

Can we manage to restore medieval books without any loss of information?

As a conservator of bookbindings at the Strahov library in the Museum of Czech literature, I have had the opportunity to examine the rich collection of manuscripts, incunabulas and paleotypes.

Preventative inspection and conservation have produced the necessary comparative material. Besides compiling descriptions of books from the point of view of conservation I have also described in detail their Late Gothic bindings. I was particularly interested in the changes books went through and what kinds of information they gathered on their way through history. When doing a complete restoration of certain bindings I have started to realize that the books have irreversibly lost part of their non-textual information.

In my contribution I would like to consider the loss of information and propose that complex research is necessary in order to discover its significance. I could not find any literature dealing with this problem as a whole 1) so I consulted specialists in the different fields with which my finds were connected. I would like to take this opportunity to say thank you for their analysis, comments and valuable advice 2).

I. What kinds of information are in books?

a) Curriculum vitae of books.

Centuries have passed since the moment that freshly printed sections of incunabulas left the printer for the bookbinders workshop where they found their form in Late Gothic bindings. Some of these bindings have survived without any changes and can tell us of the complicated and exact skill and techniques of old binders. Blind press decoration finishing, later even with gold and complicately sown headbands speaks of their style and trained steady hand. These old masters used simple tools for this work. Many other craftsmen also participated in the creation of a book. Papermakers made paper of excellent quality which modern books can only envy, tanners prepared leather and parchment and smiths made the metal decorations of the books. Some of these materials were even recycled; pages or parts of old manuscripts were very often re-used for board papers, endpapers, flyleaves or were stuck between the cords.

The condition of the binding can be a witness as to how the book was treated, for what purpose it was used and everything that happened to the book. Broken bindings with worn out leather, broken cords, torn off headbands and wooden boards, ripped or crumpled pages, cut out capital initials or just remnants of torn out pages all tell us something. Some books bear evidence of natural catastrophes or bad deposit. Other signs like supralibros, ex libris, owners notes and inscriptions on the initial pages, and papers or boardpapers and even rebindings can tell us how the book changed hands, what sort of owners it had and something of their tastes. As well as different findings

folded inside the book, dust and stains of different origin are the marks of the everyday life of the book and its owners. All these points created a life story of the book and its "curriculum vitae" which still continues.

From all these sources of information it is possible to draw up several levels of investigation. The first level is the investigation of the "inner" information of the book - the study of the text and its message. This is work for scholars of the Humanities like linguists, literary historians, philologists and so on.

The second level is the investigation of the "outer" information of the book. This is work for historians, art and craft historians, codicologists, paleographers and "archaeologists of books", who study the old materials and binding techniques. In both cases the subject of study is "direct" information so there is naturally strong connection between these two levels of investigation.

Another possible level of investigation could be the explorations of "indirect information" - all these findings and marks which appeared in the life of the book and started to be part of it. This "indirect information" could be analyzed scientifically by biologists, chemists, botanists and so on. The information learned from these analysis could be used to develop a complete synthesis of the book. We could learn more about the collection and indirectly about the life of our ancestors. This kind of combined research is already practised with good result in archaeology of the Middle Ages.³⁾

My research has not revealed all the possible findings and marks in books because their number, type and combinations are infinite. The quality of the perception of the researcher is also a variable to be considered. Although the analyses undertaken in my research are exact, their use can only in some cases lead to definite results and in others to hypotheses which can guide future research. In order to use this information as a serious historical resource, systematic research of certain books and book collections will be necessary.

b) Places and collections of findings.

A book is an expert collector, a vessel of research possibilities. Paper and leather are so absorbant that if we placed the pages of the book end to end we would get a huge display of all its marks. The bindings also have a lot of folds, bends curves and slots. Small objects are safely locked inside the bindings after the book is closed, some of them can survive in this state for a long time, others may create a new environment inside the book. Double raised cord bindings are exceptional for this sort of collecting as it is not possible to open the book completely and small objects can fall down deeper between the pages and sections of the book. There is no danger that these small objects will be lost on re-opening of the book. Such protected places can be also found in the inner joints or under the small parchment flyleaves lying so close to the board or in the first section where we can discover most of the findings.

In the book block the quantity of findings is greater at the beginning of the book than fewer and fewer until

the end of the book where the quantity increases once more. I have also discovered some exceptional findings in parts of the book which are almost untouched. These findings may even be more significant because the small object may have survived in an uncontaminated state since the time they became stuck there.

c) Kinds of findings and their possible "indirect information".

Findings in the field of botany are mainly plants and part of plants; flowers, leaves, stems, bark, fruits, grains, seeds and pollen. Besides whole plants used as bookmarks and collected pressed plants, there are also many examples which have arrived there purely by chance. These specimens especially flying seeds, leaves and pollen could have fallen into the book from trees or been blown by the wind. We will never know who and when made it possible for these specimens to get into the book but we can learn which season of year the page or chapter was being read.

After a close examination of the plants themselves we could learn about their probable existence in the surroundings of the library or the use of agricultural plants in nearby fields. We could perhaps find some comparative materials in reports, annuals or chronicles.

Some parts of plants can be deposited in the book due to human activity. For example, we know that the pollen of Clubmoss (*Lycopodium*) was used for drying freshly written pages before blotting paper was used.⁴⁾ Perhaps the pollen could even provide evidence to tell us which scriptorium the manuscript belonged to.

Specialized natural sciences are often employed in archaeology for example dendrochronology, palynology and microbiology⁵⁾. I took samples of dust from the parts of the book described above and sent it to a pollen specialist for analysis⁶⁾.

The results represent a typical synanthropic pollen spectrum - plants which are linked with human activity. The group was cereals like Rye (*Secale*), Wheat-oats type (*Triticum-Avena*), Wheat (*Triticum*) and Barley (*Hordeum*) and the Grasses (*Poaceae*). As well as cereal pollen there was also pollen from weeds like Cornflower (*Centaurea cyanus*), Sheep sorrel (*Rumex acetosella*), Knotgrass (*Polygonum aviculare*) and others. There was also Hop - Cannabis (*Humulus - Cannabis*) pollen which could have grown wild or been cultivated. Quite a large quantity of pollen was a Ribwort (*Plantago lanceolata*) and Great plantain (*Plantago maior-media*) which right suggest the existence of paths, roads, yards and ditches. The high quantity of Mugwort (*Artemisia*) would suggest pasture land and land surrounding houses. The presence of Nettle (*Urtica*) and Goosefoots (*Chenopodiaceae*) point to the existence of dumps. It was interesting to find the pollen of Campanulas (*Campanula*) and even a small quantity of Heather pollen (*Calluna*).

The tree pollen collection was also quite rich. Examples of cultivated species like Walnut (*Juglans*) and Vine (*Vitis*) and synanthropic species like Danewort (*Sambucus nigra*) and Juniper (*Juniperus*) were also found. The greatest quantity of pollen is from natural vegetation like Beech (*Fagus*), Oak (*Quercus*), Silver fir (*Abies*), Spruce (*Picea*), Pine (*Pinus*) and Birch (*Betula*).

From this pollen spectrum we could say that the pollen was mainly deposited in Middle Ages. (In a recent pollen spectrum such a high number of cornflower would not be found). The pollen spectrum does not indicate evidence of high human contamination although the location was anthropically influenced. The constitution of tree pollen is important because it shows half-cultivated forest. One possible source of this tree pollen could be Krušné mountains region not far from the town Kadaň, where the book comes from. Walnuts and Vines were probably cultivated there and Oaks were typical of this region. This analysis corresponds to another one of pollen from this region which also dates from the Middle Ages⁷⁾.

Other parts of plants were deposited in the book from the food of their readers. Even from such small remains we could learn something about our ancestors' food. I also sent one such piece of food for analysis⁸⁾. Due to the presence of cereal pollen of the following types: Oates-wheat (*Triticum-Avena*) - 3 pollen grains, Wheat (*Triticum*) - 2 pollen grains, Oats (*Avena*) - 2 pollen grains, grasses (*Poaceae*) - 1 pollen grain. We can therefore deduce that these were the remains of a piece of bread.

With food many lower plant forms like fungus are to be found in a book. It is quite surprising how many rotten remains could be found between sections, close to the spine of the book. Fungies also develop in a book from the environment in which the book was stored or due to spilt drinks or through contact with water or moisture when dropped on the floor or due to water entering through a badly maintained roof.

Fungus which we, as conservators do not like, produce an ecosystem characteristic of the place in which the book was stored. The comparison of fungi spectrums of certain book collections and individual books may be able to tell us whether a single book with its ex libris missing belonged to the collection at some time or not.

Insects like Booklice (*Psocoptera*) live on fungus, they eat the spores and other parts. Arthropods like Pseudoscorpionids and Chelicerates in turn live on the Booklice. From pseudofossilia of insects we can find out if they were living within the ecosystem of the book or if they were synanthropic or even if they were caught in the book by accident from further afield.

Some of the synanthropic kinds of insect even carry bacteria of infections like *Xenophyla cheopis*, a flea which carries the bacteria which can cause the Bubonic Plague. In my sample I found a flea, too, but after looking at it under the microscope it was classified as *Ctenophthalmus solutus* that lives on mice and not on humans⁹⁾.

People also leave an incredible number of marks and records of their presence in the book. We can find interesting reports of this in "Philobiblon" by Richard de Bury, Bishop of Durham, written in the 14th century¹⁰⁾. In chapter 13 titled "How we should carefully handle books and keep them in order" such human activity is mentioned: handling with dirty fingers leaving dirt, fat and sweat, sneezing and coughing which leave nucus and saliva, bookmarks like flowers and stems which start to rot inside the book, eating and drinking over the open book leaving drops of drink, cheese and fruit, using the

book as a food knapsack, making notes and drawings, tearing out the parts of the book like endpapers and flyleaves, he even describes a situation in which a reader bitten by a flea throws the book and leaves it lying open to gather dust even as long and making it impossible to close again. I would like to take some examples of human activity that Richard Be Bury mentioned and show what we can learn using modern scientific techniques.

From such activities we can also find parts of the body like hair, nails, pieces of skin, drops of blood, scabs and fingerprints. When I was restoring a incunabula which was bound by an unknown Prague bookbinder at the end of the 15th century, I found two hairs glued into the spine of the book. The creator of the book could have been the owner of these hairs. I was interested in what I could learn about him. The analysis in a forensic laboratory gave me this information ¹¹⁾: Two fragments of wavy human somatic hair. They were 2 cm and 4 cm long and brown. The hairs were morphologically similar in other words they could originally have been one hair which had been cut with an instrument. They could have been beard hairs. The owner had blood type "A".

Nowadays forensic scientists analysing the roots of hair can discover the individual DNA structure of the owner. However they only work with recent material.

Normal fingerprints fade very quickly and the methods of recreating them would mean destruction of the paper, therefore we can only use fingerprints which are visible in ink or pigment. From their analysis we can discover which ones belonged to the original writers and illuminators of the book, which belonged to the readers and the note-makers.

As for saliva, it is highly improbable that we will find the remains of human saliva, but it is possible to find traces of different bacterias some of which can remain in spore-form for a long time on the corners of pages. From them we could learn also about the health and hygiene of ancestors.

We can only hypothesise about the origin of the marks found in books. They could stains left by fungi, drops of various solutions, spots of glue left by careless bookbinders or the results of old methods of lighting like drops of wax and resin from wood torches.

It is very surprising what objects people would use as bookmarks like plants, needles or even a fishbone. Other objects also found their way into books as a result of human activity. In the dust of one sample I found a small spiral which after examination under the microscope turned to be a so-called layer-metallic. It was a hammered strip of gilded silver which was twisted round linen or silk and then used to decorate dresses ¹²⁾.

Scratches, dents and other results of the destructive use of implements on the bindings and books can inspire us to imagine whole stories to which the book was witness. What events has a book observed and experienced in its life ?

d) Problems arising from "indirect information".

Besides exceptional cases the main problem is dating these findings and determining the person responsible for the objects being there. For most findings there is also no medieval comparative material.

However it may be possible to compare the findings in different book collections. We could perhaps learn about the interests of the readers like topic, chapter, page. Visible evidence like worn pages, heavily noted chapters and rebindings show us which parts of the book were most read. The behaviour of the readers, their care or carelessness also shows how the book was used. Perhaps this evidence could form the basis for sociological studies.

It may be possible to date findings from books which are linked to a particular period or time of year. A book which was only in use for a short time depending on how the religious pendulum of the time was swinging will contain marks and objects mostly from that period. A book of prayer for particular celebrations in the year may contain a large proportion of marks from that time of the year.

Some opportunity to determine the person responsible for the marks and objects found in books does exist especially in cases where the book was the property of one owner, a certain family or if never left the library. For example diaries, drawing books, pocket bibles or books from chain libraries.

On the other hand we can never be sure that the objects were not contaminated during a later revision of the library.

An ideal would be if some books were discovered for which there was historical evidence that they had been stored untouched in an enclosed space, in other words free from recent contamination. Such a situation may arise one day and it would be better to be theoretically ready for this occasion in order to research the books from this point of view.

Obtaining such information and its classification could be included in the complex synthetic research of books. It could provide us with one more piece for the mosaic which is our history.

In the future the analysis of such findings, even if their size is microscopic will be more exact and more detailed. Now we have to proceed very conscientiously so we do not make the same mistakes as our predecessors did when restoring books.

II. Effects of historical repairs and recent restoration of book-bindings on "indirect information" stored in books.

The original raison d'etre of bindings was to preserve manuscripts therefore when the rebinding of books started again the text took priority and there was little interest in the original bindings of the book. When old bindings, especially of precious manuscripts, started to come apart or when they failed to satisfy the new aesthetical tastes they were usually completely rebound in a new and even more magnificent binding. In the new binding only the precious decorative elements like precious stones, small sculptures and other metal decorations, enamel decoration, and even relief-work carved from ivory which were part of the original diptych were re-used but perhaps positioned differently. The binding itself was done with the knowledge of the latest techniques. We can tell that a book has been rebound in several ways. Firstly the age of the text may not correspond to the age of bindings, secondly, from different notches on the spinal part of the

section and also the re-cutting of the block.

Unfortunately this practice has survived in some form until recently. We can find magnificent 18th century binding which contain manuscript from the 12th century. On the other hand a very plain 20th century binding might conceal some of the most beautiful ancient manuscripts.

Such books offer very little in the way of "indirect information" due to the care taken with them, the frequency with which they were read and their rebindings.

With the coming of bookprint books were more widely distributed for a cheaper price and with less decoration. Books came into common use and people's behaviour changed accordingly.

In this situation books were sometimes rebound when under new ownership or because they were falling apart but what usually happened was that they were held together with makeshift repairs. These historical repairs were often very simple but very efficient and done without taking the book apart. Broken and torn pages were stuck together with strips of paper. Broken off boards were fastened to the book block with new leather glued over the old and either cut straight or sometimes just left. The repair was then often embossed leaving the original untouched underneath. If the binding had slackened because of broken cords or worn-out sewing, new cords were fastened over the old then the book was resown and the ends of the bands glued onto the boards without passing through the boards. New endpapers were often just glued over the old. Hooks and other metal parts were completed from parts of other old bindings. Sometimes the metal decorations were removed because they damaged other books when being taken off or replaced on shelves.

The main sign of these repairs is the protection and mending of broken parts with new material without replacing the old. If we removed all these repairs we would find the original binding partly destroyed and with parts missing like the leather spine. In other words an original binding would just have some new parts and at the same time the "indirect information" contained in the old binding is not all lost.

I have found these methods of repair used on the late Gothic bindings of incunabulas in the Renaissance through to the Baroque and until the end of the 18th century.

At the end of the 19th century another attitude started to develop. Depending on the decision of librarians and bookbinders, some parts of the bindings were lost or replaced during repair. Wooden boards were replaced by paper and important subjects of study like endpapers were usually lost. The Bookbindings were also "touched-up" according to the ideas of the modern bookbinders.

Methods like this continued to be used when craft book repair slowly became book restoration in the 50's and 60's. More parts of the original bindings are re-used on the restored book. Decorated leather covers were regularly put back but cut off at the edge of the board rather than folded over. It is also not exceptional to find modern rebinding with false cords on the spine.

More recently attitudes to other parts of books changed. People were not only interested in the texts but the study of historical bookbinding enjoyed a higher status. Due to this the ethics of restoration also developed. Endpapers and headbands were retained, metal decorations were

repaired. Although sometimes this led to sewing of so-called neutral headbands and the use of galvanoplastic copies of metal parts to complete set. Other false additions and mistakes were made because although they were very good craftsmen they had no access to large collections of old books to compare a variety of methods.

Still more recently with the publishing of studies of literature about the history of old bookbinding techniques restorers have started to use this knowledge to endeavor to make a reconstruction of the original binding. In doing this they removed all the old repairs and broke the continuity of the history of the book. When restoring the book they separate all the parts. The parts are mechanically cleaned, washed in water solutions, chemicals are applied and used for cleaning, pages are repaired using modern polymers then pressed and then rebound with great care using exactly the same techniques as the old binders to bring it to what is termed its "original" condition. Is this not just a more modern binding using as many of the original parts as possible and bound using old techniques? Perhaps its the closest it will get to its original state visually but in a rather impoverished form stripped of all those riches of "indirect information" which were hidden in the real original binding.

Perhaps it is better not to mention how much is lost and the other mistakes that restorers make either without realizing or without mentioning it in the restorer's report. It will remain on our conscience.

Restorer's reports have only existed in recent times and differ from workshop to workshop. They are getting more detailed as time goes on but still they are far from adequate. Another problem is that they are stored separately unless scholars specifically ask for the report they may only be aware that the book has been restored but they will never know the details. Also by keeping the report and the book separately the report can easily be mislaid.

At this point I would like to mention pirate attacks on books by historians and librarians to get fragments or pages of old manuscripts and documents which had been re-cycled as endpapers when the book was bound. These were sometimes torn out from books and deposited in special collections often without even acknowledging from which book it came. These manuscripts and documents are sometimes judged to be more precious than the book itself however important information like added readers notes and drawings, signatures, ex libris and valuable information about the book is lost with the removed end papers.

In the case that the book is in danger of total destruction due to chemical reactions taking place and so on of course it is important to do everything we can to save such historical documents. But we must realize that in saving one part, the text, another part is destroyed. Restoration will still always remain a compromise.

III. How can we save as much information as possible for the future generations?

We have always had the support of our scientists who continue their research to develop new materials and techniques to rescue some of our cultural heritage. However will future generations despair at our combined efforts as we do our predecessors? Perhaps instead of using modern technology to wash away all the unexploited information we could take advantage of it to preserve these records using preventative methods. Unless urgency demands it, it would be better to conserve the books in proper conditions and in an environment free of pollution rather than chemically adapt them to withstand modern wear and tear.

We also need the support of librarians and curators to adapt and enforce stricter regulations for studying the original books. Scholars who just want to study the text should be offered the text on microfilms, microfiche and other modern media.

If the paper or binding of an incunabula is too fragile to be handled another copy of the same edition could be obtained from another library. Information about incunabulas and copies should be at the disposition of scholars.

Artists' facsimiles of illuminated text and the bindings are useful for two purposes. Firstly they could be used for exhibitions instead of the original. Secondly in creating a facsimile we learn a great deal about how the original was made.

The conservation of books and bindings may often only require placing the books carefully in boxes for storage. Other ideas should be learned from old historical methods of repair which do not involve destroying the bindings but just hold the book together. Added support cords and patches of leather which can easily be removed again would help us reach our goal. Although they may look rather clumsy they may be more effective than a pristine restoration of the book.

Books which are valuable for research should be stored in conditions which will prevent contamination until research takes place. If it is necessary to remove the bindings restoration should not start until a study of the whole book and its "indirect information" is completed.

Conclusion

I am sure this preventative methods of conservations will be more valuable for future generation than our most skilful restoration carried out with the help of science, technology, materials and the knowledge of artists and historians.

As a final note I would like to mention the archaeologists once again. They sometimes regret the primitive excavation methods that with the benefit hindsight we know to be inefficient. In such cases much of the historical information was lost forever at the time of excavation. Nowadays they place more value on active conservation of cultural monuments for the future. They do small probes or only excavate in emergency situations, for example when a highway was to be built. This is the direction that book conservation should take.

The position of a conservator is that of mediator. On one hand they control the supply of information and other they have a duty to protect all the information a book carries.

CAN WE MANAGE TO RESTORE MEDIEVAL BOOKS WITHOUT ANY LOSS OF INFORMATION ?

References

- 1) Ch.Clarkson - Conservation of Early Books in Codex Form
Paper conservator 3/1978
A.Giovannini - Archæologie des Buches und Konservierende Restaurierung - Restauro 1/1990
J.A.Szirmai - Stop Destroying Ancient Bindings
Abbey Newsletter sept.1989
- 2) Besides those named in connection with analyses they are:
Dr.Vl.Čtverák and other workers of Department of Archaeology
Czechoslovak Academy of Sciences,Prague
Ing.M.Štifter - Microbiology laboratory of State Laboratory
for Testing of Materials,Prague
Dr.Štys - Enthymological Studies of Faculty of Natural sciences,
Charles' University,Prague

Special thanks to B.Hunter for her great help with translation and to Dr.J.Stumb-Pañez for reading the text.

- 3) Dr.J.Klápště - Research of the Middle Ages well at town Most.
Památky archeologické LXXIV/1983 Prague
- 4) Dr.E.Opravitl - How the plants travel,Prague 1987
- 5) Dr.Vl.Jankovská - Untradition interpretation of pollen spectrum
from Middle Ages Prague - Archeologické rozhledy XXXIX/1987/4
Dr.V.Čulíková - Interesting finds remains of plants from
Middle Ages Prague (the same magazine,both Prague):
- 6) Analysis made by Dr.Vl.Jankovská Department of Botany,
Czechoslovak Academy of Sciences,Brno 1991
- 7) Dr.Vl.Jankovská 1983,1988,see above
- 8) Dr.Vl.Jankovská 1991,see above
- 9) Analysis made by Dr.J.Chalupský - Parasitology of Faculty
of Natural sciences,Charles' University,Prague
- 10)Translated freely from Czech edition issued by J.Kiesleitner
1944 Prague
- 11)Forensic Laboratory of Detective Institute,Prague 1990
- 12)Analysis made at laboratory of State Restauration Atelier
by Ing.Mařík

Written by Jiří Vnouček,conservator at
Strahov library of Museum of Czech literature
(Památník národního písemnictví)
Strahovské nádvoří 1
118 38 Praha 1
Czechoslovakia
Phone +42 2 53 88 41-7 line 277

Abstract

Medieval books and their bindings contain information on several levels.Some of them are already the subject of study of various human sciences.

One level of information is what I call "indirect information". This was deposited in books during their way through history. It includes natural things like plants and insects and also hairs and other signs of human activity.This "indirect information" could be analysed with the help of natural sciences and be used to form a complex synthesis of research on books.

Most of this "indirect information" is lost during restoration although previously retained due to historical methods of repair. The purpose of this work is to propose that we should use proper preventative strategies to save our books from restoration wherever possible so that the information they contain will remain intact for future generations.

List of keywords.

INCUNABULAS
LATE GOTHIC BINDINGS
"INDIRECT INFORMATION"
HISTORICAL REPAIR
RECENT RESTORATION
PREVENTATIV CARE
SCIENTIFICAL ANALYSES
COMPLEX RESEARCH

List of captions:

Fig. 1, 2 & 3 - Original Late Gothic bindings of incunabulas and their endpapers and flyleaves.

Fig. 4, 5 & 6 - Historical repairs of Late Gothic bindings of incunabulas.

Fig. 7 & 8 -Incunabulas which have been rebound at some time in the past.

Fig. 9 - Restoration of Late Gothic bindings from the 60's.

Fig. 10 - Original Late Gothic binding of incunabula and its brother restored in the 20th century.

Fig. 11, 12, 13 & 14 - Various findings from books.

Können wir mittelalterliche Bücher ohne Verlust von Informationen, die in ihnen enthalten sind, restaurieren ?

von Jiří Vnouček

Konservator der Strahov - Bibliothek in Prag,
Gedenkstätte des nationalen Schrifttums

Památník národního písemnictví
Strahovské nádvoří 1
118 38 Praha 1
Tschechoslowakei
Tel.: 42 2 53 88 41-7 / 277

Eine Zusammenfassung

Mittelalterliche Bücher und ihre Einbände enthalten mehrere Informationsschichten. Manche von ihnen sind Forschungsobjekte verschiedener selbständiger Gesellschaftswissenschaften, so der Geschichtshilfswissenschaften, der Geschichte überhaupt, der Kunstgeschichte oder der Literaturgeschichte.

Als eine weitere mögliche Schicht möchte ich die sog. "indirekten Informationen" bezeichnen, also Informationen, die das Buch auf dem Wege durch die Geschichte aufsammelte und die zum Bestandteil des Buches wurden. Solche Funde, wie z.B. Pflanzen und ihre Teile, Insekten, verschiedenste Gegenstände, Haare, oder andere Zeichen menschlicher Tätigkeit, die im Buche enthalten sind, können durch exakte naturwissenschaftliche Methoden analysiert werden und können womöglich durch ihre Aussagekraft bei komplexen Buchuntersuchungen nützlich sein.

Die Mehrzahl solcher Informationen geht beim Restaurieren verloren. Das gegenwärtige komplexe Restaurieren eines Buches hat einen viel größeren Umfang, als das Reparieren in der Vergangenheit.

Mit der Strategie eines präventiven Schutzes der Buchbestände sollte Eingriffen dieser Art vorgebeugt werden und das Restaurieren sollte nur dann in Frage kommen, wo Beschädigungen eine aktive Entwicklung aufweisen. Bücher mit beschädigtem Einband sollten nicht neu gebunden, sondern sollten nur durch zweckmäßige konservatorische Methoden im ursprünglichen Zustand erhalten werden.

Der Konservator hat Dank seiner Arbeit eine außerordentliche Gelegenheit, sich mit dem jeweiligen Buche vertraut zu machen. Ihn möchte ich als Vermittler bezeichnen, der einerseits den Forschern auf andere Weise unzugängliche Informationen bieten kann, und der andererseits verpflichtet ist, alle Informationen, die das Buch enthält, zu schützen und so deren Studium auch weiteren Generationen zu ermöglichen.

Deutsch von Mgr. Daniel B. Radoměský, Prag



Fig. 3

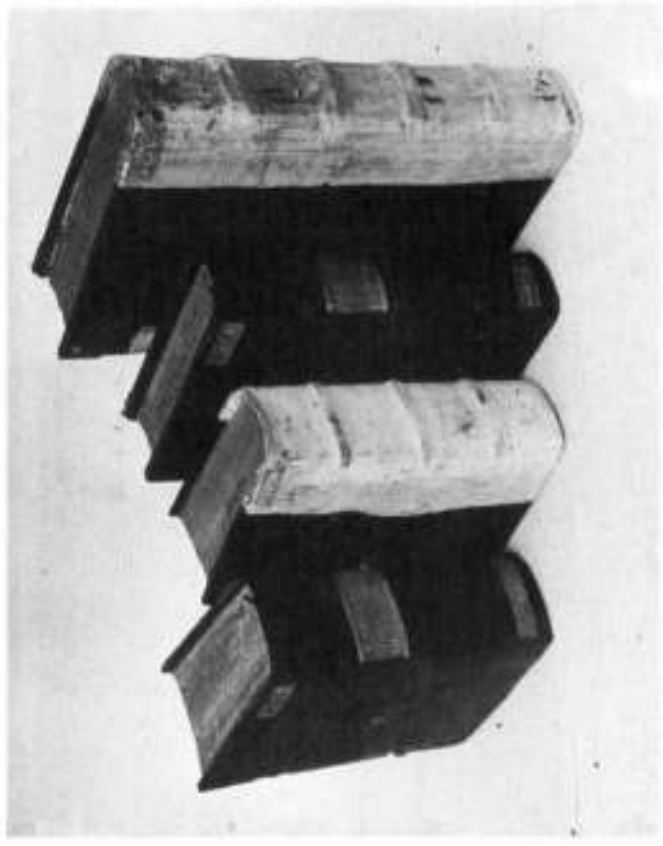


Fig. 4



Fig. 5

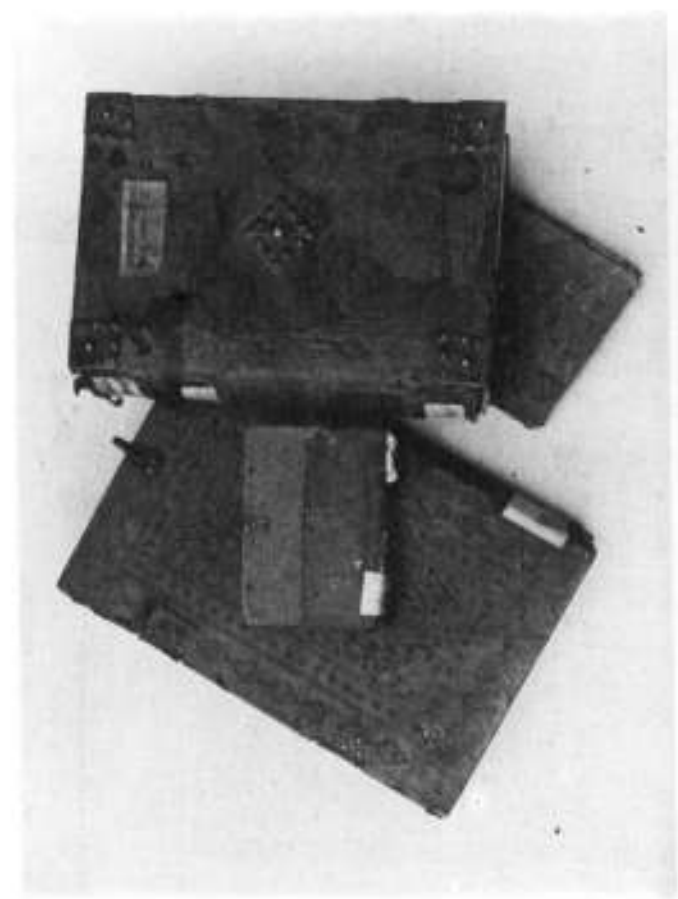


Fig. 6

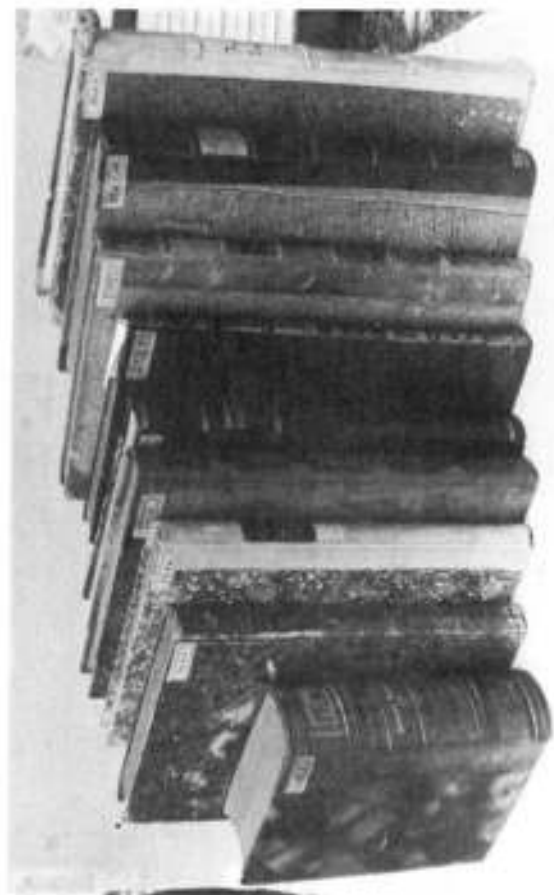


FIG. 7



FIG. 8



FIG. 5

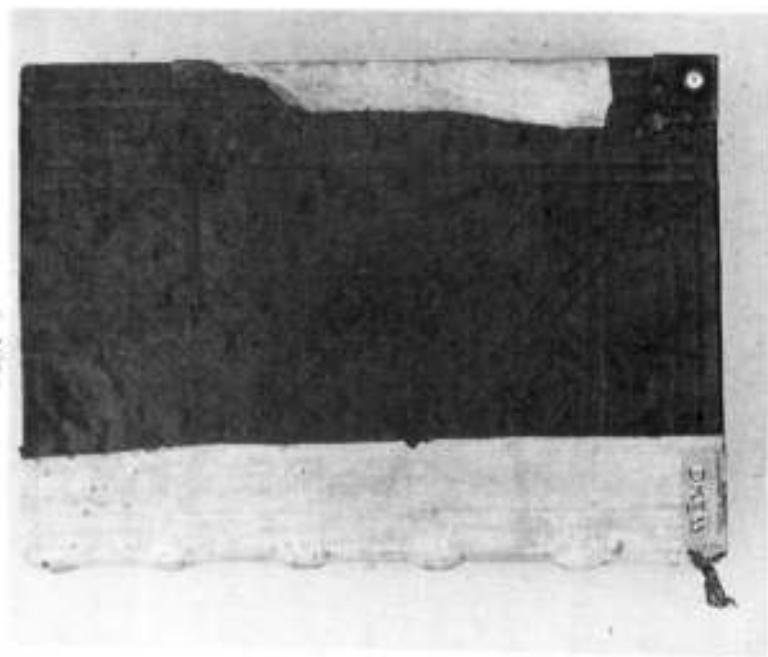


FIG. 6

emectur sydere signum,
 iam mihi, quodq; ferebam
 iuthorem dicere tanti
 etiam tolerare labores,
 nunc quoq; frigidus artus,
 arsq; est meminisse doloris
 eundem cruciata diebus
 Iccelum brachia/magno
 s clamore vocabam,
 corrupta, metumq;
 ti vellet iniquare.
 s, subfedit in illa
 ff poplite leuum
 r se pectine iunctis
 usq; carmina voce

Argolis Aleme, potiturq; pu
 Exilijt iunctasq; manus pauefa
 Diua potens uteri, vinculis leuo
 Numine decepto risisse Galan
 Ridentem, prensamq; ipsius de
 Traxit;& e terra corpus releu
 Arcuit, inq; pedes mutauit br
 Strenuitas antiqua manet, n
 mus Amisere suum, forma est diu
 feda. Quæ quia mendaci parienta
 Ore parit: nostrasq; domost
 Dixit, & admonitu veteri ec
 Ingemuit, quam sic nurus el
 Tetamen o genitrix aliena
 Rapta mouet facies: quid si

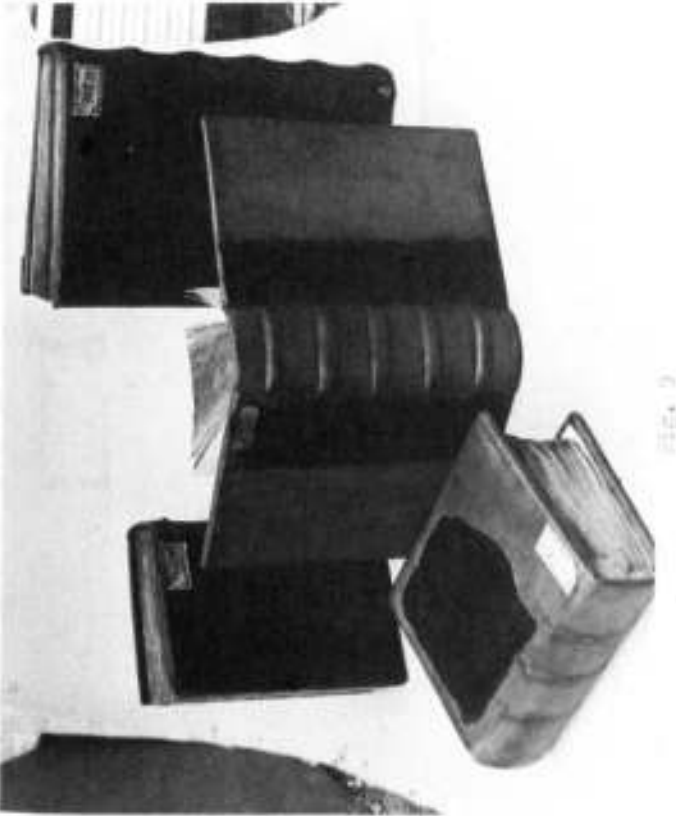


Fig. 9



Fig. 10



Fig. 11

Fig. 12



Fig. 13

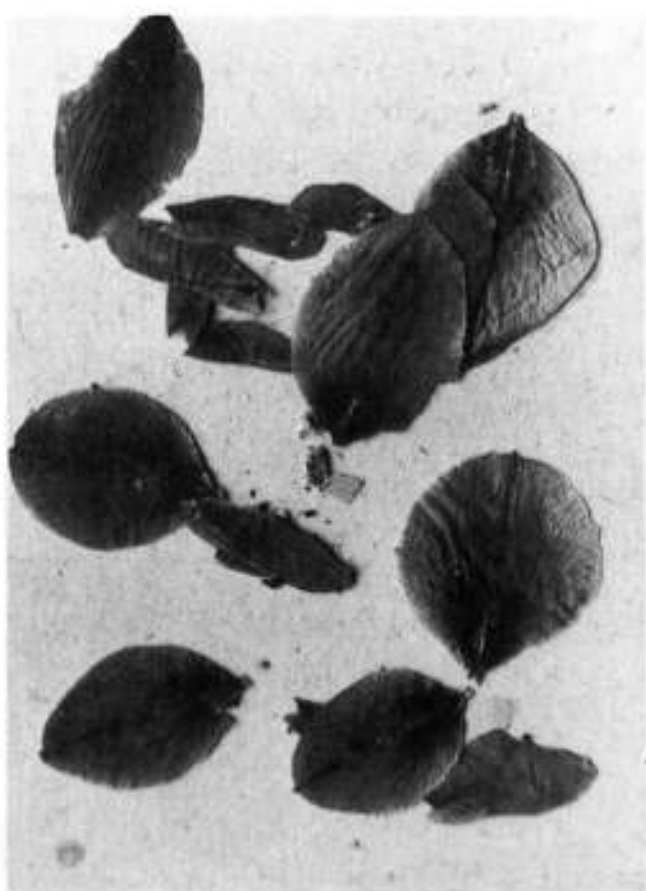


Fig. 14