthy, often several years.

Internship programs are designed to allow interns to work directly within an existing preservation program, preferably one that is comprehensive, and develop skills and knowledge simultaneously. Internship programs provide the intern with a learning environment that does not end when the period of internship is completed, as the comprehensive host program establishes a continuing relationship as a mentor. At the present time, the only appropriate model programs are outside the region. A good example of a successful internship program was the one active from 1997 to 2000 at Cornell University, which consisted of six month sessions for each of twelve interns from Burma, Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam.

The Problem. Workshops and seminars can be very useful supplementary tools to provide current information, but the information gained can soon be forgotten if there is no formal organizational structure to ensure continuity. Academic programs can provide an excellent theoretical education providing that there are viable career paths for librarians beyond the academic program and a context in which they can operate. Apprenticeship programs are essentially unattainable without established institutional or private programs. Overseas internships can work very well, but are expensive to operate and language skill are needed to match the language of the overseas sponsor, and people with language skills are often destined for higher managerial posts.

What then is the solution to the development of educational programs in preservation in Southeast Asia?

I have a fair amount of experience in many types of training and education, and have trained six-year and five-year apprentices, taught in academic graduate programs in England and America, have conducted many workshops in Europe, America, the Middle East, and Southeast Asia, and developed a series of internship programs, including a current program for Native Americans.

Of the methods I have experienced, I believe that internship provides the most practical approach for Southeast Asia, as it places librarians and technicians in a setting where there are skilled people and proven operations without too large a commitment of time. If formal overseas internships can be provided by key institutions, this can result in increased awareness, but as noted, they are expensive to run and require second language skills. I believe that the establishment of regional preservation centers can help to bring the issues of preservation more into focus

If preservation centres could to be established in the region, an important role of the center would be staff training and education through intermittent internship. The mentoring role could easily be extended to cover consultancy visits to interns= budding operations and to offer some specialized services.

Regional Preservation Center for Southeast Asia. In 1991, a plan for the establishment of an international cooperative preservation/conservation center was distributed to a number of parties, including representatives of several Southeast Asian countries, NIAS, SPAFA, and various international funding agencies, including the Ford Foundation and the Toyota Foundation. The plan describes a full service center located at a host institution in an economically and politically stable country in the region, to permit personnel from neighboring countries to pass freely to and fro. The center would function as a service facility, undertaking the preservation/conservation work of the host institution and the specialized work of other institutions on a cost-recovery basis. Trainees from around the region would serve as interns at the center, working at a range of tasks in ascending levels of difficulty according to their needs and levels of expertise guided by a core staff of professionals. Training would operate on two levels, administrative and technical.

Administrative training would expose potential preservation administrators to some of the practical aspects of preservation through short training sessions in the operational units of the center, but the primary focus would be on program development and managerial skills, needs assessment techniques, strategy planning, and proposal writing. Interns at this level would be librarians and archivists.

Technical training would be designed to develop skills and increase knowledge. Interns would work in the appropriate operational unit at the center, acquiring skills through practical apprenticeships. Because of the realities of local program development and to maintain momentum, interns would be trained on an intermittent basis, and would work at the center in the area most relevant to his/her needs for three months, then would return to the home institution to

implement the newly acquired procedures and in turn, to train local staff. After an appropriate period, the intern would return to the center for more advanced training.

The center would be staffed by a skilled and knowledgeable working group, who would assist the establishment of local facilities by site visits, but more important, would act as continuing mentors. In this role, the center staff would advise and encourage former interns, and supply technical back-up and specialized, capital-intensive services. The interaction of center staff and interns from the nations of the region, would inevitably forge formal and informal cooperative links that would lead to the development of a solid body of knowledge and professional activity.

One of those services, for example, could be a central storage facility for microfilm and other non-book media. Storage facilities could provide more than one temperature zone, ranging from below freezing to 15 celcius with 35 percent relative humidity. The freezer portion would be used to kill insects and to freeze water damaged paper materials.

Eventually, distributed regional centres could also begin a program of scanning collections that would both develop a high level of local expertise and initiate the reformatting of cultural documentary materials. The digital imaging centre would result in teams of experts able to plan, create, and organize information, lending this expertise to other institutions and individuals. Services provided by the centres could include: image archiving, feasibility studies, grant writing support, budget preparation, production planning and implementation, project management, hardware and software recommendations, financial management, and standards consulting. Offering these services and other services to other institutions and individuals for cost-recovery fees would provide the sustainability needed to ensure the continued viability of the centres.

Conclusion

I realize that the establishment of regional cooperative preservation centres in Southeast Asia would require significant funding and organization, but do not believe that it is beyond our powers to achieve this. The advantages are numerous. After an initial period, the centres would be: self-sustaining; they would be permanent---in that preservation training would not have to wait for the sporadic intervention of foreign experts; there would be a real sense of ownership; grant funding from international agencies would be more easily facilitated as requests would be on behalf of all the centres clients.

Beyond the establishment of regional centres though, it is clear that the way in which libraries, archives, and preservation in general are regarded in Southeast Asia will have to change. It is vital that those in authority be aware of the enormous importance of the vast cultural heritage represented by their collections, and begin to focus more on their continued survival. Preservation has to move from short-term projects funded by some overseas body to real home-grown programs, and the field of preservation must become a viable career path for library professionals.

Notes

1. Douglas Bennet Cockerell, *Bookbinding and the Care of Books: A Handbook for Amateurs, Bookbinders, and Librarians*. New York: Appleton, 1902.
2. Warren J. Haas, "Preparation of detailed Specifications for a National System for the Preservation of Library Materials." ARL Report. Washington: 1972
3. Roger Tol "Acid Irony? Or How to Deal with Negatives Positively: An Evaluation Report of the Microfilming Projects in Indonesia Supported by the Ford Foundation." July 1998.
4. "The Cornell University Project, Investigation of Hermetic Sealing as a Means of Extending the Life of Film-Based Materials: Final Report to the Ford Foundation." December 2005