# EUROPEAN CULTURAL HERITAGE IN THE DIGITAL AGE

# European Cultural Heritage in the Digital Age:

## *Creation, Access and Preservation*

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CONSORTIUM *of* EUROPEAN RESEARCH LIBRARIES

# Contents

# Opening Address

## V. N. ZAITSEV

Dear colleagues and guests, and participants in the pre-seminar 'European Cultural Heritage in the Electronic Age', which is being held as part of the Annual General Meeting of the Consortium of European Research Libraries, it is a special honour for us that the Consortium is holding one of its meetings in Russia for the first time and, in particular, that it taking place in the National Library of Russia.

The Consortium is a special organization that arose in the course of the process of European integration. Its purpose is to unify all the available information about the written heritage of Europe in a unique resource for investigators, librarians, and scientists.

At present the Consortium comprises more than 60 libraries from sixteen European countries, and the National Library of Russia has been a member from 1994, when the Consortium was formally inaugurated.

The Consortium was initially established on the initiative of two large European libraries: the Bavarian State Library and the British Library. The idea was first discussed in 1990 at the International Conference in Retrospective Cataloguing in Munich. It was decided to collect together in one database the records for all books, beginning from the appearance of the first European publications (1450) up to 1830 when the techniques of book production changed. The major objective of the project was also stated: to ensure access for scholars to bibliographical information in machine-readable form relating to the multilingual printed culture of Europe.

Our library entered the Consortium in 1994, although it was not until March 2001 that our first file was incorporated. Now, the Hand Press Book database contains more than 14,000 entries for books in West-European and Russian languages held in the National Library of Russia. Material in the Cyrillic alphabet was the first to be added to the database of European early printed books, and this was followed by the collections of the National Library of Russia as they became available in machine-readable form. It should be noted that the Library's foreign collections of material relating

to the European cultural heritage are very rich. At present, work on the retroconversion of about 40,000 items from 16th-century books, and on the online cataloguing of the Kadetsky Korpus (military school) collection, is proceeding.

Since the Consortium's database coverage extends to atlases as well as books, our future plans include the presentation of online records for early printed atlases. For example, the collection of Dutch early printed atlases in the National Library of Russia – in the opinion of map specialists – is one of the richest in the world.

This gives an outline of how we are carrying out the complex work of presenting our collections and participating in the creation an online database, which will be an essential tool for scholars and researchers not only from our own country, and also for those from the rest of Europe and worldwide.

The participation of specialists from the National Library of Russia in the Consortium's work in creating the Hand Press Book database has stimulated the complex and vital work of the presenting our rich collections.

At present, the Consortium's database includes over one million entries; it will develop and ensure interdisciplinary and intercultural investigations by scholars from Europe and the whole world.

I would like to wish the participants in this Seminar a fruitful and interesting day.

# Book Annotations as Historical Sources and their use in Database Applications

## L. I. KISSELEVA

Recent findings strongly suggest that inscriptions on the margins, covers or blank leaves of books represent important secondary sources for historical and cultural research. Their content relates both to bookmaking and book history. In addition to identifying owners or donors, they demonstrate readers' attitudes to the book and the text, as well as contemporary spiritual and cultural developments. Library ownership marks can give an insight into the structure and contents of extant library collections (whether government, church, public or privately owned). My extensive studies on manuscripts and rare books provide immense evidence of the above. This paper discusses various instances of inscriptions in manuscripts or printed books that could be useful in database applications.

This study focuses on books (1,117 volumes) published by Elseviers, the famous Dutch printers, which were subsequently brought to Russia. Some are found in library collections belonging to Peter I, or his associates such as Bruce, Winnius, Areskin and Theophylactus Lopatinsky. Others were acquired during the second half of the 19th and 20th centuries by Russian scholars, including Academician Keller; the bibliographer, author and lawyer, V.P. Gaevsky; and Academician N.P. Likhachev. The ownership marks indicate the interest in Elsevier's publications among certain sections of the Russian public. Ownership marks have yielded fascinating results in some current applications, including the Lyon Municipal Library development under Monique Hulvey in France, and another developed by the State Library in Moscow.

Accession numbers are also useful in identifying books or library ownership. The example below has been drawn from the author's own experience. When the great Serbian educator, Wuk Karajic, died, his son is known to have sold his father's library to the Russian Academy of Sciences, where the books were incorporated in the general collections by language. The long

Fig. 1. Signature of Dubrovsky.
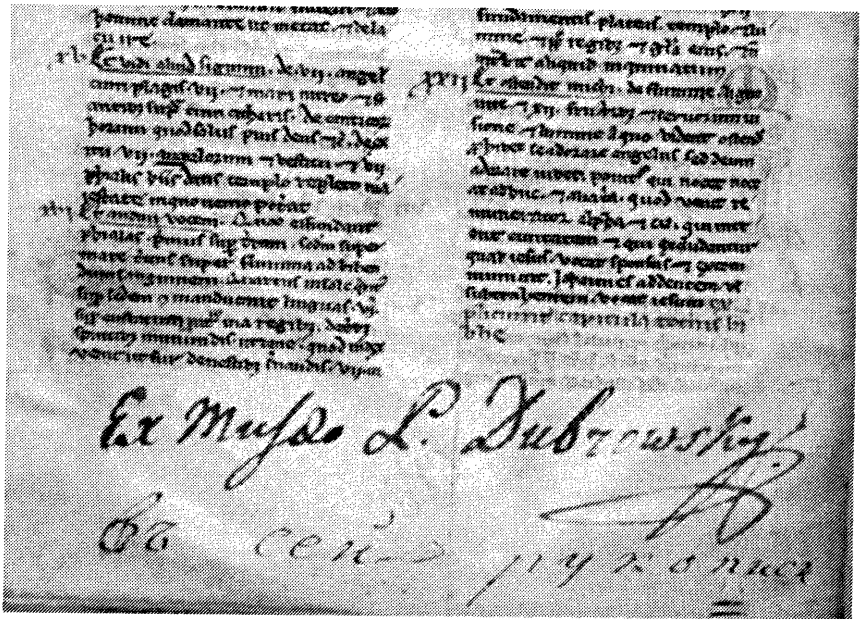


search for Wuk's legacy, which started in the second part of the 20th century, failed. The Karajic collection was assumed to be lost.

At a later date, the author discovered a register written in Belgrade, which recorded Wuk Karajic's collections as having been sold to St Petersburg. Then several volumes inscribed for Wuk Karajic were found, with small numbered spine labels and both the numbers and titles coinciding with those in the written catalogue. The Wuk Karajic library collection has now been re-assembled, opening up a new field of research in history, education and Russian links with the legacy of this Serbian educator.

Accession numbers are being used as indicators of provenance for Parisian Saint-Germain-des Prés Abbey manuscripts, now in the National Library of Russia, which were acquired by the Russian collector P. Dubrovsky, Secretary of the Russian Embassy in Paris, in the late 18th century. On return to St Petersburg in 1804, he gave his collections to the Government on condition that he would be employed as their curator in the Public Library. Each of the manuscripts was inscribed in his own hand as:

'Ex museo Petri Dubrowsky'. Books deriving from Saint-Germain-des-Prés also have accession numbers. The 14th-century register also indicates provenance for manuscripts from the St Francis Convent library in Assizes. Obviously, this type of research requires database records for surviving old registers, including descriptions of their content, for further identification of the books and the original library collections.

Accession numbers can be used to locate manuscripts from the library of the famous English collector, Sir Thomas Phillips, reputedly comprising 36,000 items, which were sold on his death and distributed among library collections in London. The Institute for the History and Study of Text (IHRT) in Paris holds the library catalogue. Two volumes of the manuscript *Corpus Justiniani* are now in the National Library of Russia (Inv. Phillips 7123), and excerpts from the *Summa* by Raymond of Penaforth (Ms. Ph. 3985), and collected works of Roman authors 1345 (Ms. Phl. 16366) are in the Academy of Sciences Library, St Petersburg.

A unique historical source is represented by presentation notes – or, in Russian terminology – 'deposit' notes for books to be deposited with the Church. Each of the notes should be regarded as a historical document to be evaluated from various perspectives. Some only acknowledge ownership; others indicate social affiliation, position or professional interests. A book note often served as a deed of purchase, containing a brief record of transaction, dates, present and future ownership, and finally, a signed manual (often witnessed) for title rights. Thus the inscription itself stands as explicit historical evidence. On the other hand, it has no standing in law, and may appear in brief or loose form, with its content dependent on the will and ability of the owner or compiler. More importantly, an inscription acts as a record of deposit (gift, transfer), transaction (purchase/sale), inheritance, or completed transaction.

The present study involves 1,500 items printed by the Printing Yard press in Moscow during the 16th and 17th centuries. Among the 2,500 inscriptions found in 900 volumes, 796 are dated. Geographically, they cover the territory of Russia: Kazan in the East, Pskov in the West, Orel town in the South, and Solovetsky Monastery in the North. The inscriptions mention over 30 towns, dozens of settlements and villages, and many monasteries and churches. No doubt, they can be used to refine 16th- and 17th-century place names, and locate contemporary monasteries and churches. The notes can help to identify the owners, buyers and sellers, donors and depositors for different churches or monasteries. Among the owners already identified are: Peter's I father, Tsar Alexey Mikhailovich, as well as Peter I himself, his

brother John, Russian Patriarch Philaret, Prince Dmitry Pozharsky, Prince Kurakin and Boyarin Golitsyn. The ranks involved include boyars, okolni-chy, Boyars Councillors, various professions, military service and trades.

Among the owners were women or peasants saving money to buy a book and give it to the church as a funeral gift for themselves or their families. Some collections comprised over twenty volumes. The notes show how books were used by successive generations of peasants, not only as funeral gifts to the church for absolution in the next world, but also as text books or blessings for the children. Anyone who made a bequest to the church expected his will to remain valid forever, or at least, for as long as possible. So the inscriptions invoked potential abusers or thieves of books bequeathed to the Church as follows:

'... and whoever loses this book through negligence, or steals it, shall appear before God when the time comes to judge the living and the dead'.
' ... and whoever takes this Service Book from Our Lady's House, or steals it or swaps it for drink, will be judged by God'.

Yet, as seen from the inscriptions, life introduced its own alterations. Many of the texts describe how books were sold and re-sold. The first entry in an interesting copy of the *Code 1649* says, 'This book is given by *strelets* in Archangel Town to Ignaty Ivanovich Zavalishin of Archangel Town against the payment of two rubles', and is signed by two witnesses. Then Zava-lishin's son arranged another deal, also witnessed, selling the book for a ruble and a half. And finally, the last entry warns that the book cannot be sold, pawned or presented, and whoever pawns or gives it away should pay ten rubles. Books were sold for large sums. Compared with current prices, say, they were very expensive in the 1730s. Thus the two rubles and 25 *altyns* (75 kopecks) paid for the *Common Euchology* in 1637 would suffice to buy four cows or two or three horses. Similarly, thirteen sweep-nets or 26 cows could be bought for the price of the *Triodion 1647*.

A remarkable note was made in a copy of the *Ladder 1647* by Ivan Ivano-vich Buturlin (1661–1738): 'I, Ivan Buturlin, General of the Regiment and First Preobrazhensky Life-Guards, began reading this book this 2nd day of November, 1722, finishing this tenth day of same month and signing in my own hand, having previously read another book of Pitirim of the Caves, that by Ephrem the Syrian, the *Sword of the Spirit*, signing in my own hand in Latin and Swedish, with all the books read in Moscow'. All these show Buturlin to be a well-educated man of the time, able to read and write both in Russian and in Swedish.

Book owners had a long tradition of book exchange, making notes of the transactions in the books. The notes demonstrate extensive book exchanging practices among monastic communities, and migration routes for many books. Some of the notes evaluate the content and the text. Thus an enthusiastic reader describes the *Marguerite* by St John Chrysostom as 'sweeter than honey', and 'containing very useful wisdom with the author providing knowledge for every reader'. The writer is both admiring of the book, and advises others to read it. There are some critical notes, like the one in the *Octateuch 1638* saying: 'This book cannot be used in church service as [it is] written in the spirit of dissent, demonstrating uncensored publishing.' A similar note is written in collected works entitled *The Book of Cyril 1644*: 'These are false and heretical books'. The inscriptions demonstrate the religious differences in Russia following the Niconian Reform.

Many inscriptions relate to social or family matters such as weddings, births, migration, murders, suicides, funerals, etc. There are several excerpts from books or parables read before. For instance: 'Blessed is [he] who never goes to the council of the profane'; and 'Not everyone who gives plentiful alms is [with] grace but he who will not offend'.

Each inscription in Cyrillic books provides an important additional source for studies in Russian history and culture. Of particular interest are inscriptions and notes in manuscripts written before the printing press era. This is, first, because of specific features and, second, because manuscripts provide a starting point for early printed books in the 15th century. Notes and inscriptions in manuscripts written some 600 to 900, or even a thousand years ago, provide evidence of events of global importance such as earthquakes, climatic changes, comets flying in space, and so on.

One more type of notes and inscriptions provides an historical source representing both ownership and reading characteristics, and special techniques for making manuscripts, along with contributors to the process such as parchment makers, copyists, artists or binders. Comprehensive studies of notes in manuscript books allow typological groupings as described below.

Group one represents memoranda written by copyists, which sometimes contain dates, author and title, as well as details of copyist and commissioner. The copyist's notes, generally made at the end of the manuscript, subsequently developed into colophons in early printed (i.e. hand-press) books. Thus a note in a manuscript work by Basil the Great and Cyril of Alexandria says that it was translated from the Greek version by the Greek writer, George of Trebizond, and copied by Nicholas Philecticus in Master Francis Fini's house in Rome in 1469. Friedrich Tulna, who copied the *Table*

*Talks*, completed his work as an ordinary monk in 1422, and added an alphabetical index in 1433, designating himself as Prior of Kremsmüster Abbey. Some of the notes describe both the manuscript's history and factual information about the copyist or the author.

Ownership notes, bookplates or library labels help to reconstruct the history of collections. Thus each manuscript in the collection of P. Dubrovsky (1754–1816), Secretary of the Russian Embassy in Paris, is inscribed as: 'Ex museo P. Dubrowsky'. Many manuscripts have notes made by previous owners. Thus the 13th-century Psalter, which belonged to Franciscus de la Morlier in the 15th century, appeared in the collection of Pierre Seguier in the 17th century (according to a superimposed bookplate on the binding). By 1735, it was registered in Saint-Germain-des-Prés at no. 1194, and was acquired by P. Dubrovsky later in the 18th century.

Another extensive collection in the National Library of Russia, formerly belonging to Count P.K. Sukhtelen (1756–1836), features his bookplate 'Aqua mente'. Some manuscripts in his collection contain notes made by previous owners. Thus the 13th-century *Codex Justiniani* shows an inscription in 14th-century writing style indicating ownership by an abbey in Liré. This note is particularly important because it mentions the price: 'This books belongs to Master Abbot of Liré, the price [thereof] being one hundred *solidi*'. A hundred *solidi* was an immense sum in Paris in the 14th century.

Still another integral collection was transferred to the Imperial Public Library from the Hermitage. It is a collection of manuscript books from a monastery in Weissenau near Ravensburg, founded in 1145 and secularized in 1803. Each of the manuscripts has a note with an indication of ownership by the monastery in Weissenau, and the Abbot's wax seal.

Group two represents text notes. Many medieval manuscripts such as breviaries, missals, psalm- or prayer books are known to contain introductory calendars. Lists of local saints are used to localize or, in some cases, to date a manuscript. Subsequent extensions provide information on the manuscript's migrations. One example is the 13th-century Psalter with the calendar listing, along with local saints for North France and multiple saints for the Netherlands, which were added during the 14th and 15th centuries. Some calendars also include deceased persons which, given dates of birth, allow precise dating. This is the case with the 13th-century Missal compiled for St Stephen's Cathedral in Halberstadt, with the calendar covering canons dying between 1234 and 1240, and therefore intended for the dates (*terminus ad quem*). Subsequent extensions allow reconstruction of the man-

Fig. 2. Marginal note in a manuscript of *Tristan and Isolde*.



uscript's history. For instance, the *Sequentia de Sancto Stephano* text added in the 14th century can be easily dated, because it contains the *Collecta Karoli regis* for the coronation of Holy Roman Emperor Charles IV in 1349. The note was therefore made by 1350. In the 15th century, the calendar was extended again to include the saints canonized during this period. In the 17th and 18th centuries the manuscript belonged to the Jesuit College, and in the 19th century to the Cathedral School in Halberstadt, as demonstrated by accession number M 127.

Finally, Group three includes the notes or, more exactly, operating evidence of manuscript making, i.e. design techniques. These are studies made

possible by a special discipline developed in the second part of the 20th century, and generally known as codicology. The subject involves signature titles and direction lines, advertisements linking successive parts. Also, it involves rubrication or artist's notes describing headings or explaining subjects respectively. All these provide information on individual stages, allowing reconstruction of specific bookmaking processes, re-integration, or evidence of errors. Pagination in manuscripts may help to re-assemble the parts dispersed earlier.

Descriptive catalogues of manuscripts should be used for database records of page numbering in each part because the information is useful for checking the date and place of writing. Thus, for instance, 7th- and 8th-century manuscripts have gatherings of four leaves, 7th- and 8th-century Irish manuscripts five, in France during the 12th- and 13th centuries mostly eight, and in Italy in the 13th- and 14th centuries six or ten leaves. Service books have gatherings of ten to twelve leaves, and a 13th-century Bible five or 24 leaves in each gathering.

Some manuscripts have auxiliary notes at the margin edge (sometimes cropped). Thus the manuscript copy of *Romance of Tristan and Isolda* in the National Library of Russia contains some notes in italic. An inscription under an illumination states: 'Two armed knights riding in joint attack'. The text represents a simple instruction to the artist to represent the two knights. Similar instructions were provided for rubricating headings and decorative initials. The techniques were extended for early printed books where the initial was replaced with a small letter (guide letter).

Notes of a kind are represented by prick-marks made for text lining. The figure shows top and side marks with lining schemes below. Together, they provide evidence about page design and book type, and the provenance of a manuscript. Scriptoria of different periods and different countries were known to establish different traditions of page design, so that lining can help to refine the date and place of writing.

In some cases, blank leaves or wide margins were filled with text of no immediate relation to the manuscript. Thus marginalia in the manuscript copy of *Evangeliary and Pontifical* written in Dalmatia in the early 12th century include details of 53 settlements, deposits, wills, resolutions, and directions associated with St Triphon Church in the town of Kotor in the 13th century, but the original deeds are still missing. In this way, the manuscript provides an immediate source of invaluable historical material.

To conclude, it has been demonstrated that manuscripts and early printed books represent a multi-faceted resource, where both the original text – and

the notes made at later dates – are of great interest for detailed historical and cultural research. With the findings included in an integrated database and then used in appropriate applications, many issues of factual and social history can be investigated. This can promote accurate evaluation and allow important conclusions to be drawn; it can reconstruct historical processes and assist in learning lessons for the future, for human beings should always learn from the past.

# New Techniques and Problems in the Preservation of Manuscript Collections

## N. A. ELAGINA

The preservation of invaluable collections 'containing the whole historical experience of humanity' has always been a major task for archives and libraries all over the world. In recent years this objective has been officially recognised as a priority in Russia, as is evident from the 'National Preservation Programme for the Library Collections of the Russian Federation'.[1]

Preservation problems are especially critical when it comes to manuscript materials, where even the slightest loss of information – whether caused by the passage of time or by excessively heavy use of the document – can turn out to be irreparable.

Successful preservation of manuscript collections is directly connected to two main factors: conditions of storage and conditions of use. Steadily growing public interest in historical sources consequently entails more and more intensive use of them. Manuscripts are not only studied from time to time on a regular basis by researchers in reading rooms, but they are also constantly required for copying for scholarly and publishing purposes, and are selected for exhibitions within the library and outside it. Quite often, and sometimes unreasonably, manuscript materials are used for filming and telephotography.

The concept of 'metal fatigue' is well-known to engineers. High-strength metal constructions, which have smoothly borne a load for a long period, begin to be unavoidably damaged after the permissible threshold has been crossed. This same phenomenon can be observed in the process of heavy continuous use of major historical manuscripts.

As a rule, the most heavily used documents are also the most valuable from the point of view of their historical significance. The Western Manuscripts collections of the National Library of Russia include first of all the medieval codices from the 5th to the 15th centuries. At each reference to these widely used materials, those in charge of the collections should deter-

mine how to ensure the safety of the manuscripts in the best way, but at the same time should not prevent their legitimate study, reproduction, and exhibition.

One of the solutions to this problem is the possibility of the replacement of the original manuscript with a surrogate copy, which could fully or largely meet the user's demands.

At present there are various types of surrogates. Some have been known for a long time; others have appeared during the last few decades. In this paper, I should like to deal with three types of surrogates, which can substitute for original manuscripts. They are: printed facsimile publications; electronic versions of facsimile publications; and electronic analogues of manuscript documents.

The first printed copies of manuscript books appeared in the 19th century. Polygraphic techniques developed and *facsimile publications* replaced lithographic and phototype publications. In the last quarter of the 20th century completely new technologies appeared, which assisted developments in the printing industry. Specialist publishing houses in Switzerland, Austria, and Spain (for example, ADEVA, Desertina, Luzern, and M. Moleiro Editor) achieved great success in the field of manuscript facsimile production. As a consequence of their co-operation with the National Library of Russia during the period 1993 to 2003, facsimile reproductions of seven codices of the 10th to 16th centuries from the Library's collections were published. These so-called 'quasi-originals' are very faithful to the original manuscripts in all their characteristics (dimensions, colour reproduction of miniatures, simulation of writing material and binding features, and so on).

In many cases, for example, when the user wants to form a general idea of a manuscript, or is interested only in its text, or in the relationship between text and the pictorial series, and so on, reference to a facsimile copy is quite sufficient. Specialists in the field of codicology can generally find answers to their questions in the detailed commentaries accompanying these publications. At the same time, one should anticipate that on occasions reference to the original manuscript will be necessary. However, if the preliminary study of the facsimile has already introduced the reader to an understanding of the original, such consultation will be shorter, more purposeful, and more effective.

In fact, facsimile publication gives new life to a monumental manuscript. However, one should remember that only selected and abundantly illuminated medieval manuscripts become the object of such expensive publications. No less valuable historical codices of the 5th to 12th centuries, often

Fig. 1. *Libro de Horas de Luis de Orleans*. Barcelona: M. Moleiro Editor, S.A., 2001. Facsimile of the Ms. Lat.O.v.I.126 from the National Library of Russia Collection.
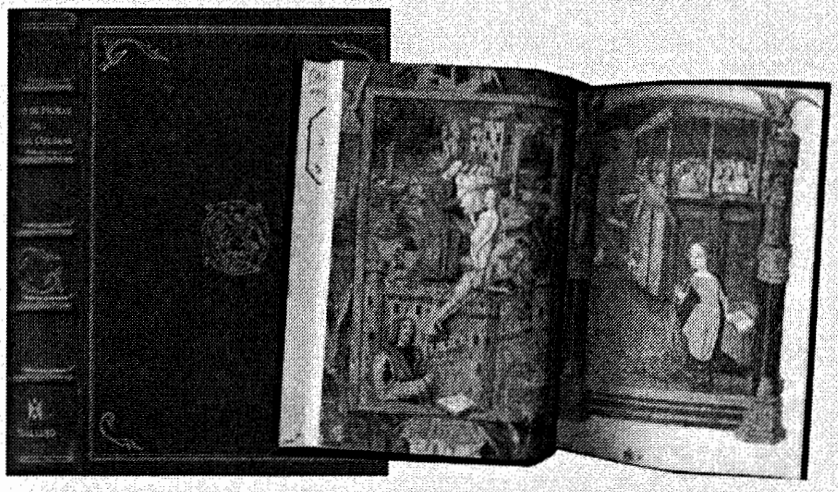


decorated only with individual decorative elements or without them, as well as the manuscripts of the 13th to 15th centuries containing rare, and sometimes unpublished texts, but having only a few miniatures which are still masterpieces of execution, usually remain beyond the interests of publishers. The significance of these monuments of writing for the investigation of the culture of the western Middle Ages is considerable, as is the mediaevalists' interest in them.

The development and implementation of new digital technologies have become an important step on the way to finding possible ways of publishing these codices.

In 2001 the National Library of Russia, in association with the Petersburg publishing house 'Spaero', prepared its first CD-ROM of the 8th-century Insular Gospel manuscript preserved in the Library's collections.

For a long time this remarkable monument of book art from the early Middle Ages remained practically inaccessible to researchers due to serious damage to the inner manuscript and its binding. A package of work on the conservation of the codex was carried out in 1998 with the financial support of the Government of Luxemburg. The manuscript was disbound and care-

Fig. 2. 'The Insular Gospels of the 8th century in the Collection of the National Library of Russia'. Electronic copy of the Ms. Lat. F.v.I.8.
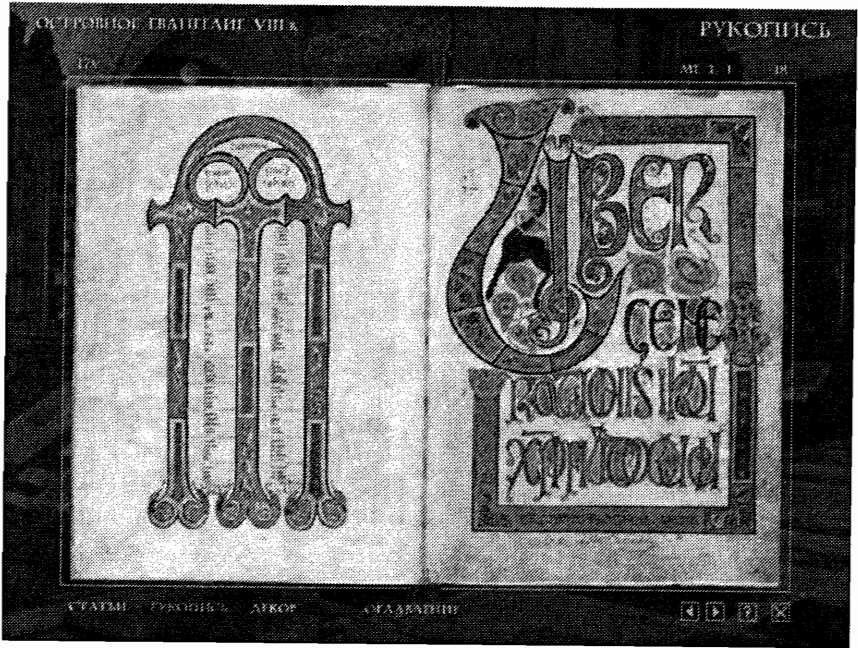


fully treated to clean and remove the distortion of the parchment sheets, which created the best conditions for its digitization. The CD-ROM 'Insular Gospel of the 8th century from the Collection of the National Library of Russia' was created from electronic images of all the manuscript folios generated by the staff of the National Library of Russia's IT Department.

This CD-ROM contains a full electronic copy of all 215 manuscript folios, and a reproduction of the surviving elements of its 18th-century binding. Digital images perfectly reproduce the lightly corrugated parchment surface, all the nuances of the rich colour palette of pictorial decoration, and the features of the Insular script. In addition to viewing the manuscript with the ability to turn the pages and increase the text image up to the original size, the user can have direct access to any text fragment. All the user has to do is to enter the 'Table of Contents', select any text or fragment of interest, and highlight it using the cursor. The relevant page of the manuscript will appear on the screen.

Fig. 3. 'The Insular Gospels'. CD operation in the section 'Décor'.
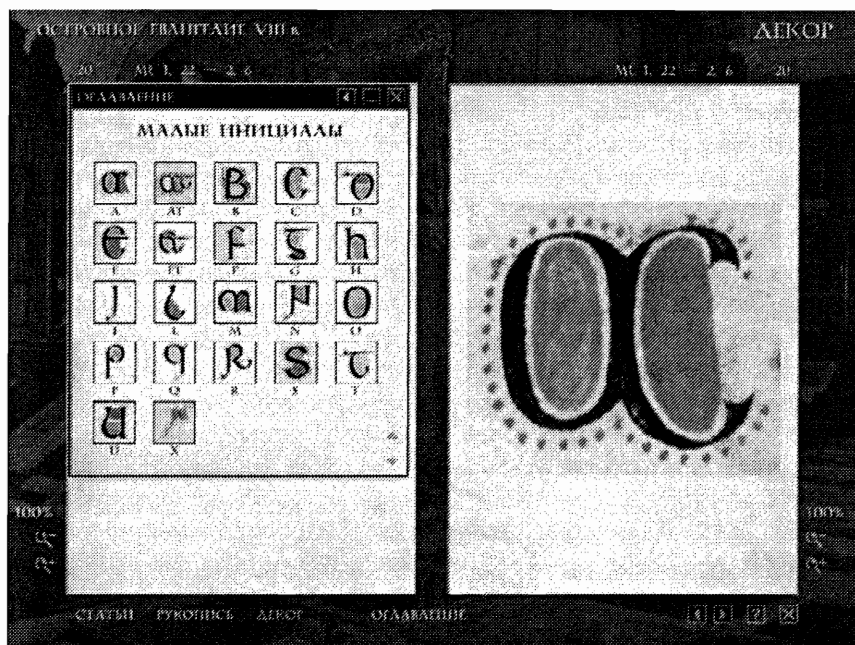


One section of the CD-ROM deals with the manuscript's decoration. All the decorative elements of the codex are organized in four groups: the opening pages of the Gospels, tables of canons, large ornamental initials and small initials. The quality of the small initials recorded in the various texts has recommended an alphabetical arrangement. An investigator can select any two images in each group, and drag them on to the desktop to compare them and to view them at up to 300% magnification.

In addition, the CD-ROM contains a detailed scientific commentary in Russian and in English: it reflects the history of the codex, gives a scientific description of the codex, transcribes the runic inscription on it, and explicitly traces the stages of manuscript restoration carried out by the Federal Document Conservation Centre of the National Library of Russia. The section starts with an opening address by Dr V. N. Zaitsev, Director of the National Library of Russia.

The content of the CD-ROM enables us to refer to it as a facsimile

publication of this unique 8th-century codex presented in an electronic version.

*Electronic publications* are receiving greater recognition in worldwide practice, but they are still new to us, and their opportunities – as well as their shortcomings – are not yet completely known. However, we would like to emphasize some positive aspects we have noted in favour of the development of this type of publication. First of all, not only medieval manuscripts, but also practically any document of interest to a wide circle of readers and which is, therefore, heavily used, can become the subject of electronic publication. Besides, using an electronic publication has a number of advantages over working with a hand-written document. The user can bring on to the desktop two pages of the manuscript, which are not a double spread. This opens up new prospects for comparative paleographical, artistic, and textual analysis of major manuscripts. The results of such analysis can turn out to be particularly interesting by allowing comparison of manuscripts from various depositories, which are linked by text, artistic design, or belong to one manuscript workshop.

Electronic publications are easy to use. It is not difficult to organize the work of researchers by providing appropriate computer equipment in the reading-room. At the same time, they can play a positive role in appropriately controlling users' access to the original manuscripts.

The 'Collection of Polish Autographs from P. P. Dubrovsky's Collection' is one of the most intensively used items in the Western Collections of our Manuscripts Division. This part of the famous collection, which comprises almost all the most valuable western manuscripts acquired by the Imperial Public Library in 1805 and kept in St Petersburg, includes about 3,000 documents that came mostly from the archive of the Princes Radziwills, who belonged to one of the powerful houses of the Grand Duchy of Lithuania. For several centuries the history of the Radziwills family was inseparably linked with the history of Rzeczpospolita.

The major group of Polish materials in the collection relates to the second half of the 16th and 17th centuries. These materials comprise public acts, the documents of royal clerical office, local administration, central and local courts, various documentation connected with the organization of the Polish armed forces, as well as the official and private correspondence of the Polish kings, magnates, and officials. All these documents are most important sources for the study of the political and military history of the Polish state, relations between Poland and Lithuania, and relations between Poland and neighbouring countries, i.e. Russia, Sweden, Finland, Turkey and

others.[2] The exceptional historical value of the collection constantly attracts the attention of both Russian scholars and numerous specialists from countries both near and far: Lithuania, Ukraine, Byelorussia, Poland, and the USA.

Moreover, the heavy use of documents in the collection is continually increasing because of the way in which it is organized. As early as the 19th century the documentary materials in Dubrovsky's collection, including the Polish items, were integrated into collection books and placed within book covers. In this case a user's need to refer to a single document entails the delivery of the whole bound volume to the reading room.

The way in which the collection is organized also significantly restricts the scope for copying. During microfilming the collection books are exposed to physical stress, which can negatively affect the condition not only of the binding but also of the documents themselves. At the same time, the results obtained do not always meet the needs of investigators. The text at the beginning and end of the lines in bound documents often cannot be read in copies, and some archive marks are not even partly reproduced.

Significant deterioration of both individual documents (many of them were already in an unsatisfactory physical condition when they became the part of the collection) and the whole set of collection books presented curators with the need to take urgent protective measures to ensure the preservation of the materials in the collection. The project developed for this purpose by the National Library of Russia's Manuscripts Division is predicated on the creation of a special collection of *electronic versions* of the Polish manuscripts simultaneously with carrying out work on their conservation.[3]

The main objective of this collection is to provide investigators with comprehensive information on each document, sufficient to carry out internal and external analysis of the item without reference to the original, or with reference to it only in exceptional cases.

An 'electronic model' of the document to meet this objective should include the following elements:

- Brief description of the document corresponding to the description in the inventory, which can be corrected and extended by entering additional data.
- Electronic copy of the document fixing its exterior and condition, and allowing familiarisation with both the main text and all archive and official marks.

Fig. 4. Brief description of the document for the catalogue.

Авт. 234. № 145.

**Radziwiłł Krzysztof, великий гетман литовский.**
Письмо [Николаю Христофору Радзивиллу], воеводе трокскому.
27 октября 1595 г. Кейданы.
На польск. яз. Подпись-автограф. Печать под кустодией.
3 л.; 320x200, 310x200 и 30x195 мм; л. 1об.-2, 3об. – без текста.

- Digital image of the watermarks of the paper used when the document was produced.
- Digital image of state or private stamps, if any.

Techniques for electronic scanning were specially developed and approved at the Codicological Laboratory, so that high-quality digital images of watermarks and stamps could be obtained. The work was organized in the National Library of Russia's Manuscripts Division, under Dr. D.O. Tsypkin.

An *electronic catalogue* of materials in the collection allowing the ability to select descriptive elements (author, addressee, date, place, type, etc.), along with *databases of paper and stamps* which will open new possibilities to localize and date documents, will be created simultaneously with the electronic versions of the documents. In addition, it is intended that information contained in the databases will become the initial data for the preparation of two kinds of electronic reference guides.

Fig. 5. Electronic copy of the document.
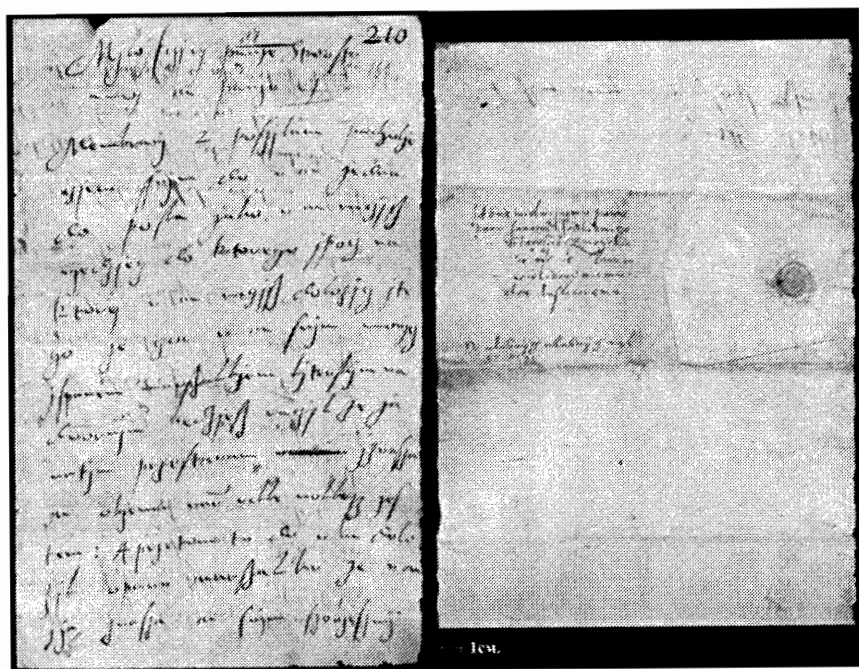


One of them will be devoted to the paper in the Polish documents. In addition to reproducing all the watermarks, it will include a technical investigation of the papers, as well as a description of the identification features of the meshes of the paper-making moulds.[4]

The second reference guide will form a catalogue of the stamps in the Polish documents. It is intended to obtain digital reproductions of all the stamps in the autograph letters in Dubrovsky's collection in the course of the preparation of the catalogue. Moreover, the stamp from each document will be exposed to optoelectronic traceological investigation in order to identify specific stamps by the impressions or their fragments.

Thus, setting up the collection of electronic versions of Polish autograph letters from the Dubrovsky collection will both stabilize their present condition, and help to ensure their preservation; and it will also allow us to advance further in our study of them. Besides, preparation of the planned electronic reference guides will become an important step in the develop-

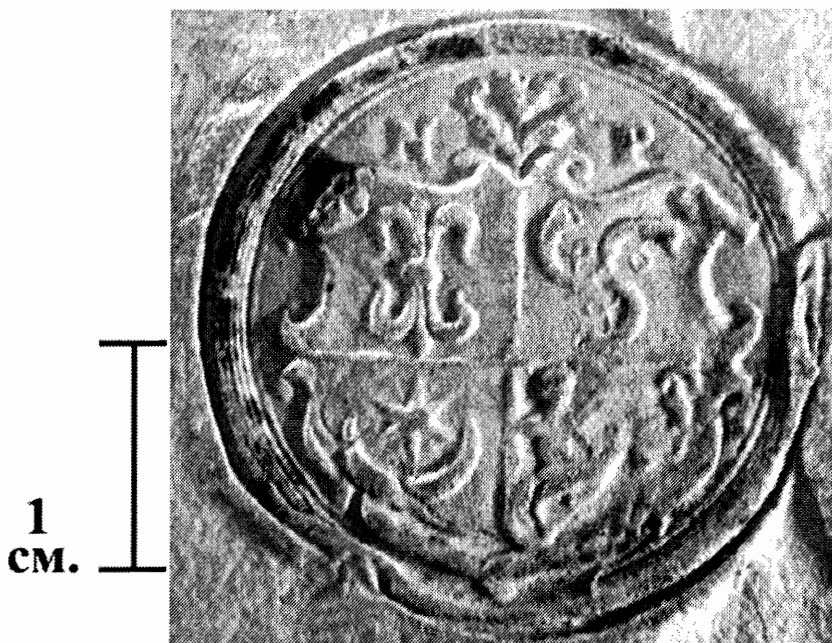Fig. 6. Digital image of the watermarks of paper.



ав.234, №145, л.2

1595г.
(27.10. Кейданы)

R.K.

1 cm.

Fig. 7. Digital image of state or private stamps.



ment of auxiliary historical disciplines, particularly filigranology and sphragistics.

At present, electronic copies of more than 500 documents have been made through the work of the staff of the National Library of Russia's IT Department. Digital reproductions of approximately 100 marking labels and about 40 impressions of various stamps have been obtained in the Codicological Laboratory. Now we have to unify these digital images into *electronic models* and test them in the reading room of the Manuscripts Division.

[1] Национальная программа сохранения библиотечных фондов Российской Федерации. Прект / Министерство культуры Российской Федерации. Москва, 2000.
[2] См.: Копреева Т.Н. Обзор польских рукописей Государственной Публичной библиотеки (Собрание П.П.Дубровского) // Труды

Fig. 8. Technological certificate of paper.

## THE TECHNOLOGICAL PASSPORT

PAPER MOULD: *IV/B/a/ab/1/form2*
(NLR Dubrovski 234, № 135, 141-142, 144-146, 148, 150, 167,
169-172, 176, 191, 193, 204)

date: *11/09/03*

COLOUR:
 R = 216 (min=200; max=228);
 G = 210 (min=194; max=222);
 B = 197 (min=183; max=208);
 $\lambda$ = 574nm (min=573nm; max=575nm);
 brightness = 85% (min=89,8%; max=78,4%);
 repletoiness =14% (min=13,2%; max=14,9%).

THE ESTIMATION OF THE UNIFORMITY OF MASS
DISTRIBUTION:
 65% (min=45%; max=80%).

THE ESTIMATION OF THE RUNNING THROUGH -
VIS. (№ T/O):
 1 (min=1; max=1/2).

THE ESTIMATION OF THE RUNNING THROUGH - IR
(№ T/O):
 1 (min=1; max=1/2).

FIBRE LENGTH:
 0,83mm (min=0,75mm; max=1,05mm).

INCLUSIONS INTO A PAPERS MASS:
 0,44% (min=0,27%; max=0,85%);
 $\lambda$ = mass; type = not determined.

A SHEET OF PAPER:
 0,127mm (min=0,103mm; max=0,153mm).

SHEETS RELIEF:
 type "E".

VISIBLE LUMINESCENCE:
 no.

Fig. 9. Elements of stamp analysis. Features allowing identifying the stamp from a fragmentary impression.
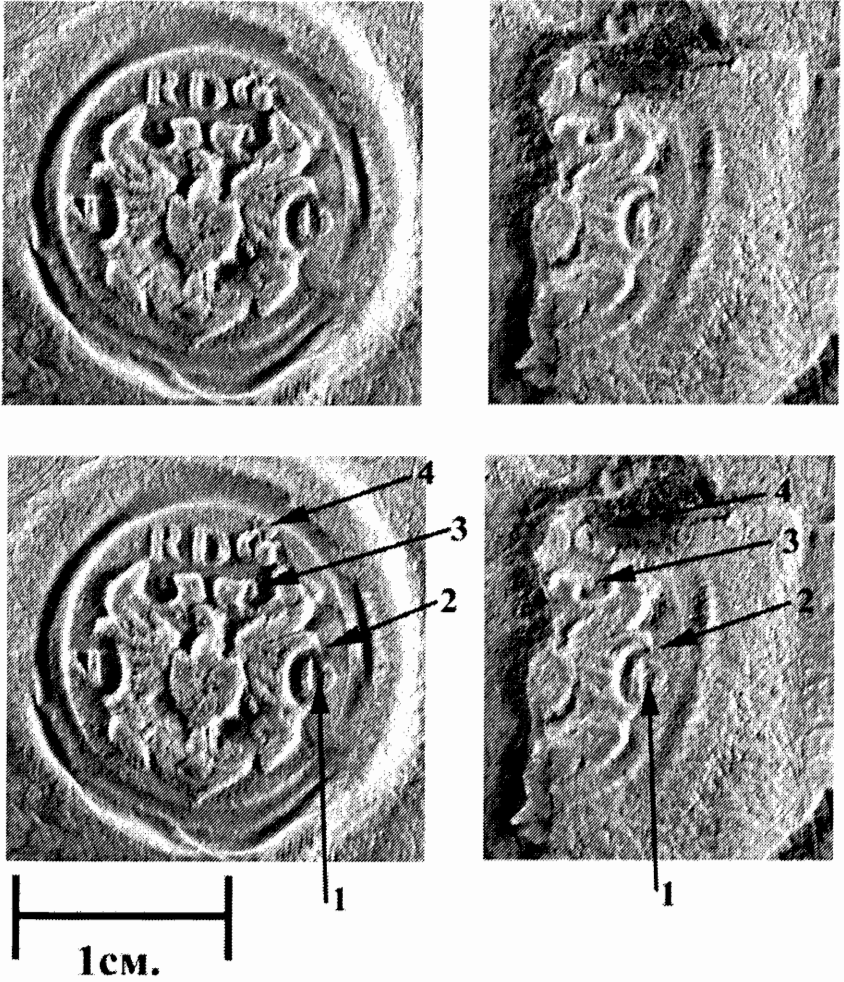
Государственной Публичной библиотеки им. М.Е.Салтыкова-Щедрина. Т. V (8). Ленинград, 1958. С. 137-165.

[3] Подробнее о нетекстовой составляющей электронной модели (о графической модели памятника), разработанной в Лаборатории кодикологических исследований и научно-технической экспертизы документов (ЛКИиНТЭД) см.: Цыпкин Д.О. Электронная модель бумажного листа в составе информационной модели историко-культурного памятника // «Санкт-Петербург – столица российской бумаги»: Актуальные вопросы истории бумаги и бумажного производства: Материалы и сообщения вторых научных чтений. СПб., 2004. Здесь же предложены основные принципы охранного цифрового моделирования памятников.

[4] Подробнее о составе «Технологического паспорта» и принципах его формирования см.: Цыпкин Д.О. Указ. соч.

# A neglected Carolingian edition of the *Historia Francorum* of Gregory of Tours: the consequences of insufficient paleographical description

## VLADIMIR I. MAZHUGA

In 1934 the eminent German paleographer, Paul Lehmann, made a tour of some weeks' duration through Scandinavian libraries. While in Copenhagen, he discovered in the University Library the fragment of the *History of the Franks* by Gregory of Tours (6th century) at the shelf-mark Rostgaard 160 2°, Nr. 1. He attributed the fragment to the 'School of Tours' dating from the beginning of the 9th century (Lehmann 1934: 170). Obviously, in doing so Lehmann took account of the influence of the newly published – at the time definitive – works of Edward Rand (1929; cf. 1934) and Wilhelm Koeller (1933) on the scriptorium of the monastery of St Martin near Tours.

Another fragment of the *History of the Franks* is preserved in the King's Library (Kongelige Bibliotek) in Copenhagen. Scholars have known about it since the 1880s. This is perhaps why Lehmann looked at it somewhat superficially, and in a general way described its script as 'französischer Minuskel saec. IX'.

Moreover, Lehmann was aware of the fragments of the *History of the Franks* preserved in the Herzog August Library in Wolfenbüttel (Cod. Guelf. Aug. 2°, 10, 9). He had, however, a very vague recollection of them: he perhaps remembered some leaves (ff. 7–9), which are now considered to be a later replacement for a lost part of the manuscript, and he referred the fragment to the 12th century.

About thirty years later, Hans Butzmann published a special study of the Wolfenbüttel fragments (Butzmann 1966). Relying on the suggestions of another great paleographer, Bernhard Bischoff, Butzmann considered that both the Copenhagen and Wolfenbüttel fragments belonged to the same

dispersed manuscript. Nevertheless, he accepted Lehmann's assessment of the Rostgaard fragment (Rostgaard 160 2°, Nr. 1) as his model for assigning the locality and dating all the fragments. In other words, Butzmann attributed the Wolfenbüttel fragment, as well as these of Copenhagen, to the 'School of Tours' at the beginning of the 9th century.

As well as Butzmann, the Russian scholar, Michael Murjanoff, published the fragment of the *History of the Franks* preserved in the Archives of the Institute for History in St Petersburg (West-European Section, Kart. 625, Nr. 2) in the same review: *Scriptorium*. He pointed out that the newly found fragment dates from the 9th century, and that in terms of its text the St Petersburg fragment immediately precedes folios 2 to 5 in the Wolfenbüttel Collection (Murjanoff 1966).

Aside from the later complement, the hands that are to be seen in the fragments under consideration differ essentially from one another. As will be shown below, the folios from the first half of the dispersed manuscript show the clear influence of the 'School of Tours'. This is the case with the St Petersburg fragment, too. However, some folios containing the later parts of the *History of the Franks* could be assigned to a scriptorium in the area of the Rhine.

It could be that Bischoff advised not only Butzmann but Murjanoff as well. Both authors directed his attention to the remains of the former part of the lost manuscript. He must have approved of Butzmann's judgements. But during his later work on a comprehensive Catalogue of 9th-century continental manuscripts, he must have had a chance to study the Wolfenbüttel fragments more thoroughly, and he questioned Butzmann's opinion.

In a letter of 1990 in answer to questions from Martin Heinzelmann, who was studying the manuscript tradition of the historical work by Gregory of Tours, Bischoff expressed his opinion that all the fragments in question, including the St Petersburg fragment, belonged to the same manuscript. This time, however, he attributed the collection of fragments to Eastern France or even to West Germany. Nevertheless, he reaffirmed the locality and the date of the fragment Rostgaard 160 2°, Nr. 1 that Lehmann had earlier suggested; in other words, he reattributed it to the 'School of Tours' from the beginning of the 9th century (Bourgain-Heinzelmann 1997: 288).

Martin Heinzelmann studied the different editions of the *Historia Francorum*, and in assessing the exterior characteristics of the manuscripts, relied on the opinion of paleographers such as Bischoff. The somewhat discordant determination of the origin and the date of fragments by Bischoff seemed to enable Heinzelmann, or so he thought, to reject the idea

Plate 1. The Identity of the Script in two Fragments of Copenhagen and one Fragment of the Wolfenbuttel Collection (fol. 1)



| I. Rostgaard 160 2°, Nr. 1, f. 2v (Hist. Franc. II, 2) | II. Ny Kgl. Samling 252b fol., f. 1v (Hist. Franc. II, 9) | III. Cod. Guelf. Aug. 2°, 10, 9, f. 1v (Hist. Franc. II, 13) |
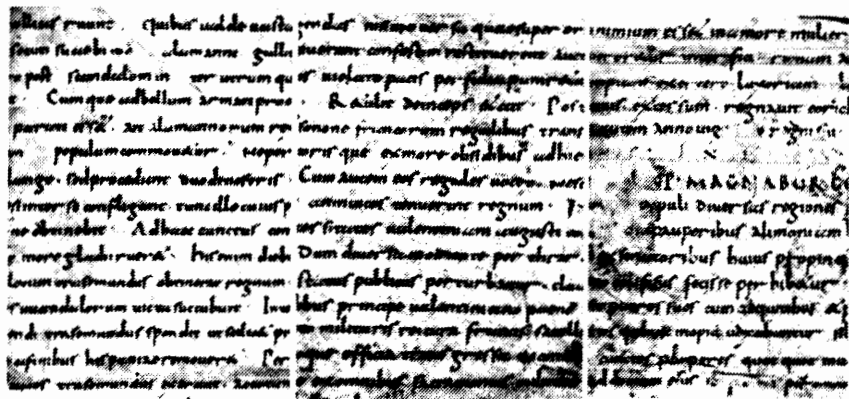
Similar forms: **a** as **u** ( I, 2 *alamanni*, II, 5 *francorum* ; III, 1 *amore*). **g**, **ex**, **et** ( I, 5 *esset* 10 *fuerat*, II, 4 *refulit*, III, 1 *esset* ) ; **N** 'uncial' amidst the word ( I, 1 *asc. (christianos,* II, 2 *asc. franc,* III, 11 *confusis*). **d** 'uncial' at the beginning of the word ( I, 7 *duo,* II, 4 *deinceps,* III, 8 *diversas* ) **P** ( I, 2 *asc. Per,* II, 4 *post,* III, 7 ). **R** (II, 4 *refulit,* III, 7 ).

that all the fragments under consideration derived from the same manuscript.

He not only dared to detach the fragment Rostgaard 160 2°, Nr. 1 from the other fragments, and to treat it as containing a particular edition of the *History of the Franks*, but he considered each fragment as containing a particular edition of a certain part of the historical work of Gregory of Tours. So he has referred the text of the St Petersburg fragment to the edition contained in the manuscript in the Bibliothèque royale at Brussels Nr. 9361–67, and he has presented the edition of both as 'C Ia'. The presumed edition of the Wolfenbüttel Collection in his study received the siglum 'C3**' (Bourgain-Heinzelmann 1977: 288)

## THE IDENTITY OF THE SCRIPT IN THE COPENHAGEN FRAGMENTS AND THE FRAGMENT IN THE WOLFENBÜTTEL COLLECTION (FOL. 1)

The comparative analysis of the scripts in the two fragments in Copenhagen and the fragment in the Wolfenbüttel Collection (fol. 1) reveals, however, the identity of the scribe who wrote them. In other words, one has a con-

viction that these fragments come from the same manuscript, and contain one and the same edition of the *History of the Franks* (Plate I).

One of the distinguishing marks of the script in question is the 'open' form of a with two horns which begin as hair strokes slanting to the right. The wide loops of g remain unclosed; the upper curve goes on softly, without any break or angle into the lower curve. The hair stroke of x is stretched and when an e precedes this letter, this stroke ends with a light curve to the left. The complicated ligature of e and t always serves the same structure. An uncial n is applied from time to time within the word, and not only as a majuscule at the beginning of the word. The uncial d, employed as a majuscule at the beginning of the text, is always modest in size. The 'rustic' forms of the majuscules P and R remain unchanged in the heading of a chapter and at the beginning of the text.

It is worthwhile to underline once more the identity of the 'rustic' forms of the majuscules. Beside the P and R mentioned above, one can observe the constant forms of the majuscules A and T. But the form of N is particularly noticeable, considering namely the last vertical stroke descending under the line. This form of the majuscule N is typical of some manuscripts created in Tours (Cf. Rand 1929: XXXVIII, 1; XXXI, 3; Koehler 1933: 7 d-e; 3 e; 10 b), or in Fleury, another great cultural centre in the valley of the Loire, some 130 km north-east of Tours (Homburger 1962: XIII, 30), at the start of the 9th century.

## THE SECOND SCRIBE OF THE DISPERSED MANUSCRIPT (AFTER THE ST PETERSBURG AND WOLFENBÜTTEL FRAGMENTS)

Just as we have seen in the Copenhagen fragments and fol. 1 of the Wolfenbüttel Collection, we can observe the identity of the hand that has written the St Petersburg fragment and folios 2 to 6 of the Wolfenbüttel Collection. The St Petersburg fragment contains book II, ch. 31 of the *History of the Franks*, i.e. the famous story of King Clovis's baptism (Archives of the Institute for History, St Petersburg: West European Section, Cart.625, Nr. 2, f. 1r).

Fol. 3 of the Wolfenbüttel Collection was the next folio in the dispersed manuscript, immediately following the folio preserved in St Petersburg. The same sentence begins at the end of the verso of the St Petersburg fragment, and continues on the upper lines of the recto of fol. 3 in the Wolfenbüttel Collection. (Kart. 625, Nr.2, f. 1v, l. 28 down to Cod. Guelf. Aug. 2°, 10, 9, f. 3r, l. 2). The usual sequence of text in other manuscripts,

Plate 2. I. Inst. for History, Kart. 625, Nr. 2, f. IV, ll. 24–30.
    II. Cod. Guelf. Aug. 2°, 10, 9, f. 3r, ll. 1–5.
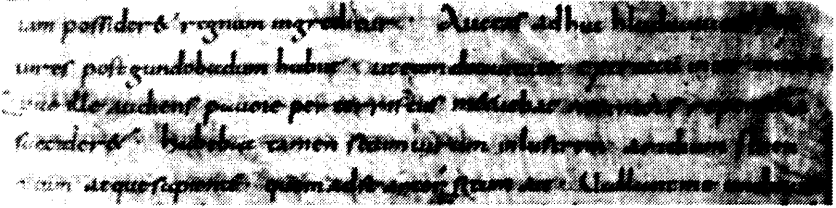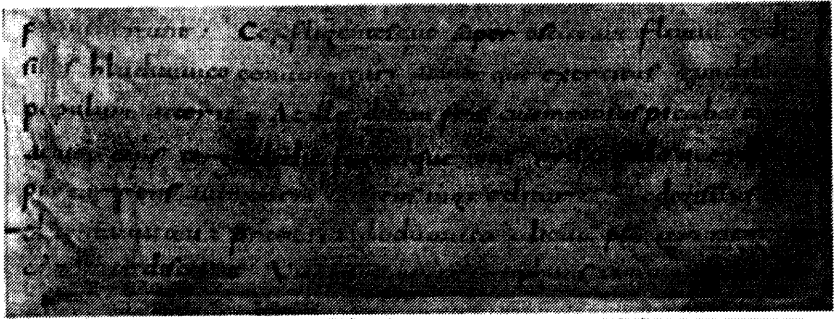


Cf. a continuous text beginning at Cart. 625, Nr. 2, f. 1v, l. 28 and going on at Cod. Guelf. Aug. 2°, 10, 9, f. 3r, l. 1
( Godegisilus vero / obtenta victoria promissa(m) Hluduvvico aliqua(m) partem regni sui / cum pace discessit. Viennamque triumphans, tamquam si totum / ^Aug. 2°, 10, 9, l. 1° iam possideret regnum, ingreditur. Auctas (Sic! ) adhuc Hluduvvicus rex / vires post Gundobadum [h]abit

where the Latin *iam* precedes *totum*, is altered in our fragments. As a result, we find no *iam* before *totum* at the end of the St Petersburg fragment, but instead the adverb *iam* appears just as at the beginning of the Wolfenbüttel fol. 3 (Plate II).

We have not, unfortunately, been able to procure a good photograph of the Wolfenbüttel fragment for the present paper. One can nevertheless see quite clearly that both the St Petersburg and Wolfenbüttel fragments have been written in the same manner and, moreover, by the same hand. The handwriting is obviously closely related to the previous hand, considering the manner and the concrete forms of the letters, but some forms of a new hand, which we will call Hand II, differ, however, from the forms common to Hand I.

The letter g is distinguished by a rather angular passage from the upper to

the lower loop, and also by the somewhat compressed head ( I, 4 *terga;* II, 2 *gundobadum*). The ligature et has a well-developed initial bow (II, 1 *possideret*). The ligature or, which is typical of French *scriptoria*, is employed more often than by Hand I (II, 3 *pavore, mors*). Hand II is particularly distinguished by the use of an uncial N, whose first vertical stroke is lengthened at the lower end out of the line, whereas the slant stroke goes straight out of the top of the first vertical stroke (I, 1 *Conligentes*).

We can see also some ligatures that distinguish Hand II (or, re, ct). In summary, we can establish, firstly, the identity of the hand that has written the two Copenhagen fragments and fol. 1 of the Wolfenbüttel Collection (Hand I); and, secondly, a similar identity for the hand that has written the St Petersburg fragment and folios 2 to 5 of the same Wolfenbüttel Collection (Hand II). This enables us to presuppose a common provenance for all these fragments from one and the same manuscript.

Contrary to the modern interpretation of his paleographical observations, Bernhard Bischoff retained his conviction of a common origin for these fragments right up to the end of his life. But having once attributed most of the fragments to the traditions of Eastern France, and even of West Germany, for greater consistency he ended up denying any link between the Copenhagen fragment Rostgaard 160 2°, Nr. 1 and the 'School of Tours' at the beginning of the 9th century. He simply noted that folios 22 and 23 of the Wolfenbüttel Collection had been written by a scribe educated at Fleury (Bischoff 1998: Nr. 1990).

It is, however, worthwhile examining the details of the script again, since they make us consider the enormous influence of the traditions of Tours on some of the scribes of our fragments. So a visibly lengthened tongue or, in other words, the shoulder of the r, which is common to Hand II, is one of the most distinctive script marks in the Tours tradition. In the same Hand II, a majuscule L is distinguished both by a higher position at the junction of the two strokes, and by an unusually long second stroke. This form of majuscule L is seen in some manuscripts from Tours (Rand 1929: XXVI, 2; cf. XXXI, 3) and Fleury (Homburger 1962: XIII, 30). We have already identified as typical of Tours the majuscule N of the 'rustic' style by Hand I, where the second vertical stroke descends under the line. We must consider, moreover, the use by both scribes of a written as u and of g with an open lower curve.

The famous copy of Livy's *Ab urbe condita*, executed by many known monks in Tours at the beginning of the 9th century, presents handwriting very similar to that in our fragments. One could compare, for instance, the

form of a written as u, the forms of g, ex, et (cf. Rand-Howe 1917: Pl. 3).

Folios 14 to 19 of the Wolfenbüttel Collection present another example of script influenced by the 'School of Tours' (cf. Butzmann 1966: Pl. 4). It would sufficient to compare an 'open' a, g, ex, and an uncial d at the beginning of the word. Moreover, the majuscule T, which differs from the minuscule t simply in size, can be compared with a similar form used by Hand II (Cod. Guelf. Aug. 2°, 10, 9, f. 4, 8): it was also used by the scribes of some manuscripts attributed to the 'School of Tours' (cf. Rand 1929: XXV, 1; XXXI, 3; LIII, 1).

The last hand, which we might name Hand IV, transcribed chapters 1 to 16 of Book VI. We can therefore conclude that three scribes, trained under the influence of the 'School of Tours' (I, II, IV), participated in the transcription of more than half of the historical work by Gregory of Tours.

This conclusion can be completed with one essential remark. The hand that copied ff. 10 to 13 of the Wolfenbüttel Collection also resembles the hands of Tours, but of a slightly later period, i.e. of the second and third decades of the 9th century, when the 'opened' form of a had gone out of usage and appeared only sporadically. This hand, which might be named Hand III, copied the chapters of Book IV (28–30; 41–44; 49 ex.-51).

One cannot, however, attribute our fragments directly to the scriptorium of Marmoutier at Tours. It is only possible to say that the dispersed manuscript was written in an area where the influence of this scriptorium was fairly strong. One must perhaps search for the place where the manuscript would have been written in the valley of Loire Moyenne, or in the neighbouring areas. The analysis of the initials confirms this impression.

The traditions of Tours and some Insular ornamental motifs are combined in the initials of the fragments. In the Copenhagen fragment Rostgaard 160 2°, Nr. 1, f. 1r, l.1, we find a majuscule M, resembling a Greek 'omega' turned upside down. Although this form was widespread, it is worthwhile to notice its presence in some the manuscripts of Tours from the time when Alcuin was Abbot of Marmoutier (796 – 804): Troyes, Bibl. mun. 1742 (cf. Koehler 1933: 7 a); Gent, Univ. Bibl. 102 (Koehler 1933: 11 h).

In the same Copenhagen fragment, on the front of folio 2 (ll. 18 – 23), we find the initial P.

The ivy leaf, which is to be seen at the top of the letter, is a recurrent motif in the manuscripts of Tours from the 820s or even earlier. Of particular note are the three points probably representing jewels, which are linked with a fine line. We can observe the same motif in the initial D on folio 13r of the Wolfenbüttel Collection. The points connected with a pointillé are to be

seen in the Tours Bible in Bern, Burgerbibl. 4, f. 112v (Koehler 1933: 18 e). The decoration of the lower ending of our initial P is, however, very probably of Breton or Insular origin.

Breton influence has been strongly confirmed at Fleury, but we do not know much about its influence in Tours. In the Copenhagen fragment Rostgaard 160 2°, Nr. 1, on the recto of fol.1 (ll. 8–10), we find the initial A, the first vertical of which ends with the same ornamental motif as in the P mentioned. The initial T found on the verso of the St Petersburg fragment (Kart. 625, Nr. 2, f. 1v, l. 7–9) strongly resembles Insular initials in general. However, according to Rand (1929: LV, 2), this form of T majuscule was in usage by the scribes of Fleury or, perhaps, those of Reims, who were also influenced by the 'School of Tours'.

I will finish with some practical recommendations on creating a modern database of the most ancient Latin manuscripts.

1. Paleographers need digitised copies of each Hand their colleagues have distinguished. Reproduction of one page will suffice. The ability to make further additions to the primary database must be provided for. A database of this kind will prevent scholars, for instance, from presenting an inconsistent interpretation of a unique historical text, as happened in the case of the Tours edition of the 'Historia Francorum'.

2. It is of great importance to create a system for reproducing ornamental motifs in the database. We should follow the example of our Italian colleagues, who carefully reproduce these motifs in their electronic database of manuscripts held in Italian libraries. The database of ornamental motifs will provide us with the most reliable criteria for localizing manuscripts.

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# Cultural Heritage projects
# from the Netherlands

## JAN BOS

'European Cultural Heritage in the Digital Age' is a wonderful theme for this seminar. Not only because cultural heritage programmes are extremely important – both nationally and internationally – and not only because we can learn a lot from each other's experiences with these projects, but also because this theme is wide enough to give me the opportunity to offer you a short overview of some quite diverse projects. But they have in common that they are all organized and executed by the Koninklijke Bibliotheek, the National Library of the Netherlands.

There are Dutch cultural heritage projects of all sorts and sizes:

- Preservation projects, primarily aimed at the restoration and preservation of fragile objects.
- Microfilm projects to transfer and spread the contents of brittle books, newspapers and periodicals.
- Cataloguing projects to describe and make accessible hundreds of thousands of books and manuscripts.
- Digitization projects, creating virtual facsimiles of books and newspapers, and some of them using Optical Character Recognition (OCR).
- Research projects, presenting both sources and context in a digital environment.

Of course, a single project may include several of these aims, and it usually does.

There are five projects I would like to present: Metamorfoze; the Memory of the Netherlands; Illuminated Medieval Manuscripts; STCN / STCV; and Bibliopolis. But I would like to start with a general question: why are we doing these projects? Or better: for whom are we doing these projects?

A few years ago the IFLA Standing Committee for Rare Books and

Manuscripts was discussing digitization projects. Several participants spoke enthusiastically about their own projects: some were digitizing beautiful old atlases, others were digitizing interesting archival materials or illuminated manuscripts, etc. But then somebody asked: 'And what are your digitization criteria? Why do you digitize this and not that?' Then there was an uneasy silence. Finally, one of us was brave enough to say: 'I digitize what I get paid for'. And with sighs of relief, everyone could join in: 'We digitize what we get paid for'. So we are digitizing for our sponsors, be it the Government or other public organizations and institutions, or private sponsors, companies, or even individuals. And the same applies to other cultural heritage projects. We do the projects we get paid for. It is very true, but maybe not the whole truth.

So for whom are we doing these projects? For our users. But we have a variety of users:

- Scholars, whom we like to provide with the materials they need for their research;
- Higher education students and teachers, whom we want to provide with everything they need for teaching and studying;
- The general public with cultural or historic interests. Of course, a National Library wants to serve everybody, and wants to create and enhance cultural and historic awareness and interest; and, finally,
- Secondary schools, a rather new target group for us, but an important one because these pupils are tomorrow's students and scholars.

So we are doing these projects for several types of users. But we also do them for ourselves. Don't we all want to satisfy our own intellectual curiosity? Don't we want to enjoy and share the beauty of our culture? And we also want to enlarge our technical skills, and we want to build up experience in the execution of projects and programmes. And, finally, we are doing these projects for future generations. We have to preserve and present our heritage for those who come after us, for our children and grandchildren, and for future generations of scholars and librarians.

Of course, all these factors influence the selection of what is being restored, preserved, microfilmed or digitized, and the methods of retrieval and presentation. An academic scholar has different interests, needs different search facilities, different information and different data from a 16-year-old schoolboy. And different types of projects require different approaches as well. In some projects it is necessary, or at least highly preferable, to include everything available. A national bibliography, for instance, should

be as comprehensive as possible. In other projects, however, a rather random selection of objects will be sufficient. There is no general policy covering all projects. Sometimes that's a pity, but it creates opportunities as well.

Metamorfoze is a national programme for the preservation of library materials. It was launched in 1997. This programme is an initiative of the Netherlands Ministry of Education, Culture and Science. (Of course, Dutch libraries first had to ask the Ministry to take this initiative.) Libraries in the Netherlands are individually responsible for the preservation of their collections, but a considerable part of the costs is now subsidized by the Ministry through this Metamorfoze programme.

Metamorfoze focuses on the preservation of manuscripts, books, newspapers and periodicals of Dutch origin, for the period 1840 to 1950. As you all know, paper documents, especially from this period, suffer from a form of internal decay which increases over the years. The paper becomes acidified, yellow, embrittled, and finally disintegrates.

If we were to preserve one copy of every Dutch document dating from 1840 to 1950, this would amount to about 400,000 books, 30,000 volumes of periodicals, 1,500 metres of newspapers, and two million manuscripts and letters, spread over all the libraries in the Netherlands. Preservation of this material will take at least 20 years. In its first four-year phase (1997–2000), Metamorfoze started with the preservation of literary collections, books of the period 1870 to 1900, and newspapers. In the second phase the programme was expanded to include cultural-historical collections, internationally valuable collections and periodicals.

A special project was set up for each type of material, including books, periodicals, newspapers and literary and cultural historical collections. So, the preservation project for Dutch *Book* Production deals with all books with Dutch imprints, dating from the period 1840 to 1950. Although there are often several copies of individual titles to be found in libraries throughout the Netherlands, generally only one copy of every edition will be preserved. Within the *Newspaper* Preservation Project national dailies from selected periods have been preserved. For every single newspaper title an attempt was made to put together as complete a set as possible from various library collections, before starting the preservation process. In the first stage of the Metamorfoze programme, 45 newspaper titles comprising a total of three million pages have been microfilmed. Part of these will also be digitized. In the *Periodicals* Preservation Project, 35 national illustrated period-

icals will be preserved. Again, for every title an effort is made to compile as complete a set as possible, just as with newspapers, before starting preservation.

The second phase of Metamorfoze will end in 2004. We expect that by then the results will be that 76% of the literary collections, 19% of the collections of cultural importance, 43% of the collections of international importance, 10% of all the books, 6% of the newspapers, and 1% of the magazines will have been preserved. A third phase is being planned.

Registration, microfilming, necessary repairs, reliable storage and, on a limited scale, deacidification and digitization: these are the focal points of the Metamorfoze programme. Every document to be preserved is registered in our national automated cataloguing system. The original document is then transferred on to microfilm. After filming, the original is stored in acid-free sleeves or boxes, under optimum conditions. Some of the documents will be deacidified or digitized. From then on, the user will generally no longer be able to consult the book or manuscript but will be referred to the microfilm.

Research and publicity are important aspects of Metamorfoze. The programme carries out research into the rate of paper decay, digitization of microfilm and the effects of mass deacidification. The results of this research is published in *Metamorfoze Reports*. There is also a *Metamorfoze Newsletter*, which appears three times a year. As with all other Metamorfoze publications, this newsletter can be consulted on the Metamorfoze website (www.metamorfoze.nl).

## THE MEMORY OF THE NETHERLANDS

In this programme over 45 heritage institutions are co-operating to build a website that gives the public free access to the digitized cultural heritage and past of the Netherlands. The basic goal is to digitize as much analogous material as possible. Every institution contributes digitized images from one of its collections.

Indeed, 45 organizations – museums, archives, libraries, and scientific, cultural and historical institutions – are co-operating, and at least in my country, it is not easy to make that happen. It only works by every participant keeping firmly to the agreed project plan, to standards, planning and budget. The programme started in late 2000, and its first phase will be completed in 2004.

*The Memory of the Netherlands* is a programme about Dutch culture and history. But we are not only interested in high culture, as can be seen in the

Mauritshuis in the Hague, or the Rijksmuseum in Amsterdam, for example, but also in the culture of everyday life, postcards, military objects, street songs, fashion, atlases, portraits, political drawings, archaeological objects, world exhibitions, the Labour movement, posters from the Second World War, the Women's Liberation Movement, and so on.

The model for the programme was, of course, the *American Memory* project, created by the Library of Congress in Washington. *American Memory* contains a lot of different collections, which are integrated and searchable. Our scope is not as big as the *American Memory* project, which at the moment contains over 7 million images. At the beginning of 2004, our efforts will create a repository of almost 800,000 digital still images, 250 hours of video and 100 hours of audio.

I'll say a few words about the selection and procedures. In principle, the institutions include every item in a selected collection. Only objects that look basically the same will be skipped, because we think the general public is not interested in, let's say, a hundred nearly identical hats, where only a specialist could see and appreciate the differences. This non-selective approach makes scanning more economical and work processes more efficient.

Another principle: *The Memory of the Netherlands* programme doesn't intend to *create* metadata, unless it is unavoidable, and the programme doesn't add much context. In order to avoid its projects going on for too long, and too much money being spent on elements other than scanning, only the metadata that is already available is being used. But, as elsewhere, Dutch cultural institutions often have very interesting collections with no descriptions of any kind. So sometimes we have to deal with creating metadata, even if it was not in the initial project plan, for an object on the Web without a description cannot be retrieved. However, the time available for making a description is limited: only ten minutes is permitted. This means that the programme doesn't pay for more than that. And for the purposes of *The Memory of the Netherlands*, more time shouldn't be necessary. We don't need a lot of technical metadata for collection management purposes: we only need some basic descriptive or bibliographic metadata to give access to the public. This metadata consists only of information about the 'who, when, where and what' of the object.

So we strongly limit the quantity of metadata and – for similar reasons – we don't give context. Nevertheless: context is important for most people. It is hard to understand history, art or culture, if no one helps you along, by explaining, by telling stories. At this moment, you can search or browse

through the tens of thousands of images, but no one tells you the relationship between objects, or the relationship to the world outside the individual images. You have a wonderful opportunity to stroll freely through the objects, as if you were exploring on your own in the repositories of archives and museums. And you can select objects, and do whatever you like with them, as long as you don't make money out of them. But a lot of context still has to be added. We will develop and implement some of that next year.

However, a special kind of context has already been developed, and these are the educational applications of *The Memory of the Netherlands*. Pupils in secondary education are a new target group for us as a National Library. So we don't develop these educational packages on our own, but in close co-operation with teachers. Digital lessons should be attractive to the young, but they have to be approved by teachers as well, otherwise they will never be used. The contents must be directly related to the school curriculum, school practice and examination requirements. And teachers need not have extensive technical knowledge in order to work with digital lessons. But, above all, these applications must improve learning, and make lessons nicer and teaching easier, and improve awareness of history and cultural heritage. Website: www.geheugenvannederland.nl

So, the primary process of *The Memory of the Netherlands* programme is basically scanning in an efficient and cost-effective way, and giving access to all these objects in a simple way. People can use this repository for their own purposes; they can browse through it freely; and they can make their own choices. And whatever they find, they may store in their own, personal memory folder. *The Memory of the Netherlands* is a digitization programme that focuses on the general public and on secondary education, and offers little metadata and – for that reason – few searching facilities. Another digitization programme, which I will introduce shortly, is quite the opposite.

## ILLUMINATED MEDIEVAL MANUSCRIPTS

The Koninklijke Bibliotheek owns the largest collection of illuminated manuscripts in the Netherlands. Of these approximately 450 illuminated medieval manuscripts, around 300 contain figurative images, whereas the remaining manuscripts are illuminated with painted decorations and/or pen work. The total number of images amounts to approximately 8,000. They contain painted miniatures, drawings, historiated initials or marginal scenes, and cover every possible topic.

The Illuminated Medieval Manuscripts website contains all the 8,000

illuminations in the National Library's medieval manuscripts. Recently 2,000 manuscript illuminations from the Meermanno-Westreenianum Museum, also in The Hague, have been added. All the images are enriched with scholarly knowledge relating to the codexes, the illuminators, the miniatures, the representations and decorations, date and place of production, etc. So, unlike *The Memory of the Netherlands*, there is extensive high quality context and content on this website.

There are three ways of searching the images:

1. Fifteen themes provide a general overview of the riches of the materials such as: 'Fabulous Animals' or 'Christian Holidays' or 'The Book of Genesis'.
2. Users may 'browse by subject' by using the Iconclass classification system, which allows direct searching of images via keywords or via selected subjects such as: 'Classical Mythology', leading to 'Roman legends', leading to, for instance, 'The Story of Aeneas'.
3. An 'Expert Search' facility provides easy access for specialists using the indexes to place names, names of artists, dates, iconographic themes, etc. For instance, a user can search for illustrations of the Holy Virgin in manuscripts from the town of Delft that were produced between 1400 and 1500.

Search options include:

Author, Title, iconclass codes, Place of origin, Text, Language, Image type, Script, Miniaturist, Scribe, Binder, Illumination style (geographic), Former owner or institution, Annotation, Date, Date After / Date Before; and, of course, one could use combinations of these search options.

I'm not going to elaborate any further on this project. Everyone can visit this beautiful website (www.kb.nl/manuscripts). At this point I just wanted to show the contrast with other cultural heritage programmes.

### STCN / STCV

The STCN, *Short-Title Catalogue Netherlands*, is the retrospective Dutch national bibliography, covering the period up to and including the year 1800. The STCN will include everything printed or published within the borders of what is now the Kingdom of the Netherlands, plus everything printed in the Dutch language in the same period elsewhere.

All books are described according to the principles of modern analytical bibliography, which means that descriptions are made on the basis of indi-

vidual examination, with the book in hand. The immediate consequence of 'working with the book in hand' is that the work must be carried out in many different libraries: there is no library in the Netherlands with anything approaching a nearly complete collection of Dutch imprints. Unlike other countries, the Netherlands has never had legal deposit, so there has never been one library that has acquired all books published in our country. The Koninklijke Bibliotheek, and the University Libraries in Amsterdam and Leiden, to name the three largest, have rich collections, but they are far from complete, and each has its own emphasis.

At this moment the database contains 124,000 records for 230,000 items.

| 1450–1540 | 3,000 | (incunables and post-incunables, derived from major bibliographies) |
| 1541–1600 | 4,000 | (covering 75% of the estimated total number of surviving editions) |
| 1601–1700 | 57,000 | (covering 75% of the estimated total number of surviving editions) |
| 1701–1800 | 60,000 | (covering 40% of the estimated total number of surviving editions) |

Work on the collections of the Koninklijke Bibliotheek has been completed. That on the collections of the University Libraries of Amsterdam, Leyden and Utrecht, the British Library, and several other smaller collections, is still in progress.

Why are we producing the STCN? Because it is felt that one of the tasks of a national library is to make a national bibliography, that is: to present a complete list of everything that has ever been printed within its present borders.

But there is a second reason. The STCN is also a research tool. The database (www.kb.nl/stcn) can be searched in many ways. One could retrieve all French poetry printed in Amsterdam in the 18th century; or all books with musical scores; or all illustrated books on geography. Search options include: author, title word, printer, place and year of publication, subject heading, size, language, type face, illustrations, printers' devices, musical notations, booklists, engraved title-pages, price quotations, subscription data, and so on.

For many kinds of historical research – book history, but also political history, art history, literary history, church history, the history of the sciences as well – the STCN offers a quick route to the sources. And it is also a very good instrument for statistical research. How many books were

published in the vernacular compared to books in Latin? What is the percentage of periodicals? Is there an increase or a decline in the number of illustrated books? And so on.

In the 17th and 18th centuries the Dutch Republic has often been called 'The Bookshop of the World'. Many books produced in the Netherlands found their way across Europe. For this reason the STCN is of great international importance. Books from the Netherlands are studied everywhere.

Being a national bibliography, the STCN aims at comprehensiveness. We do exclude some categories, such as broadsides and newspapers, but only for the time being, and for practical reasons. We are working on a new project plan for the localisation, description and digitization of Dutch newspapers up to 1869, and would be very happy to hear about any library, anywhere in Europe, that keeps old Dutch newspapers.

From the very start of the STCN we have excluded one very important category: the books in the Dutch language printed in present-day Belgium. Of course they belong in the STCN. But we could not afford to produce half the Belgian national bibliography. When the STCN started, in 1982, it proved impossible to set up a similar project in Flanders. But things have changed. The STCV, *the Short-Title Catalogue Vlaanderen* (Flanders), was started almost four years ago. It is an online bibliography of books printed in 17th- and 18th-century Flanders. The STCV is freely accessible to the general public via the Web and can be consulted at: www.stcv.be.

The initial phase of the project focuses primarily on books in the Dutch language printed between 1601 and 1700 within the present-day boundaries of Flanders (including Brussels). The long-term objective of the STCV is to produce a bibliography of all works printed in Flanders in the 17th and 18th centuries, and so non-Dutch works (in Latin, Spanish, French etc.) will be added to the database in a later phase. As you know, Antwerp, Brussels, Ghent, Louvain, Bruges, but also Mechlin, Ypres, Courtrai, Hasselt and Oudenaarde, were leading printing centres, and it is very important that the book production of these cities can now be retrieved and studied in a wider context.

The selection of materials, the methodology applied and the presentation of the records is, to a large extent, inspired by experience gained on the STCN. Like the STCN, the Flemish retrospective bibliography is being created book in hand on the basis of surviving books. The STCN descriptive model has been adopted virtually unchanged, although – unlike the STCN – the STCV was conceived from the start as an online database.

There is one major exception, however, to the rule that STCV records are

completely comparable with STCN records. Having the advantage of a later start, the STCV project was able to add digitized images of title-pages and frontispieces to the descriptions. So the STCV user not only finds high-quality bibliographical descriptions, but also illustrations showing the complete title-page (and not only the short-title) in full colour, including layout, printer's devices, decorations, and so on. If all goes well, one day the STCN records will be linked to such images as well.

Up to the present, no funding has been found to continue the STCV project after the first phase, which ends in December 2003. However, the 4,000 records which have been created so far, will remain available, and there are already agreements about the exchange of records between STCV and STCN.

## BIBLIOPOLIS

During the past decades, several countries have initiated the preparation of 'national histories of the book'. This began in France, where *L'histoire de l'édition française*, a four-volume work on the history of the book in France, was published between 1983 and 1986. It has inspired book historians across the globe, and it was predictable that Dutch book historians would try to start a 'national book history' project, too. Around 1990 a project was proposed that was intended to result in a multi-volume handbook. Funding was sought on several occasions, but unfortunately – or, maybe, fortunately – these initiatives failed, and the project was abandoned.

After it had become clear that a *printed* history of the book in The Netherlands could not be produced, the Koninklijke Bibliotheek presented a new approach. The objective was no longer to produce a multi-volume printed work, but to create an online tool for research on the history of the book. This tool would be designed as an interactive academic information system, based on World Wide Web technology. The Netherlands Organisation for Scientific Research supported the idea and provided financial support. The project started in March 1998, and ran until the presentation of the final results in November last year, during a conference that coincided with CERL's Annual General Meeting.

The result is a scholarly, interactive information system, which offers researchers insight into the state of affairs in the history of the book and book science, and provides integrated access to carefully selected literature, images, documentation and bibliographical and biographical databases.

One of the main principles behind Bibliopolis is the support for 'associative searching': if, for instance, a user finds a record about a bookseller in the

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biographical database, he may wish to know what studies are available about this person, or if there is an image of him, or if he was involved in any book auctions, or if he also *published* books. This is where the true innovation of Bibliopolis lies: it triggers the user to ask new questions, to get new associations of ideas, to look for new information in databases which are immediately accessible, or to search all the Bibliopolis components at the same time.

The Bibliopolis website offers integrated access to the following information sources:

1. *A handbook on the history of the printed book in the Netherlands*: 158 paragraphs written by 42 leading Dutch book historians. This is the component of Bibliopolis that most closely resembles 'national histories of the book' projects. In this handbook, the era of the printed book in the Netherlands (1460 to the present) is divided into five periods. Each period is organized on the basis of a fixed scheme containing 32 paragraphs. These paragraphs are introductory and short (500–1000 words), and able to be read on a computer screen. The paragraphs can be read in a fixed order, just like a book, but one can also select special topics across the five periods, such as the development of bookbinding, or censorship.

2. *An image database*: approximately 1,500 illustrations on the history of the printed book in the Netherlands, for example, a selection of highlights of the Dutch art of printing, portraits of printers and publishers, typefaces, printer's devices, watermarks, printing offices, paper mills, and so on.

3. *Reference material*: extensive search options for biographical data, bibliographical databases, information on book auctions, a guide to special collections in Dutch libraries, and a guide to book-historical websites;

4. *Full text secondary literature*: over 200 digitized widely-used book-historical articles and other texts;

5. *Retrospective bibliography*: cross-references to online catalogues in the Netherlands and abroad (including the STCN), which record and make available the Dutch printed book.

6. *Glossary*: an educational tool to explain the meaning of terms related to the study of books.

One final example: a search on Blaeu, the famous printer, publisher and cartographer, leads to the paragraphs in the Handbook where he is mentioned, to several portraits, to biographical records of his activities, to book auctions in which he was involved, to literature, including digitized full-text articles, to an explanation of a part of the printing press which he introduced, and to the option to search several bibliographical databases by his name.

Since the launch of Bibliopolis, the team has been working on its improvement and on solving some teething problems. One important task was the publication of the full English version of Bibliopolis, which became available in May 2003. As an operational service, Bibliopolis needs maintenance and updating. The bibliographical systems will be updated; images will be added; and the biographical system will be expanded. And there could be more: Bibliopolis is intended to become the platform for book historical questions, the registration of book historical research, the central point of information for exhibitions and conferences, in short *the* website for the historians of the printed book in the Netherlands (www.kb.nl/bibliopolis).

The title of the conference at which Bibliopolis was launched last year was: 'The Future History of the Book'. And several outstanding book historians expressed their views on that 'Future History'. But on neither 'the Future', or on 'History' can the last word ever be spoken. By initiating and executing cultural heritage projects though, we all contribute to a better view of 'History' and a better life in 'the Future'.

# Digital Tools for Improving Access to the Printed Cultural Heritage: the Italian Situation

## LUISA BUSON

The changing context of the Information Age in which we live has been recognized by the European Union, which has acknowledged by means of policies and action lines that, 'to promote a widespread diffusion of culture in the European Society of Information and Knowledge, the diffusion of culture is a fundamental instrument for raising the quality of life and for affirming the added value of a shared European culture'. In the contemporary social macro-context, where 'Information' is 'Knowledge' and 'Power', and where access to information is faster and easier than with previous technologies, librarians as information professionals continue, as always, to support users in their consultation of resources with the aid of new retrieval tools.

Information technology is changing the format and the medium in which information – as raw data – is transmitted:

- Web applications are important and innovative communication tools, which can be integrated with traditional mechanisms: they are a way of increasing public sensitivity to the conservation of cultural and scientific heritage.
- Portals and networks can promote certain aspects of culture and science, and can enrich and consolidate the cultural heritage of a given community.

### THE ITALIAN LIBRARY SETTING

Italy adheres to European cultural policy by participating in a number of EU projects, including the following:

1. MINERVA (Ministerial NETwoRk for Valorising Activities in digitisation). Using a working group structure, this project is examining a number of the most important areas in the field of digitisation:

- a benchmarking framework
- identification of good practice and competence centres
- interoperability and service provision
- inventories, discovery of digitised content, multilingualism issues
- identification of user needs, content and a quality framework for common access points

So far three technical documents have been produced:

- *Handbook for quality in public cultural applications* (draft version 1.0) June 2003.
- *Best practice handbook* (draft version 1.2) June 2003, with twelve practical guidelines on issues such as digitisation project planning, selection, handling of originals, metadata, etc. The definitive version of this document will be a very useful tool for all libraries that intend to undertake digitisation projects.
- *Digitisation guidelines: a selected list* (May 2003) is a selective, work-in-progress list of digitisation guidelines for the general interest of professionals, but it is also another useful benchmarking tool for all librarians.

Two important related events are also scheduled for this period. An International Conference will take place in Parma next week [November 2003] on 'Quality for cultural Web sites': http://www.minervaeurope.org/events/parma/parmaconference.htm; and, at the end of October 2003, an international workshop took place in Rome on 'Digitisation: what to do and how to do it': http://www.minervaeurope.org/events/bibliocom03/bibliocom-programme.htm.

2. Rinascimento virtuale is another EU project that uses digital imaging technology to identify palimpsets in medieval manuscripts.
   The Italian member libraries in the project are:

- Biblioteca medicea Laurenziana di Firenze
- Biblioteca nazionale di Napoli
- Biblioteca monumento nazionale di Grottaferrata
- Biblioteca nazionale Universitaria di Torino
- Biblioteca nazionale Marciana di Venezia

Now passing from the international to the national context, we can say that there is no large, national 'Memory' project in Italy, such as that of the Library of Congress or Gallica. We are just beginning a national inventory of digital collections on the model of the French 'Programmes de numérisa-

tion du patrimonie culturel' (http://www.iccu.sbn.it/censbidigit.html).

Online bibliographic records for the early book collections of the majority of Italian public and state libraries are available through the Opac interface of two national online catalogues:

Indice antico (http://opac.sbn.it/cgi-bin/IccuForm.pl?form=WebFrame), with bibliographic records from SBN libraries (partly searchable in CERL's HPB database); and EDIT 16, an ICCU project for a National Census of 16th-Century Italian Editions, which is identifying and describing editions printed in Italy in any language, and printed abroad in Italian, in the period between 1501 and 1600. Altogether, 1,200 state, local and private libraries are participating in the project, which also includes publishers and printers' devices. EDIT 16 currently contains about 50,000 printers and bibliographic records, and identification of a further 30,000 records is envisaged.

A more specific national project on digitisation was launched in Padua in 2001 with the title:

Biblioteca digitale italiana (Italian Digital Library Project). This is the first project co-ordinated at Ministry level and, from the end of 2001, it has been actively promoting three different action lines:

1. Digitisation of historical card catalogues

In this first phase of the programme, 29 library projects have been funded in order to promote widespread dissemination of bibliographic records by means of tools (such as online catalogues) obtained quickly and at a low cost. A special working group has responsibility for co-ordinating the projects by defining the technical requirements and standards for the scanning and indexing criteria.

Some of the libraries involved in this project are:

- *Biblioteca Angelica di Roma* (34 folio manuscript volumes for the 18th century)
- *Biblioteca Casanatense di Roma* (Audifreddi catalogue, Manuscripts inventory, Index de Re Musica)
- *Biblioteca Estense Universitaria di Modena* (24 manuscript volumes for the 15th to the 19th centuries)
- *Biblioteca Marciana di Venezia*
- *Biblioteca di Marucelliana di Firenze*

2. Digitisation of musical documents both in manuscript and printed form

The aim of this action line is to define and test a new integrated service for music information, which will provide multimedia access on the network to

scores, music manuscripts and recorded sound through a common user interface. The project is the first phase of the digitisation of the Discoteca di Stato recorded sound collection (record and tapes) for preservation and access services.

The 'Archivio Digitale della Musica Veneta' project has been recognized as a 'model of best practice' to be disseminated to other libraries. The project's new title will be 'Archivio Digitale della musica', with 57,000 pages of digitised music manuscripts. The libraries already involved are: Biblioteca Marciana, Venice, Universitaria di Torino, Biblioteca nazionale centrale di Roma, Estense di Modena, Discoteca di Stato and Palatina di Parma (DI.MU.SE project).

The first phase has resulted in the digitisation of 27 volumes of Vivaldi's manuscripts, and 65 volumes of the manuscripts of Alessandro and Benedetto Marcello.

3. Digitisation of periodical publications

In this part of the project, a working group is engaged on a study of standards and software, and the implementation of an online database containing information about projects that have already been completed, or are ongoing.

Over the last five years many libraries have undertaken individual projects which are of definite use, but they are often difficult to access because of a lack of alphabetical or subject indexes, and because users require constant effort to become familiar with different search interfaces. Moreover, these libraries have to find new methods and tools to advertise their new products in order to maximize the benefits of their work and to disseminate information about it.

Different kind of materials have been treated and digitised: manuscripts, books, book-bindings, bans (*bandi*), proclamations (*grida*), heraldic bearings (*stemmi*), maps, card catalogues, and so on.

A very interesting manuscripts project is the online edition of the manuscript Ms Ga. 72, held in the Archives of the Biblioteca nazionale centrale of Florence. This manuscript, which is of major importance for the study of the transition from Aristotelian to classical physics, has not hitherto been translated in full or even adequately published. The online edition of the manuscript is a pilot project carried out jointly by the Biblioteca Nazionale Centrale di Firenze, the Institute and Museum for the History of Science in Florence, and the Max Planck Institute for the History of Science in Berlin. The scholarly work on the codex, which is included as part of the online edition (transcription, translation, internal cross-references, references to

the literature, etc) was carried out by a joint working group from the Museo di storia della Scienza and the Max Planck Institute for the History of Science:

http://www.mpiwg-berlin.mpg.de/Galileo_Prototype/INDEX.HTM.

Some libraries, such as those listed below, have chosen to make their retroconverted historical catalogues available in CD-ROM format:

- Biblioteca Poletti of Modena,
- Biblioteca Forteguerriana of Pistoia,
- Biblioteca comunale Renato Fucini of Empoli

The Archiginnasio of Bologna Library has developed a Digital Library comprising different objects owned by the library. At http://www2.comune.bologna.it/bologna/archigin/ we can find the Frati-Sorbelli historical catalogue with the original cards digitised, and Luigi Frati's *Bibliografia Bolognese*, which is a precious tool for the study of the history of Bologna. On the other hand, we can also find also historical primary sources such as the *Gazzette Bolognesi*, the bans of the Merlani collection (75,000 items published in Bologna between 1560 and 1869), and the 6,000 heraldic bearings (*stemmi*) of people who attended Europe's most ancient university.

Through its project Di.Re., the National Braidense Library, Milan (at http://www.braidense.it/digitale.html) has so far produced CD-ROMs and digital books that are only partly available on the Web. They are imperfect monographs published in Milan, Manzoni autographs, historical printed sources and book-bindings.

'Bookbinding' is the name of a special project that started in 1994 when a scholar undertook a survey of the historical decorative book-bindings housed in the Brera Library in Milan. A proportion of the 3,000 bindings reported were converted into digital form and recorded on CD-ROM. A significant number of 15th- and 16th-century bindings were chosen for exhibition, and it is now possible to view the web version of the exhibition on the library site.

The Marciana Library's ADMV project has already been mentioned, and the other important GeoWeb project was presented at CERL's Annual General Meeting in Padua in 2000. Both can be viewed at: http://marciana.venezia.sbn.it/catalinea.htm.

The aim of the Digital Library Project in Milan University – and, in particular, the Istituto di storia del diritto italiano – is to make available to remote users a great number of historical documents of great scientific interest. For example, 1,600 18th-century 'Gridari' (Proclamations) of the

Duchy of Milan can be found at: http://www.historia.unimi.it/istitutonew/dl.htm. Other digitised monographs are available on CD-ROM.

## CONCLUSIONS

The work carried out so far by Italian libraries has mainly been concentrated on the creation of high quality online catalogues, deriving both from book-in-hand cataloguing, and from the retroconversion of historical card catalogues: the principal aim is to increase awareness of the libraries' holdings.

Secondly, many digital projects have already started but these have mainly arisen spontaneously, and without national or shared guidelines.

It is only in the last two years that it has become evident and generally accepted that it is necessary to follow a common model in order to avoid duplication, and projects that are ineffective because of high costs and problems of access.

It is now clear that guidelines, best practice (from international bench-marking, in particular), and standards have to be applied in the field of metadata, preservation strategies for digital objects, selection criteria, and Opac interfaces.

# Digitising the heritage – strategies for success

## KAI EKHOLM

*This chapter has been adapted by David Shaw from a PowerPoint presentation given by Dr Ekholm at the St Petersburg Seminar. The examples cited were accompanied by extensive photographic images.*

### MISSION STATEMENT

Digitising is the most demanding, important and growing area in library work.

- Digitising provides new in-house materials for education and research
- Digitising creates new collections, rather than duplicating old ones
- Digitising is not an option today, it is a necessity

### VISION

Our cultural heritage will slowly evolve into a digital form. This will create new ways for users to access materials and will attract new audiences for our resources.

### FINANCE

There is not only a question of cost, but also one of continuing governmental commitment and also of getting broader public acceptance for digitisation. We need to formulate 'intelligent strategies' for preserving materials (the Slavica project is an example).

### OUR USERS AND CUSTOMERS

Who are our users?

- The local library network
- Research and education in general
  - Researchers
  - Students
  - Schools

- Memory organisations
- The book business and content providers
- Partners
- Cultural audiences, life-long learning

Operating strategies for digitisation should be considered under four headings:

- Cultural strategy
- Collection strategy
- Monetary strategy
- Service strategy

1. Cultural strategy

- a widely-accepted service concept
- need for long-term planning for digitising
- maximizing reusability for other purposes (educational etc.)

2. Collection strategy

- collection policy based on co-operation (with libraries, other memory organisations)
- policy for the preservation of the national heritage
- national co-ordination of the long-term preservation of electronic material
- creating a successful counterbalance for commercially available materials

3. Monetary strategy
Funding from the national budget – Is this the only strategy?

- France: universal 100%, local 50%-50%
- USA: budget + business money
- co-operative budgeting (companies, countries, TEL)
- hybrid funding: users will pay the rest
- need for pricing models (nano-pricing, etc.)

4. Service strategy

- needs a strong technical infrastructure
  - operating system, portal, Document Object Model (DOM)

*Digitising the heritage – strategies for success*

- inter-operability
- easy to use interfaces

Training and skills strategies

- Digitising doesn't just mean scanning
- The whole workflow involves 6–7 professionals
- Employment plan: how to keep employees motivated and in-house?
- Logistics: how to create more effective workflows; how to reduce costs

A state-of-the-art project

Helsinki University Library Microfilming and Conservation Centre, established in 1990 in Mikkeli, Finland


## THE DIGITAL VALUE CHAIN IN HELSINKI UNIVERSITY LIBRARY

*Customer services*
Acquisition
Content production
Delivery
Archiving
FinELib
Digitising
Portal DOMS
Web, e-deposit

*DRM (Digital Rights Management)*
Commercial picture database
Digitising on demand (DOD)
Free materials (pictures, records, copies)
Copyright materials

*Work in-house*

- Serving *national* collections for the *local* audience
- Creating *national* collections for a *global* audience (noting the problems of language and cultural barriers)
- Creating *global* collections for *global* use
- Should access be provided free of charge or by reasonable pricing?
- Partnerships – TEL (The European Library) starts 2004

Plate 1. First Finnish title printed in Finland. Collinus, Johannes Matthiae. *Ylimmäisen keisarin Jesuxen Christuxen mandati eli käsky : Weisattawaxi tehty, sillä nuotilla: Autuas autta köyhä waiwaist etc. J.M.C.* Turku : Peder Wald, 1643
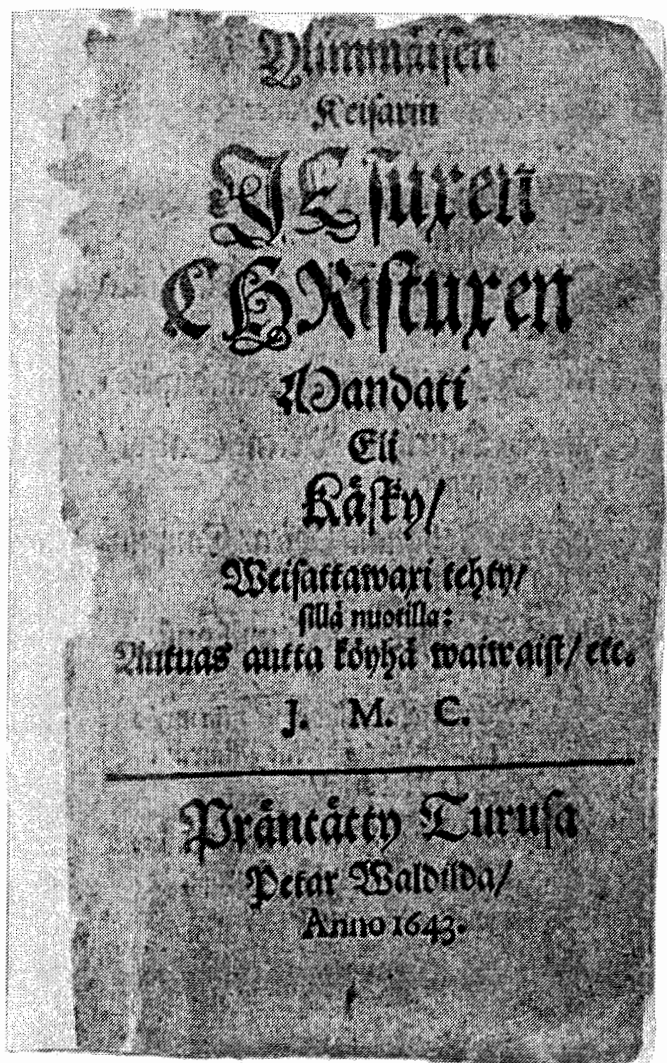
### DIGITISATION OF THE FINNISH CULTURAL HERITAGE
### IN THE NATIONAL LIBRARY

1. Medieval manuscript fragments
   11,000 units:

- All Finnish medieval manuscript fragments and manuscript literature from 16th century.
  - Oldest material from 10th century, of foreign origin
  - 13th-century Nordic
  - 14th-century mostly Finnish
- This material represents endangered cultural heritage
  - books
  - texts
  - songs
- These are national Finnish research subjects and represent an important group of materials for cataloguing and digitisation.
- Need for co-operation with other institutions and countries.

2. Finland under Swedish rule from Agricola to Porthan

- Our oldest literature, representing the birth of Finnish identity.
- A period marked by the expansion of education and thinking, improvements in living conditions
- Examples are travel journals and the map of Finland.
- This category represents frequently used material that is partly missing. The project is being developed in co-operation with Sweden.

3. Under Swedish rule
*Books*

- 18,000 titles from this period in Helsinki University Library
- 60% of these items are available in better condition in Sweden.
- This material has been catalogued and keyworded as part of a co-operative project.

*Songs Sheet*

- 7,350 units
- This class of literature, characterised by worn typefaces and cheap paper, survives from the 17th century until the 1930s. It was sold in leaflet form by itinerant salesmen.
- The subject matter can be classed as religious (1,750 items), non-

religious (4,850 items), and stories (750 items)

- The project is a collaboration between HYK, JYK, and SKS

### 4. Finnish society in the 19th century

- The materials are represented by newspapers, magazines, catalogues, travel journals, maps
- They show images of livelihood: the countryside, industrialisation, culture (theatre, music, literature)

Newspapers tell about everyday life (website at http://digi.lib.helsinki.fi)
*First phase, 1771–1860*

- 200,000 pages digitised and viewable on the internet.
- 1 million yearly visits since October 2001
- offers free text search and an index of articles

*Second phase, 1861–1890*

- 800,000 pages
- Time of strong social development, marked by the rise of local regional newspapers.
- 2004: 400,000 digitised newspapers
- 2005: 600,000 digitised newspapers
- 2006–7: 1,000,000 digitised newspapers

Livelihood

- agriculture, commerce and industry, transportation
- Living conditions
  - social politics: animal protection, fire fighting, women's rights, prisons...
  - religion
  - pedagogy: ABCs, the art of living, games, sports ...
- Geography, travel and maps
  - travel journals, Map image of Finland
- Education
  - Schools, Higher education, luonnontieteet, medicine, history, linguistics, philosophy, dissertations.
- State and communal administration
  - Statutes collection, police, statistics, customs, law, justice, political parties, monetary institutions, defence
- Literature, arts

Plate 2. Children's book containing ABC, Catechism and teachings from the Bible. Gezelius, Johannes vanh. *Yxi paras lasten tawara*. Turusa: prändätty Petar Hannuxen pojalta, 1666.
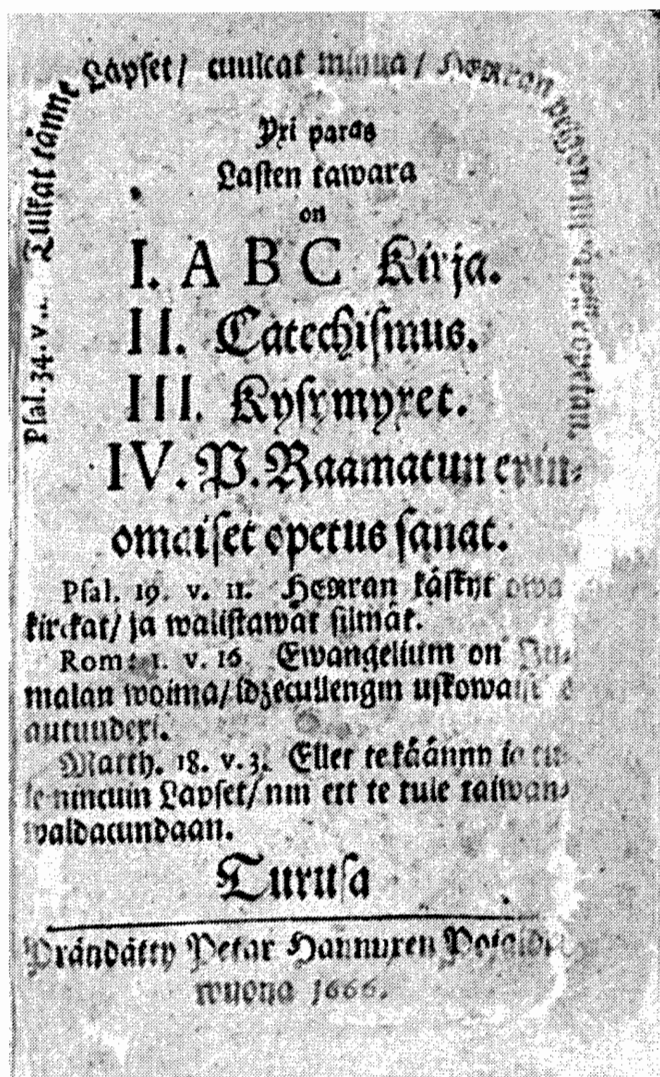
- stages, music, photography

Ephemera

- There is a large demand for this ephemeral material (about 450,000 items in the catalogues)
- It is a major collection of national literature that is mostly unavailable for use.
- The material covers a number of research fields, representing about 3 million pages in total

Posters and pictures

- An interesting collection but a difficult one to manage due to its size.
- Posters were made for short-term use and are in part fragile.
- consist mainly of theatre and circus programmes.
  - Weckström Theatre collection
  - Alexanter's Theatre programmes
- 8,000 units (in HYK)

Musical material

- 45,000 units

Manuscripts
  Statesmen
  - J.W. Snellman (4 sm)
  Scientists
  - Matthias Alexander Castren
  - Anders Johan Sjögren (4 sm)
  - Zacharias Topelius (8.6 sm)
  - Georg August Wallin (1 sm)
  Artists
  - Aino Ackté-Jalander (4.5 sm)
  - Fanny Churberg (0.7 sm)
  - Magnus Enckell
  - Fredrik Pacius (2.5 sm)
  - Ferdinand ja Magnus von Wright (0.6 sm)
  - Toivo Kuula
  Oriental
  - Arabic, Persian and Turkish (2.8 sm)
  - G.J. Ramstedt's Mongolian library (2.5 sm)

Treasures of Literature

- Basis for Finnish literature and Classics
  - Books affecting our minds (from folk poetry to literature)
  - Once important, now a 'lost' literature.
  - Children's books are an important part
- Translated literature
  - Finland is an island. Translated literature has been important in the development of Finnish literature.
- about 50,000 titles (in HYK)

Cartographic material
Nordenskiöld map collection

- Manuscript atlases
- editions of Ptolemy ( Ptolemaios)

Works under copyright
Works produced in the 19th century have to be individually checked to determine if copyright still applies and to discover what are the terms for digitisation.

# List of Contributors

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