PRESERVING ARCHIVAL COLLECTIONS IN THE CORY LIBRARY FOR HISTORICAL RESEARCH: CHALLENGES AND ACHIEVEMENTS

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Abstract

Every institution has a responsibility to safeguard the collections that are entrusted to it. That responsibility includes incorporating preservation and conservation awareness into all facets of the institution's activities so as to ensure the long-term preservation of its collections. However, many archival institutions around the world particularly in Africa face many challenges in their efforts to permanently preserve their archival collections. Poor infrastructure, lack of funding, staffing shortages, lack of skills, poor storage facilities, severely limited or non-existent environmental control, disaster contingency measures and lack of proper preservation policies within institutions have all had a negative impact on long-term survival of archival material. This paper aims to share the Cory Library for Historical Research's experiences in its effort to ensure long-term preservation of its archival collections. The Cory Library acquires and preserves records of historical value and provides its services to meet the research needs of Rhodes University staff, students and the community at large. Unlike museums where items can be kept for a long time without being handled, archival collections in the Cory Library are meant to be used. The high frequency of use of archival collections by students is one of the dilemmas that the Cory Library faces. Continuous use of archival material increases the rate of deterioration, thus this paper will look at efforts by the Cory Library in its attempt to address this dilemma and how information can still be made accessible, while still

ensuring that it is also preserved for use by future generations. The paper examines the Cory Library's preservation strategies including its archival building which was designed according to international archival requirements and standards and also incorporated Stehkämper's greening principles.

Keywords: Cory Library for Historical Research, Preservation Strategies, Rhodes University

Introduction

The Cory Library for Historical Research is situated in Grahamstown, Eastern Cape Province, South Africa. The library collects material of all types to support research into the history of Southern Africa with particular reference to the history of the Eastern Cape Province. The library started operating in 1931 with the presentation by Sir George Cory (Rhodes University Professor of Chemistry) of his collection of historical books and documents to the Library of Rhodes University. Since then the Cory Library has developed into a specialized library within Rhodes University Library service.

The Cory Library collections includes material of all types, manuscripts (including personal documents - diaries, journals, autobiographies, family histories), Government publications, rare and modern books, periodicals and newspapers, maps, photographic material, microforms, audio visual material, artworks, regalia, records for businesses and local community associations and educational institutions within the Eastern Cape, church records and Rhodes University archives.

Cory Library's archival holdings are particularly strong with regard to the history and politics of the Cape, Southern African, Xhosa history, mission and church history, 1820 Settlers, education, mining, commercial and agricultural history. The holdings of the Cory Library are extensive and most of the material dates back from the 19th century.

Cory Library continues to build on its traditional strengths, adding new areas that complement and enlarge upon older collections.

The main purpose of the Cory Library is to acquire collections, organize and make them available for use, and also preserve them for future use. Without proper preservation, these collections can be lost forever. This paper aims to provide an overview of preservation issues for all types of material in the Cory Library.

Preservation in the Cory Library

As with all collections in different institutions around the world, Cory collections are vulnerable to deterioration. It is the responsibility of Cory Library staff to conserve and preserve the institution's collections as Harris (2000) stated "preservation should be a core archival function which informs everything else archivists do ...the availability of archival use by the public assumes and depends on archives being properly protected and cared for".

There are a number of contributing factors that lead to the deterioration of archival material, for example, unsuitable buildings, extreme temperatures and relative humidity, careless handling, theft, fire, water, pests, pollutants and excessive light. The main responsibility of the Cory Library is to ensure that all these factors that cause collections to become vulnerable to deterioration are efficiently and effectively addressed whilst also ensuring that users have unlimited access to these collections. Cory Library has implemented different preservation strategies to prevent or slow down the process of deterioration of its different types of collections.

Cory Library: building structure and environmental control

A building's structure and condition is the outermost shell in protecting archival collections according to Patkus (2003). It is the first defense against the impact of weather, pollutants and water. A building's environment affects collections. Archival institutions should have a good understanding of the importance of environment and buildings in preserving collections and understanding the effects of the environment on the deterioration or preservation of collections. Research from different parts of the world has showed that archival documents of all kinds are sensitive to the atmospheric conditions in which they are stored. High humidity with high temperature will en-

courage mould and insects while very low humidity can cause paper to become brittle. Given that an environment which is too hot, too dry or too damp can cause serious physical, chemical and biological damage to collections, effective control of both temperature and humidity is essential for the preservation of collections. Building facilities if planned carefully can provide a proper environment for the purpose of long-term preservation.

This opportunity presented itself for the Cory Library in 1996 when the University approved plans for a new building for the Cory Library. With the approval of the University, the new Cory Library building was planned and designed according to international archival requirements whilst also incorporating Stehkämper's greening principles which emphasize structural rather than artificial means to control the environment (Stehkämper 1988 in Rowoldt-Shell 2005). Stehkämper promotes natural air conditioning as a cost effective solution because it does not require the maintenance that mechanical systems do. While mechanical systems can fail, a "natural" system is part of the building's very structure, and barring natural disasters, will remain stable for hundreds of years. Stehkämper cites the Cologne City Historical Archives in Germany, the depository for the town documents since around 1408 as a testament to the effectiveness of this kind of design.

Planning the new building for the Cory Library centred on designing a building that would provide a relatively stable environment with low-cost energy consumption to prolong the lifecycle of collections. It was important for Cory Library staff to recognize the importance of low-cost energy solutions for climate control as rising costs can pose a threat to the long-term preservation of collections as Cullhed (2005) points out "while modern technology provides excellent systems to cope with excessive dryness, heat and dampness and cold for the benefit of preserving collections, little attention is paid to the issue of costs necessary for keeping such systems active". Sophisticated Heat Ventilation Air-Conditioning (HVAC) systems can be a real threat in the future especially when an archive/institution can no longer afford to pay the huge energy costs necessary for keeping the HVAC systems active. This is particularly true to most institutions in the developing world that are constantly faced with diminishing resources and frequent power cuts. The issue of energy is a factor

that all institutions involved in preservation should consider particularly when planning for a new building. Sandra Rowoldt-Shell, the Cory Librarian at the time visited a number of archive and library buildings in various countries to gain on-site experience of environmental controls in archives and museums in a climate more resembling South African conditions and most of what was learnt was incorporated into the planning and designing of the new Cory Library building.

The new Cory Library began operating in 2000. The library is accommodated into the lower ground floor of a multi-use building which includes the Registrar's office, Student Bureau, International Office and lecture/seminar theatres. According to Rowoldt-Shell (2005) the relatively stable environment and the low energy design of the building were achieved by structural passive means (designed to maintain reasonable environmental conditions with few mechanical systems).

1. The archives are below ground to utilize natural temperature control by means of the thermal inertia of the earth.
2. Extensive waterproofing and subsoil drainage network below and around the building prevent ground water penetration.
3. The solid mass of the building concrete frame acts as a thermal heat sink to limit excessive temperature fluctuations.
4. Large cavity brick walls and concrete roof tiles on insulation provide additional mass and solar screening.
5. Natural lighting maximized in work and circulation areas by means of south facing roof windows and an atrium that penetrates through all floors.
6. Natural ventilation and cooling is encouraged by means of open-able windows and ventilated triple volume atrium.
7. Effective solar shading is achieved by the use of natural elements such as existing large trees retained on site, together with deep roofing overhangs and sun louvers.

To modify the relative humidity, small stand alone low-cost dehumidifiers are placed in each storage room. The dehumidifiers are checked and emptied on a regular basis. The dehumidifiers are equipped with an automatic humidistat to maintain relative humidity control. Thermohygrographs are used to monitor any fluctuations in

temperature and humidity levels in all storage rooms. The thermohygrographs records temperature and humidity on a graph paper which is attached to a rotating disk. The graphs are read on a weekly basis and adjustments are done to the dehumidifiers if need be. So far the recordings indicate that relative humidity and temperature levels in these storage rooms conform to recommended international standards. The only strong room with air-conditioning is the audio-visual storage room (which houses photographs, videos, tape audios, DVDs, CDs, film recordings and microforms) because the collections require different climatic conditions from paper based collections in other storage rooms.

Fire suppression system

Fire protection to the storage rooms is provided by two hour fire compartmentalization and an Inergen gas fire suppression system linked to a fire alarm system that automatically detects smoke/fire. The fire-detection system controls the automatic closure of doors in the strong rooms thereby containing fire to a specific area/room. Inergen gas extinguishes fire by reducing the oxygen level in a room to below 15% (the point at which most combustibles will no longer burn). Simultaneously the patented carbon dioxide in Inergen protects anyone that may be trapped in the fire area from the effects of the lowered oxygen levels. The fire alarm system has an indicator panel that indicates where in the building the fire is located. This is used by emergency personnel for locating the fire quickly. The system is directly connected to the University's Campus Protection Unit (CPU) offices (24 hour security) who directly contact the fire department. The system is serviced regularly to prevent false alarms or a malfunction in the event of a real emergency.

Care, handling and storage facilities

Care for collections in the Cory Library is an on-going process. Beyond providing a good environment, Cory staff ensure that different forms of collections are handled properly and stored in appropriate storage containers and in clean, organized storage areas with appropriate shelving. Cory Library's archival collections have been accommodated in six different storage rooms: one room accommodates for audio-visual material, photographs and microforms; another

room has maps, plans, artworks, posters and oversize documents; three other rooms accommodate manuscripts and newspapers.

Documents

To protect collections from damage and chemical deterioration caused by acid found in paper Cory Library stores documents in acid-free folders and acid-free document boxes, an expensive but necessary means of preservation. Paper clips, pins, staples, rubber bands are removed from documents as they are acidic and rusty. Care is taken not to damage material when removing these items.

Photographs and glass negatives

Photographs in the Cory Library are interfiled with acid-free paper and placed in hanging folders in metal cabinet drawers. Acid-free paper is used to prevent the migration of acid from one photograph to the other and also to prevent photographs from discolouring and sticking against each other. The folders are packed tightly in cabinets to prevent curling. Staff wear white gloves when processing photographs so as to prevent oils and acids often found in hands from damaging the photographs in the long run. Glass negatives are stored separately from photographs. Sir George Cory's very fragile glass negatives (of the Eastern Cape) are presently being scanned and made accessible on the library's OPAC system. This ensures that copies are available in case the glass is accidentally broken or the picture fades.

Microforms and audio visual collections

Microforms, videos, DVDs, CDs, film reels, audio tapes, negatives are stored separately in fire proof cabinets as some of these collections can be highly inflammable.

Maps, plans and posters

Maps, plans, posters and other oversized documents are kept in their own storage room separate from other documents. They are all kept flat to prevent creases and tears and are stored in protective oversize

folders in cabinet drawers. Rolled maps are stored in cardboard tubes.

Newspapers and newspaper articles

Bound newspapers are stored flat on shelves. Copies of microfilms are made for fragile newspapers. Newspaper cuttings are photo-copied and original cuttings are discarded. This is because news-papers are made from highly acidic paper which deteriorates quickly.

Prevention against light, pests and theft

Excessive light accelerates the deterioration of archival materials by yellowing, fading and drying them. Sunlight causes fading, and ultra-violet light, found in some fluorescent lighting, will increase chemical deterioration of paper. Cory's strategy has been to limit the amount of light in storage areas as much as possible. Lights in storage rooms automatically switch off to keep the rooms dark for longer periods when not in use.

Cory Library has a purpose built fumigation chamber in the building. All new deposits are fumigated as soon as they are received and before they are moved to workrooms or storage rooms. Regular pest inspections are carried out and if pests are identified the areas are fumigated immediately. Cleaning of the premises and shelves is done on a regular basis. Vacuum cleaners are used instead of sweeping because sweeping simply moves dust from one area to the other.

Researchers are constantly monitored to prevent theft or mishandling of documents. Archives material and rare books are not circulated outside the library.

Use of archive material in the Cory Library

Cory Library recognizes that as use of its collections is the prime purpose for its existence, collections should not only be preserved but should also be made available for research purposes. There is no purpose in preserving a record and denying users access to it. A fact supported by Timothy Ericson who argues that "...if, after we brilliantly and meticulously appraise, arrange, describe and conserve

our records, nobody comes to use them, then we have wasted our time". (Ericson 1990) in (Harris 2000). For the Cory Library use of collections is the goal, thus the library strives to promote and provide optimum access to its collections. However this optimum unlimited access is coupled with challenges. One of the challenges is the physical condition of the archival material. What should an archivist do when confronted by a user who *needs* to use an original fragile document? An archivist will know that any handling of fragile material will cause further or irreparable damage. Should access be denied?

When financial resources permit Cory Library creates and provides reproductions (microfilm, photocopy, duplicate, digital record, transcripts (in the case of tape recordings)). But in cases where reproductions are not available, Cory Library staff have first to consider the hazards of use. In order to protect fragile archival materials from damage, handling restrictions on access have been put in place and consequently a researcher may only be allowed access at the discretion of the Cory Librarian, under strict supervision. The researcher has to be highly qualified with an exceptional reason for wanting to consult such material and has to practice extreme care when handling material.

Cory Library users are discouraged from photocopying fragile documents as it exposes them to damaging light from the photocopying machine. Users are encouraged to take notes or use digital cameras instead.

Frequent use of the same type of archival material by students, the primary users of the Cory Library is another cause for concern. Rather than discourage use by students certain procedures and guidelines have been put in place to prevent indiscriminate handling of archival material. Reproductions are given to students instead of original material. Cory Library conducts orientation classes to students where they are introduced to activities of the library and its collections, how to handle and care for archival material, and how to use the various information sources available in the library.

All collections in the library are carefully catalogued where each item is numbered and the bibliographic information can be accessed from the Internet via the library's OPAC webpage. This organized system

prevents unnecessary rummaging through a large number of boxes as the user can decide from the OPAC exactly which documents she might want to use.

Challenges

Although Cory Library has been very successful in many ways in preventive preservation of its collections, there still remain a number of challenges that need to be addressed. One of the challenges is the absence of a preservation treatment/restoration and repair facility in the library. The purpose of treatment and restoration is to keep archival material in their original format for as long as possible. Without any preservation treatment/restoration facilities, Cory has been forced to outsource for this type of work. This has meant that damaged, fragile documents cannot be treated immediately because we have to rely upon a contracted company that is based outside Grahamstown. This increases the risk of losing material (although I must state that this has not happened yet).

Another challenge that Cory faces is on reformatting its audio-visual collections (videos, tapes and film recordings) from old formats to new formats. Best estimates of the lifespan of magnetic media do not exceed 30 years and the estimate is considerably less if materials are played routinely (Patkus 2003). The audio and video recordings have inherent chemical instabilities and the binders used to couple magnetic media to their film base break down quickly. Format obsolescence is also another problem faced when preserving audio visual collections. Because of the ever-changing technology, recording formats change before the physical deterioration occurs. As formats change so does the reading equipment. To avoid losing information on the old audio and video recordings, Cory needs to either digitize the collection or migrate the information to new formats (CDs, DVDs, etc). The problem is that this requires highly specialized skills and equipment which unfortunately Cory does not have. So for now the library has to rely solely on its excellent storage facilities to preserve its audio-visual collections and remain hopeful that the material will remain readable until such time.

Digitization

Another area where Cory Library needs to look at in the future is digitization as a form of preservation of its current collections. Digitization creates and stores multiple copies of records which can be accessed from anywhere in the world thereby reducing the physical handling of the original. The challenge is that digitization is an expensive exercise as Reed-Scott (1999) correctly puts it "it entails significant investments". Currently Cory Library does not have the necessary resources to carry out such an extensive exercise.

Currently, the library has been looking at external funding, partnerships and collaborations. This has resulted with the recent partnership with the Digital Imaging Project of South Africa (DISA) for the digitization of manuscripts on the freedom struggle in South Africa. DISA has supplied Cory with the necessary equipment and has also trained Cory staff to do the actual digitization. The only disadvantage with this type of project is that DISA selects the type of material to be digitized and the library cannot select the material based on its selection priorities. However, the project will ensure that a portion of Cory's manuscripts are digitized and are accessible on the Internet ensuring that the information is preserved in various formats thereby reducing the physical handling of the originals.

Conclusion

Preservation of collections is one of the important responsibilities of the Cory Library along with service. Cory Library's successes can be attributed to a good understanding of the effect of environment on collections. A lot of research was done particularly during the planning phase of the new building and this helped in developing a programme and specifications for an energy low-cost library building that serves to prolong the life of library collections.

In conclusion, for archival collections to survive in the best condition possible for the longest time possible, a systematic preservation programme is necessary. An assessment should be carried out on the institution's building regarding its suitability to protect collections, the general physical condition of collections and what policies and procedures should be included in the preservation programme.

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