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Preservation and Risk Assessment in Archival Depos

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The paper presents the basic preservation activities and results of the risk assessment survey in archival premises. For such assessment are of great help standards and guidelines and of course already formed models for he evaluation ob premises which are in use for keeping sensitive cultural heritage such as paper and other organic materials. In the particular case we used standards and guidelines suitable for the climatic conditions in Slovenia, together with the model for archives and museums formed by Stefan Michalski and Robert Waller and presented for surveying and reducing risks to collections in archives and museums. The situation in Slovenia is based on the results presented at the conferences of Slovenian archivists in Velenje 2007 and Radenci 2008.

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L'articolo presenta le operazioni basilari per la conservazione ed i risultati della valutazione di rischio negli edifici adibiti ad archivio. Per una tale valutazione standard e linee guida sono di grande aiuto, ed ovviamente i già esistenti modelli per la valutazione degli edifici adibiti a contenitore di patrimoni culturali delicati come carte ed altri materiali organici. Nel caso in particolare, sono stati utilizzati standard e linee guida adatti alle condizioni climatiche della Slovenia, assieme con i modelli per archivi e musei di Stefan Michalski e Robert Waller presentati per una perizia e riduzione del rischio delle collezioni museali ed archivistiche. La situazione in

Introduction

The success of preservation programs and measures depends to a great extent on mastering some principles which are closely linked to archiving tasks.

1. Preservation management is a diverse area which includes practically all activities and responsibilities in all archiving areas of work, from taking over the materials, storing them in depots, climatic conditions of storage, safety, preparedness for possible damage and loss, replacement copies and conservation-restoration interventions; it is also an integral part of other more distinctly archiving tasks such as valorization, processing, use of materials and presentation to the public.

2. Preservation management must be recognized by the archiving profession as the concern and responsibility of each and every employee in the archive, regardless of the level he or she works at.

3. This is also why all archivists need to have certain knowledge necessary for understanding the material condition of the fonds and collections, preventing damages or prolonging the life span of materials.

4. Practice, at home and abroad, has showed and proved that the abundance of available literature, planning and education of the people involved in the process are all in vain unless the actions are thoroughly organised and supported by the management of the institution.

5. Preservation management is a management responsibility, which needs to be argued for and articulated at all top levels, also outside the strictly defined archiving profession.

6. In the area of written heritage as well, prevention is better than cure. Influences of unsuitable environment the influences of unsuitable environments in which written records are stored and used cause damage which also leads to loss and destruction of written records. Changes in microclimatic conditions, polluted environments and unsuitable handling of written records are as important as the influence of aging. The effectiveness of long-term protection of materials is dependent on mastering dangers, integrated methods, teamwork and perseverance, and regular maintenance conditions.

Dangers threatening materials

The dangers that threaten materials are fundamentally the same for all materials. The experts have classified them into ten dangers which affect the decay of objects of cultural heritage, regardless of the form or material in which they were included in the institution: 1. direct physical force (earthquake, vibrations, punch, wear and tear, etc.), 2. theft and vandalism, 3. fire, 4. water, 5. pests (insects, rodents, birds, bacteria, etc.), 6. air pollution (harmful gases, dust particles, salt, grease, etc.), 7. light and radiation, 8. inappropriate temperature, 9. inappropriate relative humidity, 10. loss/misplacement.

Today we can claim with certainty that the biggest trouble in use and storage is represented by the materials that were created in the 20th and 21st centuries. In this time, due to the tendency for mass production and the lowest possible price, the quality of materials and workmanship grew worse. The paper is in most cases worse, less persistent and durable. The same holds true for inks, as they pale more quickly and are less durable. Techniques of production were simplified due to automatisation. Even machine-readable media, including e-records, cannot avoid this.

Basics strategy

In planning we talk about the basics of storage, which in a way summarize all those logical points that we inevitably run across when planning the storage and protection of archival items. Experts who are engaged in management are finding that the majority (80%) of the benefits of an organization are normally obtained by a small (20%) percentage of invested efforts. Therefore, we can say that a substantial part of successful storage and protection is achieved with a short list of recommendations, which we could also call the Basic Strategies of Storage, and they represent an important step in the process of effective storage and protection of archive materials:

- Well-informed and adequately educated personnel
- Reliable roof, walls, floors, windows and doors
- All problems of humidity solved
- An effective fire-prevention system
- Safe locks on the doors and windows; an efficient safety alarm that has a shorter response time than a possible break-in time
- No intense light, direct sunlight or strong electric illumination
- Regular cleaning and examination of the materials in the depots and at exhibitions
- Boxes, wrapping, folders and other types of protection and support for sensitive objects.

The basic steps in this list can reduce the risk of several factors at the same time, often also at low cost, or they can reduce the risk of one single larger factor that could seriously affect all collections or perhaps even the whole building. For example, a reliable roof and

Slovenia è basata sui risultati presentati alle conferenze degli archivisti sloveni di Velenje 2007 e Radenci 2008.

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Prispevek predstavlja osnovne principe materialnega varovanja in oceno nevarnosti, ki pretijo gradivu v arhivskih skladiščnih prostorih. Pri pregledu in oceni stanja zgradb in gradiva si je moč pomagati s standardi, priporočili in že izoblikovanimi modeli pregledovanja in ovrednotenja stavb, pripravljenosti na nezgode in druge nevarnosti, ki ogrožajo hrambo in uporabo arhivske dediščine. Kot osnovna izhodišča ugotavljanja nevarnosti so služila priporočila in standardi za hrambo pisne dediščine in model, ki ga sta ga izdelala kanadska strokovnjaka Stefan Michalski in Robert Waller za pregled stanja in določevanju prioritet pri varovanju arhivskega in muzejskega gradiva. Ocena stanja je podana na osnovi rezultatov predstavljenih na posvetovanju v Velenju 2007 in Radencih 2008.

SUMMARY

In planning and implementation, we often like to make the mistake of seeing solutions above all in building or buying something new. In fact many other, perhaps even more efficient, possibilities exist, which are based primarily on education of the personnel and on good mutual communication. The most important thing should be the common interest, connecting, pooling knowledge and experience, with a common objective of preserving heritage for future generations and enabling access to it to the greatest possible extent. We must therefore seek integrated solutions for storage and protection of materials, which means that we should try to introduce the activity of preservation management throughout the whole public archive system. Our objective is not theoretical, but practical implementation of measures. We must search for lasting and persistent solutions which are in harmony with the professional, economic, and today also with ecological and energy-saving aspects. For such assessment are of great help standards and guidelines and of course already formed models for he evaluation ob premises which are in use for keeping sensitive cultural heritage such as paper and other organic materials. In the particular case we used standards and guidelines suitable for the climatic conditions in Slovenia, together with model for archives and museums formed and presented by Stefan Michalski and Robert Waller at the ICCROM 2005 preventive conservation course Reducing risks to collections in archives and museums. It is not important the survey is very detail, but it needs that is contains all vital aspects, which gives us an clear and comprehensive situation

about all possible risks. Very important is also that all participants use the same methodology.

walls stops nine of the ten factors that influence the decay of materials, perhaps not always entirely, but definitely to a large extent.

Additionally, the following must be taken into consideration in the protection of materials:

- What the general condition of the archival items is
- Which items are in extremely bad condition?
- Which items are especially valuable or important?
- Which items are most endangered?
- How quickly the collections grow
- Which types of archival material have the biggest inflow?
- Whether enough space is anticipated for new materials

Therefore both the employees and the users must know the proper storage and handling of materials, but above all we need to be aware of the importance of the institution and its fonds in the process of preserving cultural heritage and spreading knowledge.

Risk assessment

Risk assessment survey of archival premises is the essential part of an effective preservation management. For such assessment are of great help standards and guidelines and of course already formed models for he evaluation of the premises which are in use for keeping archival records. In the particular case we used standards and guidelines suitable for the climatic conditions in Slovenia, together with the model presented at the ICCROM 2005 preventive conservation course Reducing risks to collections in archives and museums. The situation in Slovenia is presented on the base of the results presented at the conferences of the Slovenian archivists in Velenje 2007 and Radenci 2008.

Since 2006 a risk assessment was carried out in Slovenian public archives at least in one storage room per archive. A detailed dossier with information about the short history of the archives, buildings and material was prepared for each presented archives. Possible risks were identified for all ten agents of deterioration: physical force, theft and vandalism, fire, water, pests, air pollution, light and radiation, inappropriate temperature, inappropriate relative humidity and loss / misplacement.

For each of the ten agents of deterioration a scenario, possible damage or losses was worked out. The risks were classified in 3 types:

Type 1: rare in frequency and catastrophic in severity

Type 2: sporadic in frequency and intermediate in severity

Type 3: constant in frequency and gradual or mild in severity

In accordance with Stefan Michalsky's classification of evaluation we need to estimate possible risk that threats to the collection. We expose only those which are realistic, and eliminate those that do not represent any risk in accordance with the specific characteristics of individual institution.

Risks are than semi-quantitatively evaluated in accordance with the collected data, condition of the institution and possible eventual risks in the following scale:

*** - high risk,
** - medium risk,
* - low risk,
Ø - no risk.

Results of the first part of the survey

The dangers that threaten materials are fundamentally the same for all materials. Experts have classified them into ten agents of deterioration which affect the decay of materials, regardless of the form or material. Table 1 is presenting the data obtained from the results presented in Velenje 2007 and Radenci 2008 and is presenting the average situation of the archival repositories in Slovenian archival repositories. On the base of the first results of the risk assessment survey done in years 2007 and 2008 we may established that the biggest risks that are: poor handling, all sorts of pipes under the ceilings, lack of hydro and thermo isolation and incorrect humidity.

Agents of deterioration	Specific examples of damage or loss	Magnitude of risk
Direct physical force	Collapse of part or whole building	Ø
	Poor handling, distortion, abrasion, vibration…	***
Theft and vandalism	Professional theft or vandalism	*
	Inside theft	*
Fire	Soot, smoke, water damage…	*
Water	Roof leaking and similar	Ø
	Capillary and condense humidity	***
	All sorts of pipes	***
Pests	Insects, rodents, birds, bacteria…	*
Air pollution	harmful gases, dust particles, salt, grease …	**
Light / radiation	Inside	*
	Outside	*
Inappropriate temperature	high temperature: melting, fragility, chem. reaction, disintegration from drastic change of T	**
Inappropriate humidity	High or low humidity: mold, corrosion, swelling… or dehydration or checking	***
Loss or misplacement	Loss or misplacement of object or data	*

Table 1: Estimation of risk for the majority of the Slovenian archives (year 2007/08)

Conclusion

In planning and implementation, we often like to make the mistake of seeing solutions above all in building or buying something new. In fact many other, perhaps even more efficient, possibilities exist, which are based primarily on education of the personnel and on good mutual communication. We must therefore seek integrated solutions for storage and protection of materials, which means that we should try to introduce the activity of preservation management throughout the whole public archive system. Our objective is not theoretical, but practical implementation of measures. We must search for lasting and persistent solutions which are in harmony with the professional, economic, and today also with ecological and energy-saving aspects. For such assessment are of great help standards and guidelines and of course already formed models for he evaluation ob premises which are in use for keeping sensitive cultural heritage such as paper and other organic materials. It is not important the survey is very detail, but it needs that is contains all vital aspects, which gives us an clear and comprehensive situation about all possible risks. Very important is also that all participants use the same methodology.

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