



## Discovering and studying the ancient handwritten Cultural Heritage

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### **Abstract**

*The Regione Lombardia has organised an important project concerning ancient manuscripts held in local libraries. The aim of the project was to compile an enhanced census of the medieval manuscripts produced before 1500, held in libraries. Some results of this project are shown in this paper, including access to the database and the knowledge of the important collections existing in the region.*

*The idea was to share information not only locally, but also at a national and international level, to ensure knowledge and access to all dispersed cultural collections. An experiment feature of the project is a system of collecting data and managing linked information related to the manuscripts. Added value was given to the project by the inclusion of selected images from the manuscripts described.*

*The project is a very important instrument in literary research for people looking for information on local history, for antiquarian commerce in rare books and for their preservation. Software called Manus-on-line has been adopted, supported by Istituto Centrale of Catalogo Unico -ICCU and developed together with the University of Milan.*

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Since 2005 Regione Lombardia has been improving/working-on a project concerning ancient and medieval manuscripts held in local libraries. Many initiatives were made in this direction including an ambitious one: it has been chosen to start from a census of medieval manuscripts (produced before 1500) which are held in the most important libraries. The census is available at <http://www.manoscrittilombardia.it>.

The results of this census will be illustrated in this paper, through demonstration by Internet access to the regional and the national database, and the structure of the system itself, allowing access to the collections existing in Lombardy. The concept is to share information and documentation not only at a local level, but also at the national and, if possible, the international level. The aim of this

project is to ensure knowledge, preservation and access to all of the dispersed cultural collections in Lombardy - whatever the written language - belonging to libraries, archives and museums, parish churches, monastic funds and private collections all across the region, often coming from libraries which no longer exist or have been scattered.

The feasibility study was conducted which analyzed different solutions proposed by a scientific committee with experts at the national level. At the same time, a mixed technical working group was formed in 2006 to define an action plan<sup>1</sup>. They started from the situation of the libraries to be contacted and experimented with a model considering both reduced project costs, and an acceptable duration. The problems to be solved were both bibliographical and technical. It has been discussed if, and how, to implement and manage a local database as well as looking into whether the ministerial Istituto Centrale per il Catalogo Unico (ICCU) for manuscripts, designed some years ago, could be useful and satisfy our purpose.

The decision to adopt the national software was taken after an informal agreement with ICCU and their willingness to support and fund a new release based on the Internet, interoperable with other systems and supporting downloading and uploading data and images combined with OPACs on the net, and defined and experimented by the Lombardy's working group<sup>2</sup>. Officially, the University of Milan has been charged with updating the original old package named Manus<sup>3</sup>. The structure of the new web-based system is described below. New "concept software" for the database was first produced for the Regione Lombardia which it would have tested and adopted for its project. Regional decisions would also be an example which would help stimulate other regions to start manuscript projects and enrich the national database by first recovering the data collected with the old software, then adding other information when or if possible.

At first, we started collecting basic data and bibliographic information about manuscripts, even if not yet catalogued, starting from the existing sources: old hand-made paper catalogues, printed catalogues, lists and any existing inventories. Descriptions from articles and books have also been scanned. At the same time, we decided to scan images of incipit and colophon or whatever was considered important in recognizing and appreciating the manuscripts directly from the (previously unknown) original document.

### **About the libraries involved in the model.**

The main historic libraries and their specialised sectors in the capital towns of provinces, such as Biblioteca Queriniana in Brescia, Biblioteca Angelo Mai in Bergamo and Biblioteca Teresiana in Mantua, were gradually involved/integrated in the project of the census, but national libraries are

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<sup>1</sup> The regional committee members for the project were: Mirella, Ferrari (Catholic University of Milan), Ettore Cau (University of Pavia), Giorgio Montecchi (University of Milan), Antonio Padoa Schioppa, (Istituto Lombardo Ateneo di Scienze e Lettere) Ornella Foglieni (Regione Lombardia, coordinator), Giliola Barbero (expert), Massimo Menna (Istituto Centrale per il Catalogo Unico), Roberto Di Carlo (Braidense National Library). The regional working group for the census: Giliola Barbero, Rossana Guglielmetti, Lisa Longhi, Martina Pantarotto, Simone Signaroli and some expert staffs in the libraries involved. ( This paper has been written sharing the contents:, but Ornella Foglieni is responsible for pages 1-4 and 11-13, while Giliola Barbero is responsible for pages 4-11).

<sup>2</sup> The technical working group of Lombardy includes: Paolo Chiesa (University of Milan), Giliola Barbero, Gianfranco Prini (University of Milan), Gian Paolo Bagnato (University of Milan), Massimo Menna (ICCU). They were charged to remake the software Manus, together ICCU's team. Focused meetings were held with Regione Lombardia and librarians.

<sup>3</sup> For the stand alone application see <http://www.iccu.sbn.it/genera.jsp?id=81#MANUS>; *Guida al software Manus*, ed. by L. Merolla e L. Negrini, Roma, ICCU, 2001. This software has a long tradition begun with a congress in 1980: *Il manoscritto. Situazione catalografica e proposta di una organizzazione della documentazione e delle informazioni. Atti del Seminario di Roma, 11-12 giugno 1980*, ed. by M. C. Cuturi, Roma, ICCU, 1981; but see also the recent M. Menna, *L'attività dell'ICCU per la conoscenza del patrimonio manoscritto*, in *Conoscere il manoscritto: esperienze, progetti, problemi. Dieci anni del progetto Codex in Toscana. Atti del convegno internazionale. Firenze, 29-30 giugno 2006*, ed. by M. Marchiaro - S. Zamponi, Firenze, Sismel - Edizioni del Galluzzo, 2007, pp. 117-124.

also collaborating including the National Library Braidense in Milan, the Government and Public Library in Cremona, the University Library in Pavia; while ecclesiastical libraries are cooperating in very different ways<sup>4</sup>. Some specialized librarians can work independently in implementing the system. Training courses have been held to support libraries in working with their own staff. Small collections without skilled staff have been included in the survey with University of Milan staff to help collect the data. At present the main difficulty lies in having skilled librarians in both palaeographical and philological subjects and in the ICCU and Manus cataloguing rules: Lombardy Region offices can provide software and cataloguing professional training, but scientific paleographical and textual skills must have been acquired through previous university courses<sup>5</sup>. The fusion of these two professional trends is extremely rare for several reasons, not least, because of the economic implications.

Another important choice was to add digital images to the record description, such as incipit or colophon or meaningful decorations or notes of the documents. It was the first time in our library context that we were able to immediately see the image of these parts of a document and the connections with other contexts they are related to. The documents are described with traditional criteria of Paleography and Codicology<sup>6</sup>. The actual step is to study and organize an authority file of authors, copyists and possessors related to the history and culture of Lombardy. The problem is in comparing and finding a solution that combines the national level of Servizio Bibliotecario Nazionale (SBN) authority files with the regional files, deriving from other local cultural heritage systems, not only documentary, but also of museums and archives<sup>7</sup>.

It is expected that it will take five years before the system can be completely implemented with short information about each manuscript.

At this time the central database is already available at the national level<sup>8</sup> and it is harvestable at the Portal of Consortium of European Research Libraries (CERL)<sup>9</sup>. Our goal is to integrate other regional archive systems and museums, such as databases about historical sources of Lombardy,<sup>10</sup>

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<sup>4</sup> The list of libraries considered by Lombard *Census* can be seen at <http://www.manoscrittilombardia.it>.

<sup>5</sup> The problem of "surviving" of skilled manuscript cataloguers has been discussed by S. Zamponi, *Obiettivi, modelli e limiti della catalogazione: alcuni problemi aperti*, in *Zenit e Nadir II. I manoscritti dell'area del Mediterraneo: la catalogazione come base della ricerca. Atti del Seminario internazionale. Montepulciano, 6-8 Luglio 2007*, ed. by B. Cenni, C. M. F. Lalli, L. Magionami, Montepulciano, Thesan & Turan, 2007, pp. 30-33.

<sup>6</sup> In Italy cataloguing rules have been discussed on several occasions and inside working groups, in collaboration between academic researchers and librarians; there are the most important results of such very detailed discussions: *Guida a una descrizione uniforme dei manoscritti e al loro censimento*, ed. by V. Jemolo e M. Morelli, Roma, ICCU, 1990; *Metodologie informatiche per il censimento e la documentazione dei manoscritti. Atti dell'Incontro internazionale di Roma, 18-20 marzo 1991*, Roma, ICCU, 1993; *Norme per la descrizione uniforme dei manoscritti in alfabeto latino*, a c. del Ministero per i beni e le attività culturali, Ufficio centrale per i beni librari le istituzioni culturali e l'editoria, Istituto centrale per il catalogo unico delle biblioteche italiane e per le informazioni bibliografiche, Commissione indici e cataloghi, Roma, ICCU, 2000; *Norme per i collaboratori dei manoscritti datati d'Italia*, ed. by T. De Robertis, N. Giovè Marchioli, R. Moriello, M. Palma, S. Zamponi, Firenze, Dipartimento di Studi sul Medioevo e il Rinascimento, 2000; 2<sup>nd</sup> ed. Padova, CLEUP, 2007.

<sup>7</sup> Authority files for manuscript descriptions have been discussed for example in M. Menna, *Il progetto Manus. Problemi di authority control nella catalogazione dei manoscritti*, in *Authority control. Definizione ed esperienze internazionali. Atti del convegno internazionale, Firenze, 10-12 febbraio 2003*, ed. by M. Guerrini e B. B. Tillet, Firenze, AIB, 2003, pp. 307-311; single experiences in G. Barbero - C. Pasini, «*Indici*» e *cataloghi di manoscritti alla Biblioteca Ambrosiana*, «*Gazette du livre médiéval*», 42 (printemps 2003), p. 43; B. Vanin - P. Eleuteri, *La «Nuova Biblioteca Manoscritta» della Regione Veneto*, in *Conoscere il manoscritto*, cit., pp. 149-150.

<sup>8</sup> See ManusOnLine at <http://193.206.221.40/manus/>.

<sup>9</sup> See CERL Portal at <http://cerl.epc.uu.se/sportal/>.

<sup>10</sup> See in Regione Lombardia. <http://www.lombardiabeniculturali.it/istituzioni/>; this database describes any Lombardy's historical civic and religious institutions, such as legislative and administrative offices, monasteries and convents, parish churches and so on, from Middle age to XX century.

Archives,<sup>11</sup> Artistic cultural heritage: architecture, paintings, photos engravings, archaeological artefacts and Music.<sup>12</sup>

This project provides very important support for literary and historical research at the academic level as well as for people looking for information about local history. It will also play a crucial role as a reference tool for the commerce of antiquarian books. It will allow reconstructions of ancient collections and items that are often stolen and knowledge of the rarity of the documents and their possible value. The antiquarian market exhibits in auctions, fairs, printed catalogues and booklet and through online sites such as E-bay, examples of ancient manuscripts, often decorated with illuminations which may be particularly rare. This new tool creates the possibility of locating different manuscripts, and checking and comparing them to help understand the provenance, or to determine the date or value.

The most important result about provenance for example is the identification of manuscripts originally belonged to religious institutions dispersed during XIX century because the se of abolition of religious institutions. While several of those manuscripts had been acquired by Braidense Library in Milan and by Teresiana Library in Mantua, Franciscan items stayed in local repositories and the Lombardy Project staff (Martina Pantarotto *in primis*) discovered them in many little institutions: the Archive of Lombard Capuchin friars, the Franciscan Library of Sant'Angelo in Milan, the Franciscan cloister at Dongo (Lake of Como) and at Rezzato (Brescia).

The benefits for the project library partners include preservation and conservation activities through the identification and description of their collections that are better managed and preserved. So it is now possible to produce easier inventories and lists of the materials for quick access at any given time to find misplaced or lost documents.

### **The system structure**

The Lombardy Manuscript Catalogue is part of the Italian Manuscript Catalogue designed by ICCU and called ManusOnLine (MOL). MOL consists of a shared MySQL database, managed by a complex management system, while PHP, Hypertext Preprocessor has been chosen to write dynamic web pages, which allow cataloguing and searching activities. Each cataloguer can work through the Web operating directly in ICCU's MOL, the central database that can be accessed at <http://193.206.221.40/manus/> . Moreover, each working group can download its portion of DB and publish its data in a single local OPAC, managing and connecting them with other local archives.

This Web based application can be used by librarians to keep inventories, to catalogue manuscripts and to share an authority list of names, while users can search only some of the information included in the database, for example the history of collections and descriptions of manuscripts.

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<sup>11</sup> See <http://www.lombardiabenculturali.it/archivi/>; the site publishes inventories of present archives existing in Lombardy Region.

<sup>12</sup> See <http://www.lombardiabenculturali.it> following link on the left.

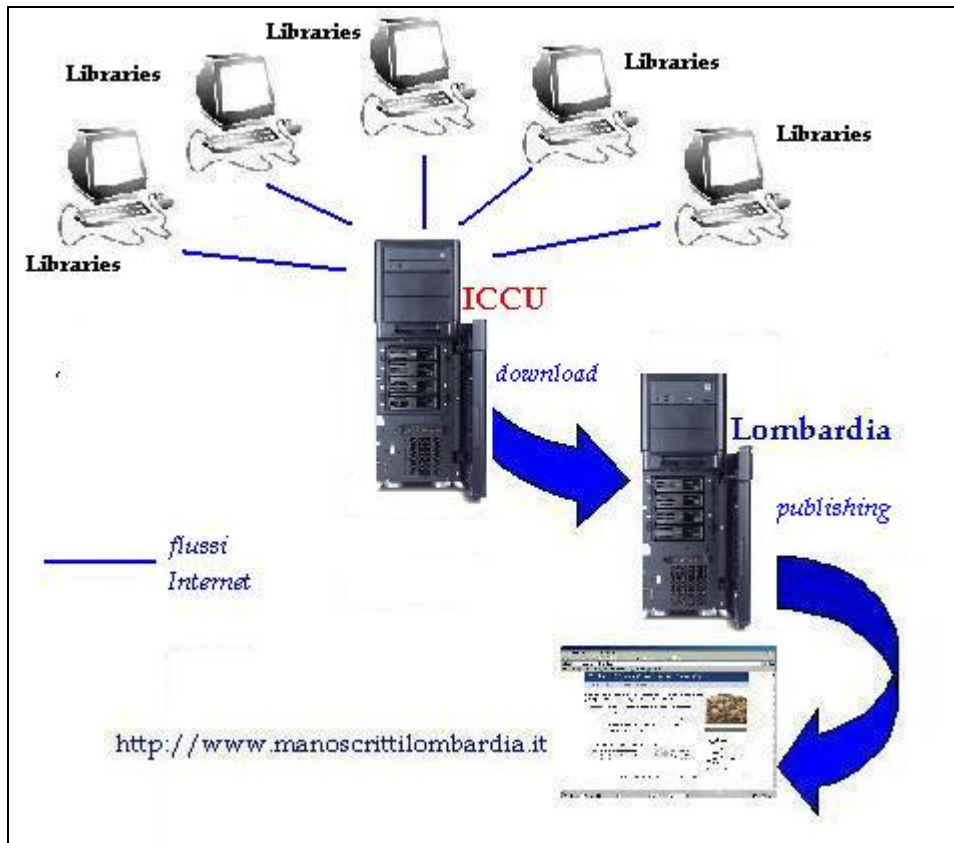


Fig. 1 – ManusOnLine architecture

The MOL central database has different entities; the most important ones are:

- cataloguing groups, with their committed stakeholders working inside ;
- repositories, with collections and manuscripts identified as minimum by shelfmarks;
- manuscripts and their attributes: descriptions, languages, images of folios, images of traditional printed catalogues with their description;
- names.
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Also preservation and collections management have been considered as much as cataloguing procedures.

### **The Lombardy project in ManusOnLine**

MOL identifies any cataloguing group by a title («Denominazione progetto»), by a period of activity («Data di avvio» and «Data di termine») and by a colloquial description of its goals («Obiettivi»). Cataloguing groups are connected to repositories, promoters and clients. Clients, that are cataloguers, include a manager who has the authority to change any data contained inside his/her working group, and as many cataloguers as needed, who are allowed to modify only their own descriptions and images. Information about projects is accessible from the central database management system.

Fig. 2 - The Lombardy working group (Project) described in ManusOnLine

The Lombardy working group includes many libraries working in the shared DB. For example, as you can see in Fig. 2, librarians can catalogue manuscripts preserved in the Archive of Lombard Capuchin friars, in Trivulziana Library and so on; Regione Lombardia and University of Milan are the promoters, while the list of working people starts with Barbero, Bertolli, Chiesa..

Every library is identified and described following national and international standards, so that they can be automatically connected with *Anagrafe delle Biblioteche Italiane*<sup>13</sup>. Information about libraries are registered in MOL and they are accessible from the Lombardy public catalogue, as shown in Fig. 3.

Only authorized local librarians, with knowledge of their own collections can consult the original documents, having the responsibility for manuscript information: they are responsible for describing the history and bibliography of their library and of their collections. They can trace a precise map of them by recording all shelf-marks after having carefully verified their collocation in the library. Information about shelfmarks are accessible from the central database management system. Each shelfmark is identified by its exact form («Denominazione segnatura»), by the real collocation inside the library's buildings («Collocazione fisica»), by a nickname, an unambiguous code («CNMS», Censimento Nazionale dei Manoscritti. Segnatura), its collection («Fondo») and its repository («Biblioteca»).

<sup>13</sup> See <http://anagrafe.iccu.sbn.it/index.html>

Scheda Biblioteca	
Codice	IT, MI0327
Città	Milano
Denominazione	Archivio storico civico e Biblioteca Trivulziana
Indirizzo	Castello Sforzesco, 20121 Milano (MI) - Lombardia
Tipologia amministrativa	Enti territoriali. Comune
Stima manoscritti medioevali	530 mss. circa databili ai sec. VIII-XV
Stima manoscritti moderni	1150 mss. circa databili ai sec. XVI-XX
<b>Notizie storiche</b>	
<b>Bibliografia:</b>	
G. Porro, <i>Catalogo dei manoscritti della Trivulziana</i> , Torino, Fratelli Bocca, 1884;	
E. Motta, <i>Libri di casa Trivulzio nel secolo XV</i> , Como, Tip. Franchi, 1890;	
E. Motta, G. Seregni, <i>Biblioteca Trivulziana</i> , in "Le biblioteche milanesi. Manuale ad uso degli studiosi", Milano, Cogliati, 1914;	
G. Seregni, <i>Don Carlo Trivulzio e la cultura milanese dell'età sua</i> , Milano, Hoepli, 1927;	
R. Giolli, <i>La Trivulziana e Milano</i> , Milano 1935;	
C. Santoro, <i>Il passaggio della Trivulziana al Comune di Milano</i> , "Nuova Antologia", 70 (1935), pp. 112-126;	
C. Santoro, <i>Le collezioni Trivulziane</i> , "Archivio Storico Lombardo", 62 (1935), pp. 79-88;	
C. Santoro, <i>Codices Trivulziani antiquiores (ab VIII usque ad XII saeculum)</i> , Milano, Libreria Antiquaria Hoepli, 1950;	
C. Santoro, <i>Un registro di doti sforzesche</i> , "Archivio Storico Lombardo", s. VIII, 4 (1953), pp. 1-53;	
<i>I codici miniati della Biblioteca Trivulziana</i> , a cura di C. Santoro, Milano, Comune di Milano, 1958;	
<i>Mostra dantesca. Manoscritti ed edizioni della Biblioteca Trivulziana, Milano, Castello Sforzesco. Catalogo</i> , a cura di C. Santoro, Milano, Ente manifestazioni milanesi, 1963;	
<i>I codici Medioevali della Biblioteca Trivulziana</i> , a cura di C. Santoro, Milano, Comune di Milano, 1965;	
C. Santoro, <i>Biblioteche di enti e di bibliofili attraverso i codici della Trivulziana</i> , "Archivio Storico Lombardo", 7 (1968), pp. 76-109;	
<i>Annuario delle biblioteche italiane</i> , parte II, Roma 1971, pp. 287-290;	

Fig 3 - The Trivulziana Library description at <http://www.manoscrittilombardia.it>

The Lombardy project, operating in a specific local area, has considered institutions such as religious convents or private foundations which have never kept inventories of their holdings (sometimes just two or three liturgical codices), but even important libraries do not have updated inventories, so that in collaboration with directors and curators we have definitively assigned and standardized shelf-marks, for example in punctuation and spaces (for computer «XIV.A-1» is completely different from «XIV A 1»). Correspondence between current and old shelfmarks have been created, the room where codices are preserved have also been included along with their exact position on the shelves, as we can see in the following record (fig.4)

The screenshot shows a web application interface for managing library records. On the left is a sidebar with the 'lanus online' logo and a list of menu items. The main area is titled 'Modifica Segnatura' and contains several navigation buttons: 'Indietro (ModificaBiblioteca)', 'Indietro (ModificaBiblioteca\_Segnatura)', 'Numeri di inventario', 'Lingue e alfabeti', 'Schede', 'Immagini di manoscritto', and 'Immagini di catalogo'. Below these is a breadcrumb trail: 'Biblioteca della Fondazione Ugo Da Como, Lonato, Manoscritti, Fram.8'. The main form contains the following fields:

- Denominazione segnatura\*: Fram.8
- Collocazione fisica: Scaffale A (all'interno di una custodia grigia)
- Nickname: (empty)
- CNMS: CNMS\0000026098
- Fondo: Manoscritti
- Biblioteca: Biblioteca della Fondazione Ugo Da Como - Lonato

A 'Salva modifiche' button is located at the bottom of the form.

Fig. 4 - A standard shelfmark of Fondazione Ugo Da Como.

## Manuscripts

Any shelfmark, as shown, can be related to inventory numbers, languages and alphabets used in the manuscript, descriptions, images of folios, images of previous printed catalogues or external catalographic resources with permanent URL.

The great novelty of this structure is that each shelfmark, considered as the identifier noun of each handwritten document, can be connected with different kinds of resources, so that, for example, we can create new extensive codicological descriptions, composed as a complete study of the manuscript; we can copy into the database an old description taken from a printed catalogue, and at the same time we can load metadata in order to index the image of a printed catalogue or an external bibliographic resource.

The most interesting of these solutions is of course extensive cataloguing of a manuscript never published before. Here is an example taken from the Morcelliana Library, Chiari (Brescia), that preserves a humanistic manuscript that had never been studied before. Also an image of the manuscript has been published («Sfoggia le immagini di manoscritto»).

**Chiari, Biblioteca Morcelliana, Fondo Manoscritti, ms.7**

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**Ente promotore:** Biblioteca Morcelliana  
**Tipologia:** di prima mano.  
**CNMS:** CNMS\0000026125  
[Sfoggia le immagini del manoscritto](#)

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**Scheda manoscritto**

**CNMD\0000050037**

Manoscritto cartaceo, guardie cart.; fascicoli legati; 1451-1500 stimata; cc. III + 276 + III; numerazione del sec. XV, da c. 99 a c. 276, con un solo salto tra 275 e 276, essendo quest'ultima numerata 277. Dimensioni: mm 274 x 192 (c. 7).

**Scuola della decorazione:**  
iniziale in oro decorata a bianchi girari alla c. 1r; iniziali semplici in inchiostro rosso alle cc. 119r e 155r; disegno di una grande iniziale eseguito a inchiostro alla c. 276r (numerata 277).

**Filigrana:**  
alle cc. 1-92, 119-275 corona tipo Briquet 4730; alle cc. 99-118 campana tipo Briquet 3923-3934.

**Fascicolazione:**  
1-7 (12), 8 (14), 9-10 (10), 11-15 (12), 16 (7+6), 17-24 (10), 25 (5).

**Rigatura:**  
rigatura verticale a piombo, orizzontale a inchiostro secondo schemi diversi tra loro alle cc. 1r-92v, 99r-118v, 119r-150r e 154r, 155r-191v; rigatura a secco imposta a telaio alle cc. 192r-275r.

**Specchio rigato:**  
alle cc. 1r-92v: mm 274 x 192 = 30 [188] 56 x 30 [125] 37 (c. 7r);  
alle cc. 99r-112v e 117r-118v: 274 x 192 = 16 [205] 53 x 19 [64] 15 [60] 34 (c. 103r);  
alle cc. 113r-116v: 274 x 192 = 18 [207] 49 x 22 [140] 30 (c. 114r);  
alle cc. 119r-150r e 154r: 274 x 192 = 27 [200] 47 x 27 [129] 36 (c. 120r);  
alle cc. 155r-191v: 274 x 192 = 25 [200] 49 x 32 [115] 45 (c. 156r);  
alle cc. 192r-275r: 274 x 192 = 22 [203] 49 x 32 [120] 40 (c. 193r).

**Righe:**

Fig. 5 - The first part of a manuscript description at <http://www.manoscritttilombardia.it>

Of course, there are also many well known manuscripts in the libraries of Lombardy and in these contexts we decided to produce new descriptions collecting all previous information and bibliographical references about them. These descriptions are also illustrated by original folios images to show paleographical, artistic and codicological features. An interesting example of this type of information management is in Dante's *Divina Commedia*, signed by Francesco di Ser Nardo da Barberino in 1337, preserved at the Trivulziana Library (shelfmark Triv. 1080). This is a very famous codex that had been studied by many individuals and researchers, but no one had ever

collected all the information about it or published any digital images on the Net. Its bibliography has been published in the Lombardy catalogue:

**Bibliografia a stampa**  
 Bibliografia dantesca ossia catalogo delle edizioni, traduzioni, codici manoscritti e commenti della Divina Commedia e delle opere minori di Dante, seguito dalla serie de' biografi di lui compilata dal sig. visconte Colomb de Batines. Traduzione italiana fatta sul manoscritto francese dell'autore, I-II, Prato, Tipografia Aldina Editrice, 1845-1846, vol. II, p. 138 nr. 257;  
 Giulio Porro, Catalogo dei codici manoscritti della Trivulziana, Torino, Fratelli Bocca, 1884 (Biblioteca storica italiana, 2), pp. 106-107;  
 Carlo Negrone, Sul testo della Divina Commedia, «Memorie della Reale Accademia delle Scienze di Torino», s. II, 40 (1890), p. 24 nr. 2;  
 Ludwig Volkman, Bildliche Darstellungen zu Dante's Divina Commedia bis zum Ausgang der Renaissance, Leipzig, Breitkopf & Härtel, 1892, p. 10;  
 Paolo D'Ancona, La miniatura fiorentina (secoli XI-XVI). I: Testo e tavole. II: Catalogo descrittivo, Firenze, Olschki, 1914, vol. I, pp. 25-26, vol. II, pp. 166-167 nr. 184;  
 Paolo D'Ancona, La miniature italiane du Xe au XVIe siècle, Paris-Bruxelles, G. van Oest, 1925, p. 36, tav. XXXIV;  
 Kunstschatze der Lombardei 500 vor Christus / 1800 nach Christus (Kunsthau Zürich, November 1948 – März 1949), Zürich, s.n., 1948, nr. 195;  
 Caterina Santoro, Codici miniati del Rinascimento italiano, Milano, Castello Sforzesco, 1952, pp. 49-50 nr. 42;  
 Caterina Santoro, Mostra dantesca. Manoscritti ed edizioni della Biblioteca Trivulziana, Milano, Castello Sforzesco, 1954, p. 11 nr. 1;  
 Caterina Santoro, I codici miniati della biblioteca Trivulziana, Milano, Comune di Milano, 1958, pp. 71-72 nr. 74;  
 Bernhard Degenhart, Die kunstgeschichtliche Stellung des Codex Altonensis, in Dante Alighieri. Divina Commedia. Kommentar zum Codex Altonensis, herausgegeben von der Schulbehörde der Freien und Hansestadt Hamburg durch Hans Haupt, I-II, Berlin, Gebr. Mann Verlag, 1965, vol. I, pp. 67-70, tav. 1-3;  
 Caterina Santoro, I codici medioevali della biblioteca Trivulziana. Catalogo, Milano, Comune di Milano – Biblioteca Trivulziana, 1965, pp. 265-266 nr. 401;  
 Dante Alighieri, La Commedia secondo l'antica vulgata, a cura di Giorgio Petrocchi, I, Introduzione, Milano, Mondadori, 1966, pp. 85-86, 413-416, 535;  
 Giorgio Varanini, Le texte critique de la Commedia selon l'Antica Vulgata, «Scriptorium», 22 (1968), pp. 75, 78-79;  
 Giulia Bologna, Miniature italiane della Biblioteca Trivulziana, Milano, Comune di Milano, 1974, pp. 21, 89;  
 Bénédictins du Bouveret, Colophons de manuscrits occidentaux des origines au XVIe siècle, I-VI, Fribourg (Suisse), Éditions Universitaires, 1965-1982 (Spicilegii Friburgensis Subsidiaria, 2-7), vol. IV, p. 232 nr. 13925;  
 Luisa Miglio, Considerazioni ed ipotesi sul libro «borghese» italiano del Trecento. A proposito di un'edizione critica dello «Specchio Umano» di Domenico Lenzi, «Scrittura e civiltà», 3 (1979), p. 313;

Fig. 6 - Bibliography of ms. Trivulziano 1080

All precious manuscripts collected by marquis Gian Giacomo Trivulzio (1774-1831) had never been considered all together neither published through the Web. Several images of these manuscripts are now accessible through the Net.

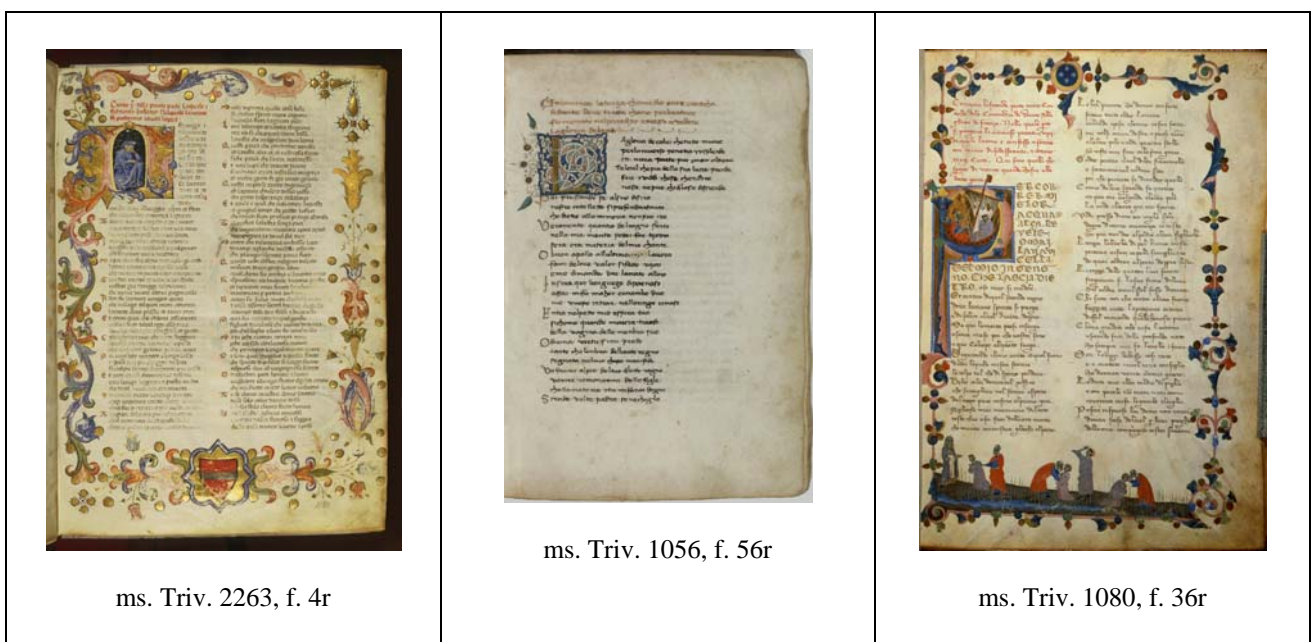


Fig. 7 - Images of some Dante manuscripts of Trivulziana Library

Finally when previous resources have been found on the Web, every effort has been directed to connect those resources to MOL, not to reproduce or to replace them.

This solution has been adopted for the Library of Seminario Vescovile in Como, a local ecclesiastical institution, now depositing funds to the Centro Studi Niccolò Rusca, where an electronic catalogue of manuscripts using HTML has been published (see the green and light blue window in Fig. 7). For Lombardy Project we took the decision to index such descriptions through few metadata, that means to consider previous shelfmarks («Antiche segnature»), possessors («Possessori»), authors and titles («Autore», «Titolo elaborato»). In this way users can search in the Lombardy Catalogue and find also the Library of Seminario Vescovile collections.

**Como. Biblioteca del seminario vescovile. Fondo Manoscritti. ms.8**

Ente promotore: Biblioteca del seminario vescovile  
 Tipologia: indice.  
 CNMS: CNMS\0000026193

**Scheda indice**  
 CNMD\0000050053

Manoscritto membranaceo, fascicoli legati;  
**Legatura:**  
 1963-1964..

**Antiche segnature:**  
 Morimondo B (segnatura assegnata all'inte XVI-10 (segnalata in M. Ferrari, Biblioteche episodi, in "Ricerche storiche sulla Chiesa A N. XXVII (segnatura di Santa Maria di Morimondo 8)

**Possessori:**  
 Santa Maria di Morimondo <monastero>; 113

**Descrizione Interna:**

**cc. 1r-106r**  
**Autore:**  
 Bernardus Claraevallensis <santo>

**Titolo elaborato:** Sermones per annum a

**cc. 106-125r**  
**Autore:**  
 Bernardus Claraevallensis <santo>

**Titolo elaborato:** Vita sancti Malachie

**chi siamo | info | archivio diocesano | biblioteca seminario | beni artistici | link**

**BIBLIOTECA SEMINARIO : PATRIMONIO LIBRARIO : INDICE MANOSCRITTI : MANOSCRITTO 8**

MS. - 8 (già Morimondo 8)

**BERNARDUS Claraevallensis, santo**

Ms. membr., ff. 129 (fasc. I-IV<sup>10</sup>; V<sup>4</sup>; VI-XII<sup>10</sup>; XIII<sup>4</sup>;XIV<sup>2</sup>), mm 361 x 258 (284 x 192) [f. 86r], 2 col., 35/37 linee; scritto in Italia, minuscola di transizione, sec. XII ex.; iniziali calligrafiche in rosso. Legatura in pelle verde-bruna su assi, risalente al restauro del 1963-64.  
 Bernardus Claraevallensis, Sermones per annum a Pascha usque ad finem anni (ff. 1r-106r); Bernardus Claraevallensis, Vita sancti Malachie (ff. 106r-125r); Bernardus Claraevallensis, Sermo eiusdem sancti Bernardi abbatis de eodem sancto Malachia (ff. 125r-128v).  
 A f. 128v: "Liber sancte Marie de Morimundo ordinis cisterciensis mediolanensis diocesis N. XXVII".  
 J. LECLERQ, Manuscripts cisterciens dans des bibliothèques d'Italie, in "Analecta Sacri Ordinis Cisterciensis", VII, 1951, p. 73; J. LECLERQ, Textes et manuscrits cisterciens dans des bibliothèques des Etats-Unis, in "Traditio", XVII, 1961, p. 178; J. LECLERQ, La tradition des sermons liturgiques de s. Bernard, in "Scriptorium", XV, 1961, p. 261 e p. 263; R. GREGOIRE, Repertorium liturgicum italicum, in "Studi medievali", s. III, IX, 1968, p. 495; M. FERRARI, Biblioteche e scrittori benedettini nella storia culturale della diocesi ambrosiana: appunti ed episodi, in "Ricerche storiche sulla Chiesa Ambrosiana", IX, 1980 (= "Archivum Ambrosianum", XI), p. 267.

Fig. 7 - Few metadata in Lombardy Catalogue connected with Nicolò Rusca's description.

## Names

The ICCU shared authority file has been designed respecting SBN and UNIMARC models of data. Each name is followed by a date of birth and a date of death or, as an alternative, by a *floruit* date, or by a century designation; for example, in the case where the name corresponds to a copyist whose activity is dated on a palaeographical basis; dates can be followed by qualifications, corresponding to persons' or entities' activities, and notes about their life and bibliography.

Roles of persons and entities, like authors, copyists or possessors, are other kinds of attributes collocated outside the authority list, and each name is related to manuscript description through such attributes.

The amount of qualifications and roles needed to define names in a manuscript description is the main difference in distinguishing bibliographic authority lists from manuscripts lists. In many cases, we can insert so many items "Iohannes" in a catalogue, that it is essential to distinguish them by date or other types of qualification. Moreover, the codification of some Latin names is often due to

discoveries made by studying manuscripts, so that the manuscripts are the only evidence for such persons.

The image shows a web-based form for editing an authority record. The fields are as follows:

- Codice CNMN: CNMN\0000013788
- Codice ISADN: (empty)
- Forma: (A) Forma accettata e identificata (dropdown menu)
- Nome\*: Bruni, Leonardo
- Authority di riferimento: (empty) with buttons 'Cambia' and 'Azzera' to the right.
- Importazione Qualifica + Datazione: (empty)
- Qualifica: (empty)
- Datazione: 1370 ca.-1444
- Tipo nome SBN: C (dropdown menu)
- Lingua prevalente utilizzata: (empty)
- Nota biografica: Umanista e politico; fu segretario apostolico e cancelliere della Repubblica fiorentina dal 1427; nato ad Arezzo e morto a Firenze.
- Note al nome, Fonti o note bibliografiche: DBI, 14, pp. 618-633

A 'Salva modifiche' button is located at the bottom center of the form.

Fig. 8 - A record from the authority file

### Future improvements

In concluding our local census, there was a problem in identifying all repositories preserving ancient and medieval manuscripts. In Lombardy, and everywhere in Italy, there are many codices not yet included in inventories or catalogues. So the regional offices concerning preservation have to find and to enhance projects about the identification and the conservation of the handwritten Cultural Heritage. For this purpose Regione Lombardia has enhanced this type of inventory for preservation and knowledge, because manuscripts are considered under great risks. Without a "name" (shelfmark) filled into the handwritten book but also in a digital system, but without at least one reproduction and few physical data (material, number of folios, dimensions) and textual data (author, title, incipit, colophon) it is very difficult to recognize manuscripts unfortunately stolen.

Many small catalogues of non literary manuscript collections had been supported in traditional way, promoting printed catalogues<sup>14</sup>.

Looking at this very varied landscape at present, the problem is the convergence of archives, libraries and museums. For this reason we are preparing tables comparing the data and fields of

<sup>14</sup> See for example ; P. Margaroli, *Le pergamene Belgioioso della Biblioteca Trivulziana di Milano (secoli 11.- 18.). Inventario e registi*, Milano, Regione Lombardia - Biblioteca Trivulziana, 1997.or

MOL, which substantially follows the Text Encoding Initiative (TEI) Document Type Definition<sup>15</sup>, with SBN and UNIMARC data and fields, with archive inventory standards<sup>16</sup> and with Italian Istituto Centrale per il Catalogo e la Documentazione (ICCD) standards for artistic cultural heritage<sup>17</sup>. This collation is both interesting and innovative, because our aim is not to force manuscript descriptions into inadequate standards (like many single institutions are doing - following commercial enterprises' input - without any consideration for standardization rules), but to build interoperability solutions, by considering metadata shared by different present standards and by preserving original data models which characterize specific domains.

Convergence would be considered not only in manuscript description but also in their preservation. As well as cathedrals, we also found museums with codices and manuscripts permanently exhibited in cases and this is a risk for them because of long-term exposure to light. Sometimes ecclesiastic and museum staffs are often unbelievably not yet ready to change their organization to preserve such type of cultural heritage. We have seen any important institutions to separate folios of old autograph codices (books with notes and drawings) to preserve better the material, but also to show them more and more, considering these folios as artistic objects to be shown and not as a bibliographical resources..

At this point, as ancient and mediaeval cataloguing is going on simultaneously with research about interoperability, we are reflecting on the possibility of improving the knowledge and preservation for items dated between XVI-XX centuries. Could this method also be adopted for more recent manuscripts? The problem will be the different types of document, no more codices on parchment, or humanistic illuminated books only. But other types of manuscripts, such as diaries, music, personal notes or scientific documents, completely change the scenario as they are no longer devoted to being read in front of a group of people but rather individually as letters or comments or description of travel with drawings or scientific manuscripts<sup>18</sup>.

In the past, some types of census were performed, but manuscripts had not been managed in a database, only as traditional printed catalogues or on fiches, but our census *I Carteggi* and *I Fondi speciali* are so much important for our researchers that they will be the basis of the next step toward a modern manuscript catalogue in Lombardy<sup>19</sup>.

Moreover in last years the Central Public Library of Milan and Braidense National Library have worked a lot on modern collections and on contemporary correspondence.

The Centro Stendhaliano of Milan, into the Central Public Library of Milan has catalogued about 3100 items in *Manus* and published its own OPAC, experimenting a specific layout for modern collections and correspondence that has inspired MOL's OPAC too<sup>20</sup>. The staff of the Braidense Library has already described directly in MOL about 1100 items concerning autograph letters,

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<sup>15</sup> See the TEI-Consortium site at <http://www.tei-c.org/Activities/Workgroups/MS/> and the Digital Scriptorium solutions at [https://www1.columbia.edu/sec/cu/libraries/bts/digital\\_scriptorium/technical/ds-xml/description\\_dtd/index.html](https://www1.columbia.edu/sec/cu/libraries/bts/digital_scriptorium/technical/ds-xml/description_dtd/index.html).

<sup>16</sup> See at least Encoded Archival Description (EAD) at <http://www.loc.gov/ead/>.

<sup>17</sup> See <http://www.iccd.beniculturali.it/Catalogazione/standard-catalografici/index>

<sup>18</sup> See different opinions in *Manoscritti librari moderni e contemporanei. Modelli di catalogazione e prospettive di ricerca. Atti della giornata di studio, Trento 10 giugno 2002*, ed. by A. Paolini, Trento, Provincia autonoma di Trento. Servizi beni librari e archivistici, 2003 (Beni librari e archivistici del Trentino. Quaderni, 4); G. Barbero, *Per la catalogazione dei manoscritti moderni*, «Bollettino AIB», 43/3 (2003), pp. 271-299; G. P. Mantovani, *Il manoscritto moderno come problema catalografico*, in *Conoscere il manoscritto*, cit., pp. 57-80.

<sup>19</sup> *I carteggi delle biblioteche lombarde. Censimento descrittivo*, Regione Lombardia, Milano, Editrice Bibliografica, 1986-1991; *I fondi speciali delle biblioteche lombarde. Censimento descrittivo*, Regione Lombardia, 2 v., Milano, Editrice Bibliografica, 1995-1998.

<sup>20</sup> See <http://mssormani.comune.milano.it/sub%5Fmanoscritti/>; G. Chiesa - G. Barbero, *I manoscritti moderni della Biblioteca comunale a Palazzo Sormani, Milano*, in *Manoscritti librari moderni e contemporanei*, cit., pp. 19-39; R. Marcuccio, *Il catalogo elettronico dei manoscritti della Biblioteca Sormani*, «Biblioteche Oggi», 23/8 (2005), pp. 60-64.

demonstrating that MOL cataloguing standard can be adopted without problem to describe the correspondence.<sup>21</sup>

We hope the Lombardy Census would become a really useful instrument to discover and study the entire handwritten cultural heritage, believing that it will be considered a part of our previous catalographic tradition.

At the same time we are discovering many codices preserved in archives or museums, not always in libraries, mixed with archival documents or in historic and artistic collections. This happens, for example, in liturgical contexts where they are preserved with other material but they are still employed, and other are included in old family archives and then not accessible.

In some cases it is difficult to distinguish the handwritten books: we have found volumes of *Statuti* (local ancient laws) already described in archival inventories and notebooks with drawings already described in archival context. With the *Codice diplomatico* of Regione Lombardia it has already been promoted and supported a very important project, with University of Pavia, in which many mediaeval documents are published in XML (eXtensible Markup Language) format<sup>22</sup>. Many small catalogues of non literary manuscript collections had been supported in a traditional way, promoting printed catalogues<sup>23</sup>.

Looking at this very varied landscape at present, the problem is the convergence of archives, libraries, but also with museums. We are preparing tables comparing the data and fields of MOL, which substantially follows the Text Encoding Initiative (TEI) Document Type Definition<sup>24</sup>, with SBN and UNIMARC data and fields, with archive inventory standards<sup>25</sup> and with Italian Istituto Centrale per il Catalogo e la Documentazione (ICCD) standards for artistic cultural heritage<sup>26</sup>. This collation is both interesting and innovative, because our aim is not to force manuscript descriptions into inadequate standards (like many single institutions are doing - following commercial enterprises' input - without consideration for standardization rules). To build an interoperability solution is very crucial, considering metadata shared by different standards and preserving original data models characterizing specific domains.

Convergence would be considered not only in manuscript description but also in their preservation. As well as cathedrals, we also found museums with codices and manuscripts permanently exhibited in cases. This is a risk for them also because of long-term exposure to light.

At this point, as ancient and mediaeval cataloguing is moving forward simultaneously with research about interoperability, we are reflecting on the possibility of improving the knowledge and preservation for items dated between the XVI-XX centuries. Could this method also be adopted for more recent manuscripts? The problem will be the different types of document, no longer codices on parchment, or humanistic illuminated books but other types of manuscripts, such as diaries with drawings, pictures, music, personal notes or scientific documents. This completely changes the scenario as they are no longer devoted to being read in front of a group of people but rather individually as letters or comments or description of travel with drawings or scientific manuscripts<sup>27</sup>.

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<sup>21</sup> See [www.braidense.it](http://www.braidense.it).

<sup>22</sup> See *Codice diplomatico della Lombardia medievale* at <http://cdlm.lombardiastorica.it/>

<sup>23</sup> See for example ; P. Margaroli, *Le pergamene Belgioioso della Biblioteca Trivulziana di Milano (secoli 11.- 18.). Inventario e registi*, Milano, Regione Lombardia - Biblioteca Trivulziana, 1997.or

<sup>24</sup> See the TEI-Consortium site at <http://www.tei-c.org/Activities/Workgroups/MS/> and the Digital Scriptorium solutions at [https://www1.columbia.edu/sec/cu/libraries/bts/digital\\_scriptorium/technical/ds-xml/description\\_dtd/index.html](https://www1.columbia.edu/sec/cu/libraries/bts/digital_scriptorium/technical/ds-xml/description_dtd/index.html).

<sup>25</sup> See at least Encoded Archival Description (EAD) at <http://www.loc.gov/ead/>.

<sup>26</sup> See <http://www.iccd.beniculturali.it/Catalogazione/standard-catalografici/index>

<sup>27</sup> See different opinions in *Manoscritti librari moderni e contemporanei. Modelli di catalogazione e prospettive di ricerca. Atti della giornata di studio, Trento 10 giugno 2002*, ed. by A. Paolini, Trento, Provincia autonoma di Trento. Servizi beni

In the past, some types of census were produced, but manuscripts had not been managed in a database, only as a traditional printed catalogue or on fiches. Our census *I Carteggi* and *I Fondi speciali*<sup>28</sup> will be the basis of the next step toward a modern manuscript catalogue in Lombardy, which we believe could be considered comparable with our catalographic tradition.

Moreover in last years the Central Public Library of Milan and Braidense National Library have worked a lot on modern collections and above all on modern and contemporary correspondence. The Centro Stendhaliano of Milan, inside Central Public Library has catalogued about 3100 items in *Manus* and published its own OPAC experimenting a specific layout for modern collections and correspondence, that has inspired the construction of MOL's OPAC too<sup>29</sup>. Library staff of Braidense has retrieved in MOL about 1100 items concerning autograph letters, demonstrating that system MOL cataloguing standard can be adopted without difficulties for the description of correspondence<sup>30</sup>.

We hope that all these efforts will allow Lombardy Census to become a really useful instrument to discover and study the exceptional handwritten cultural heritage, believing that it will be considered part of our catalographic tradition.

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librari e archivistici, 2003 (Beni librari e archivistici del Trentino. Quaderni, 4); G. Barbero, *Per la catalogazione dei manoscritti moderni*, «BollettinoAIB», 43/3 (2003), pp. 271-299; G. P. Mantovani, *Il manoscritto moderno come problema catalografico*, in *Conoscere il manoscritto*, cit., pp. 57-80.

<sup>28</sup> *I carteggi delle biblioteche lombarde. Censimento descrittivo*, Regione Lombardia, Milano, Editrice Bibliografica, 1986-1991; *I fondi speciali delle biblioteche lombarde. Censimento descrittivo*, Regione Lombardia, 2 v., Milano, Editrice Bibliografica, 1995-1998.

<sup>29</sup> See <http://mssormani.comune.milano.it/sub%5Fmanoscritti/>; G. Chiesa - G. Barbero, *I manoscritti moderni della Biblioteca comunale a Palazzo Sormani, Milano*, in *Manoscritti librari moderni e contemporanei*, cit., pp. 19-39; R. Marcuccio, *Il catalogo elettronico dei manoscritti della Biblioteca Sormani*, «Biblioteche Oggi», 23/8 (2005), pp. 60-64.

<sup>30</sup> See [www.braidense.it](http://www.braidense.it).