An atlas of classification

Signage between open shelves, the Web and the catalogue

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Classified arrangement on open shelves A signage system

- This paper aims to present the in-progress project for the signage system of the Dewey-classified shelves in the Library of Social Sciences at the University of Florence.
- The project dates back to 2005;
- It was published in 2006;
- o its realization began in 2011 and is still ongoing.

Classified arrangement on open shelves

- Library users use classified arrangement on open shelves in two main ways:
 - 1. to search for works on a particular subject within a discipline;
 - 2. to locate specific items identified by codes composed of letters and figures (the call numbers).
- The reasons for the systematic arrangement of open shelves relate to the first mode of use.
- O In order to induce users to use the classified arrangement of open shelves to their full potential, a signage system is necessary.

Principle of indexing transparency

- A 'smarter' catalogue is also a more intelligible catalogue, understandable to users.
- 'Understandable' does not mean to deny complexity, but to make it explicit, to clarify it.
- O To express the characteristics, the fundamental elements, and therefore all the potentials of indexing, in the presentation of the cataloguing data one should always keep in mind what might be called the **principle of indexing transparency** towards users: *entities and relationships, which appear in a specific form of indexing, must always be presented to users in a visible and understandable way*.
- Transparent indexing makes the catalogue 'richer'.

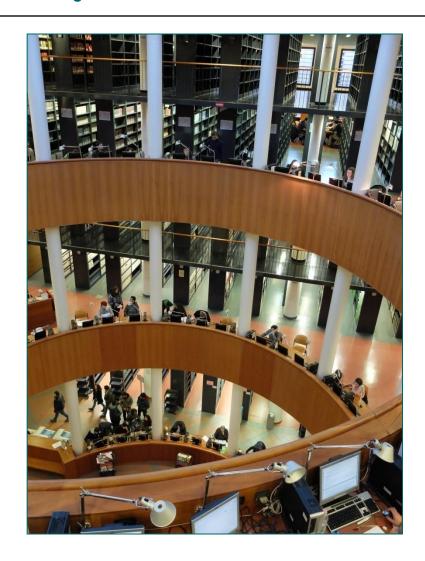
Principle of indexing transparency

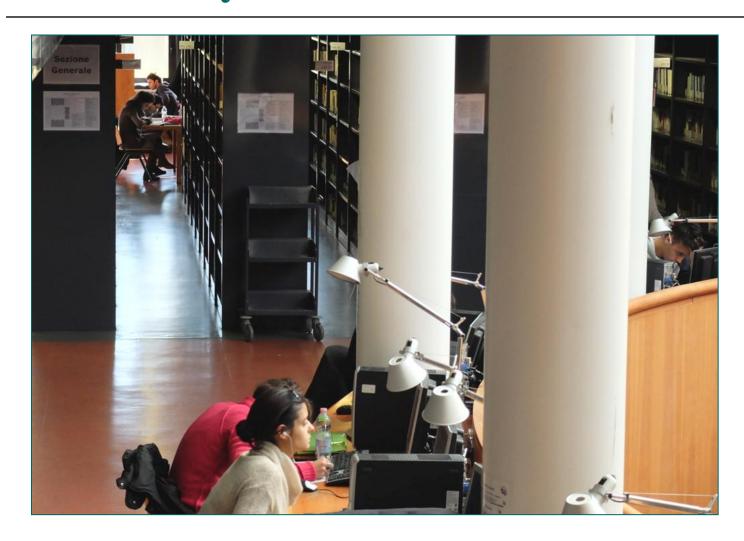
- Class indexing is made available to users in two ways: the online catalogue and the classified arrangement on open shelves.
- The signage system of the Dewey-classified shelves must, therefore, highlight the basic characteristics of the Dewey Decimal Classification:
 - the organization by discipline;
 - the principle of hierarchy;
 - the decimal notation.

Principle of indexing transparency

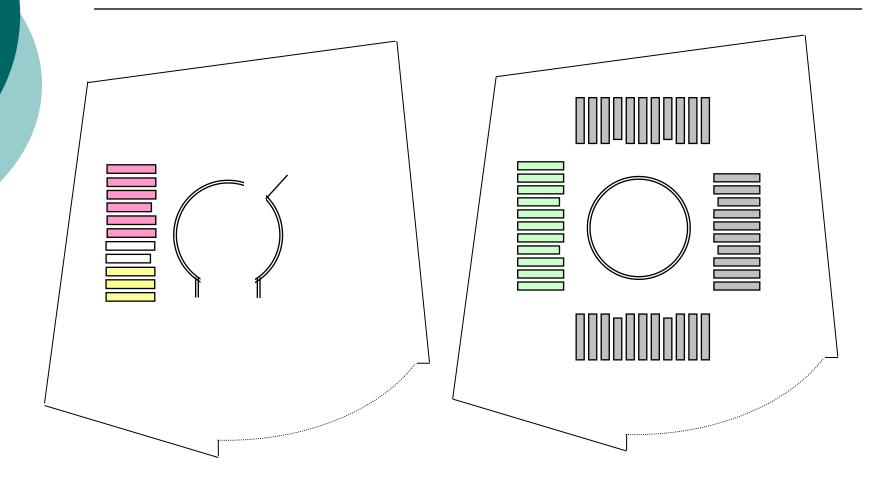
- Bearing in mind the basic characteristics of class indexing according to the DDC, the aims of the signage system for the classified arrangement on open shelves in the Library of Social Sciences are:
 - to make users always aware that the subject on which they seek information, or the document they want to retrieve, is within the context of classification;
 - to indicate the position of the shelves in the physical context of the library as well as in the conceptual context of the DDC;
 - to effectively display all the classified subjects of the works contained on each shelf;
 - to clearly identify the different sections of the Deweyclassified open shelves in the library.

- The particular structure of the Library of Social Sciences was seen as an opportunity to achieve the aims of the signage system.
- The library is a single, completely open environment: three floors with a lightwell in the middle around which the open shelves are arranged.
- Most of the library workstations which are equipped with computers and most of the users' tables where portable computers can be used are near the open shelves.

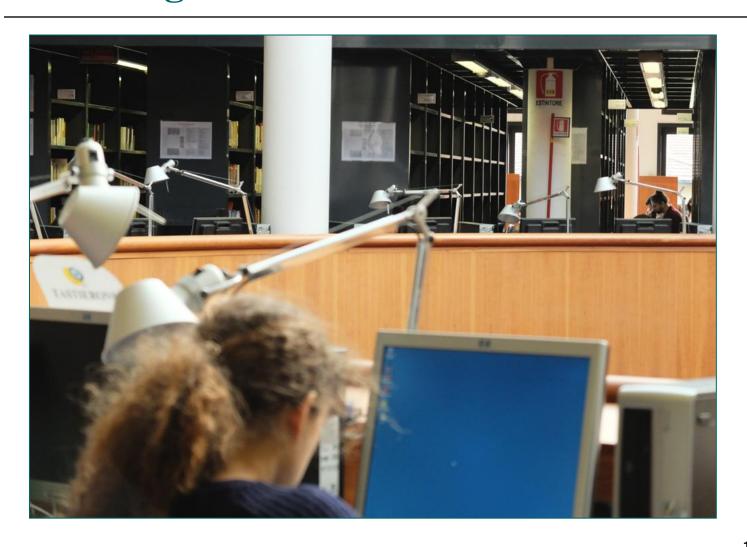




- The Dewey-classified shelves are on the ground and second floors and are divided into four sections:
- the two sections on the ground floor concern in particular the student's early years of learning (approx. 6,500 volumes);
- o the two sections on the second floor are devoted to specialized studies (approx. 90,000 volumes).
- In order to distinguish these four sections, the signage system uses the same colours as the book labels: yellow and pink for the sections on the ground floor, green and grey on the second floor.



- In a vast and open environment, the information contained in the signs on the end caps of the adjacent shelves can be considered integrable with one another: this is possible since users standing at various distances are able, in one glance, to take in several signs.
- The proximity between the devices for accessing the web and the shelves allows the floor plan shown on the library website to be placed in the real space: thus, the information on the website can be considered integrable with that which is physically on the end caps.



- The project involves the integration of information from different sources and proposes communication using:
 - the same medium: the sign on each end cap indicates its physical position and its semantic content in relation to the physical position and the semantic content of the adjacent shelves;
 - different media: the library website presents further information that integrates the information on the signs, presenting it so that it can be both further explored and also shown in a different way.
- The information on the library website is conceived for users who are physically *in the library*.

• In the years following the conception of this project, mobile devices such as tablets and smartphones have become very popular, as shown by these two images of the people in St. Peter's Square during the announcement of the new pope in 2005 and in 2013.



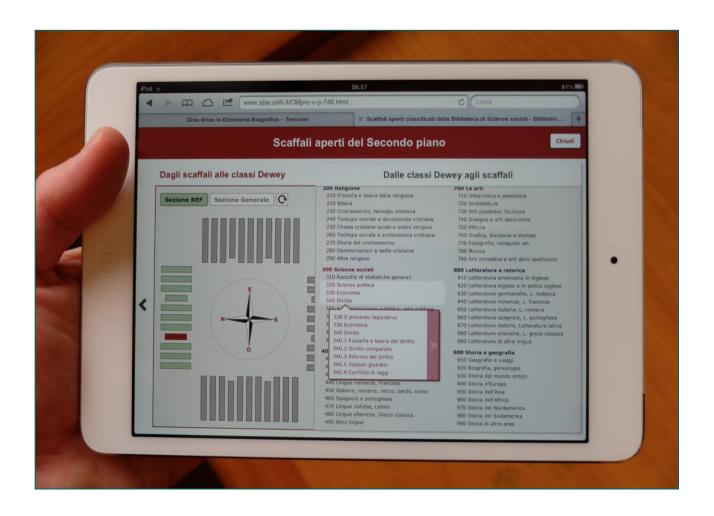


- Due to their portability, mobile devices are now even more suitable than computers for integrating the information on the website and the information physically present in the library.
- The possibility to access the Web while moving from shelf to shelf allows this project to be put into practice even in environments which are structurally different from the one for which it was designed.

The separation of information

• The signage system is based on the identification of three types of information, with different functions.

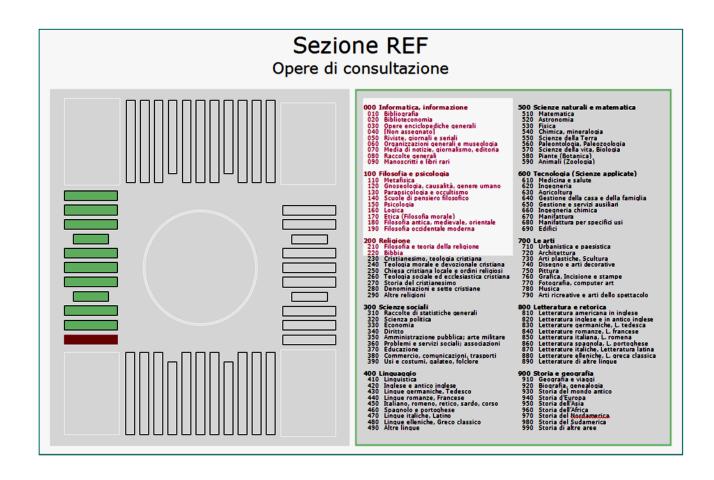
- Physical context
- Context of the conceptual organization
- 2. Content information
- 3. Location information.

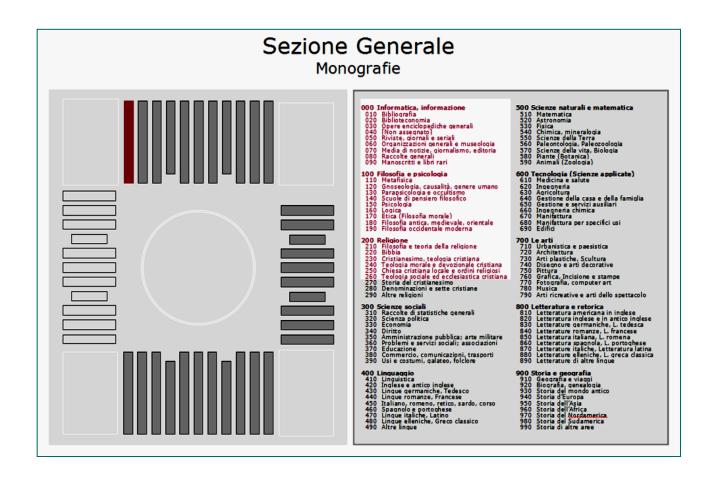


- The main function of the context information is *user orientation*: it is aimed at making users constantly aware that the subject on which they are searching information or the document they want to retrieve is included in the context of a classification.
- It expresses the basic characteristics of the Dewey Decimal Classification.
- Moreover, it indicates on which shelves of a library floor one can find the documents corresponding to the main classes and the divisions of the DDC.

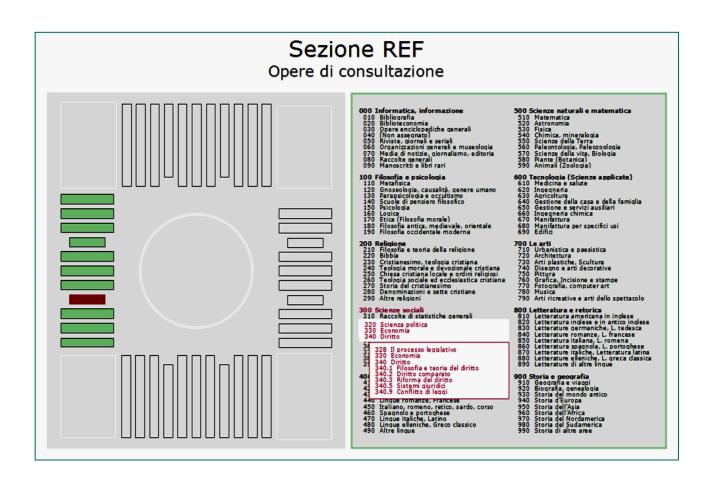
- The first element of orientation is the **physical context**: the representation of the shelf near which the user is or which the user intends to examine, in the context of the shelves of the section which is schematically represented in the plan.
- Next to the physical context, the context of the conceptual organization of each shelf is presented: the conceptual content of the documents of the shelf, highlighted in the context of the entire world of knowledge, represented by the DDC summary of the hundred divisions.

- *In the library*, the context information is presented with a sign in A3 format on the end cap of each shelf.
- In one half of the sign there is the representation of the shelf (in red) in the context of the section, in the other half there are the classes of the DDC summary of the divisions corresponding to the conceptual content of the documents of the shelf, highlighted in red.





- In several cases the classes expressed at the level of the division (two significant digits) are not sufficient to distinguish the conceptual content of a shelf from the adjacent ones.
- For this reason, it is possible for the summary of the divisions to be superimposed by a text box, with a list of classes and their descriptions which expresses the conceptual content of the shelf with greater specificity, even up to five digits.



280 Denominazioni e sette cristiane	780 Musica
290 Altre religioni	790 Arti ricre
300 Scienze sociali	800 Letteratu
310 Raccolte di statistiche generali	810 Letterati
-	820 Letterati
320 Scienza politica	830 Letterati
330 Economia	840 Letterati
340 Diritto	850 Letterati
2	
3 328 Il processo legislativo 3 330 Economia 3 340 Diritto	860 Letterati
330 Economia	870 Letterati
340 Diritto	880 Letterati
340.1 Filosofia e teoria del diritto	890 Letterati
340.2 Diritto comparato	900 Storia e
340.3 Riforma del diritto	910 Geografi
340.3 Riforma del diritto 340.5 Sistemi giuridici 340.9 Conflitto di leggi	920 Biografia
340.9 Conflitto di leggi	930 Storia de
	940 Storia d'
440 Lingue romanze, Francese 450 Italiano, romeno, retico, sardo, corso	
	950 Storia de
460 Spagnolo e portoghese	960 Storia de
470 Lingue italiche, Latino	970 Storia de
480 Lingue elleniche, Greco classico	980 Storia de
490 Altro linguo	000 Storia di

- Looking at the end caps of the shelves, library users can simultaneously see several signs.
- As their eyes move from one shelf to the adjacent one, the parts highlighted in red on the summary of the divisions seem to move, in a sequence similar to film frames.
- In this way the signage system aims to suggest that each shelf covers one part of the overall knowledge.

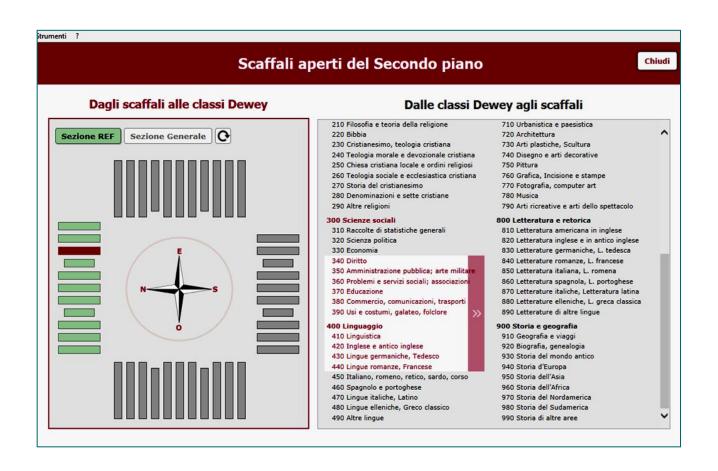


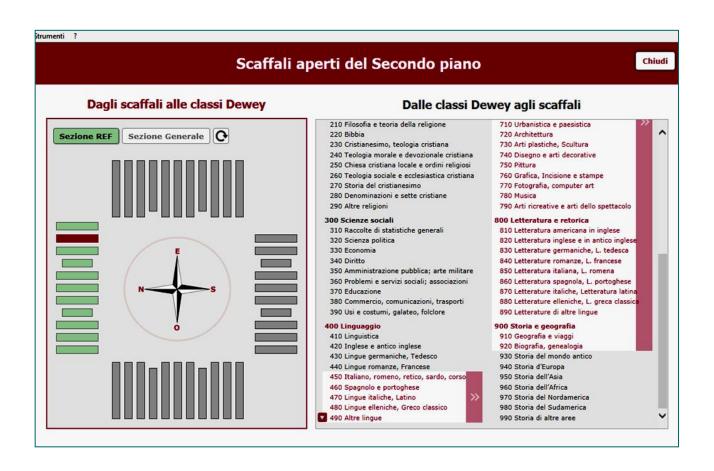


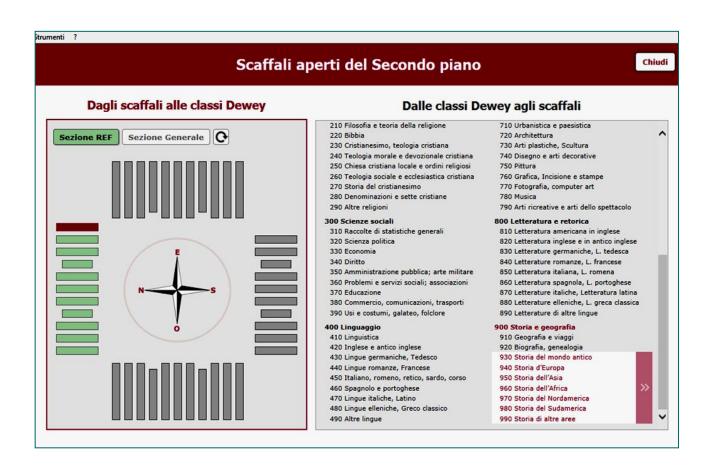




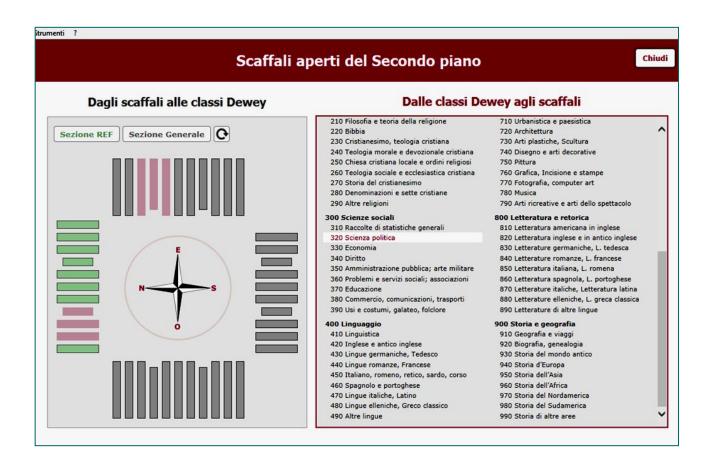
- The context information is also presented *on the library website*, with graphics similar to those of the signs on the end caps.
- O By clicking on the shelves represented on the floor plan, users can get the same effect that occurs physically in the library when looking at the signs on the end caps of the adjacent shelves.

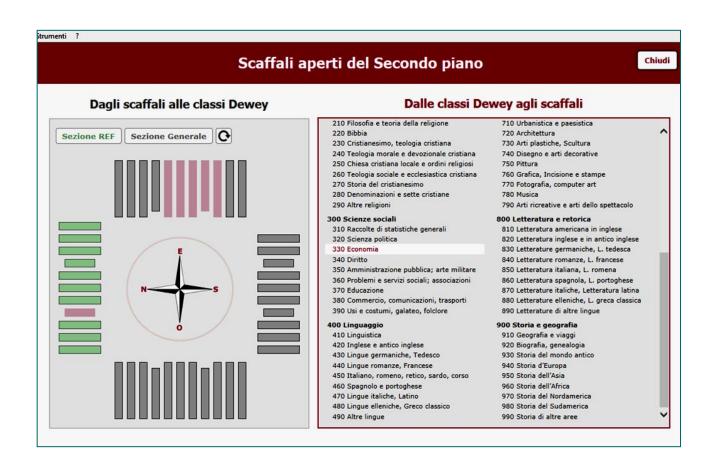


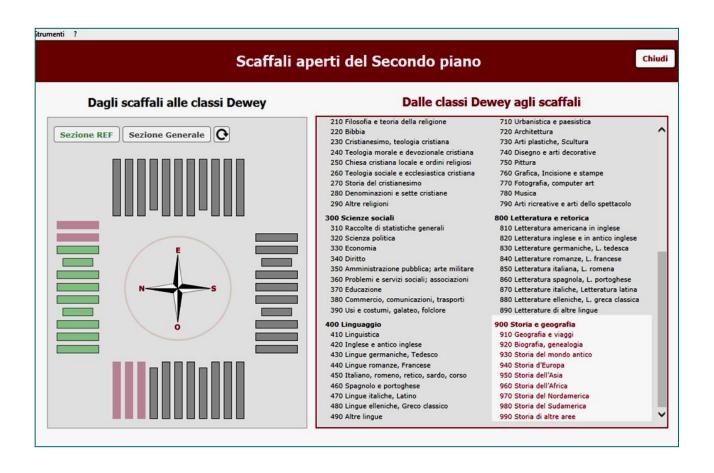


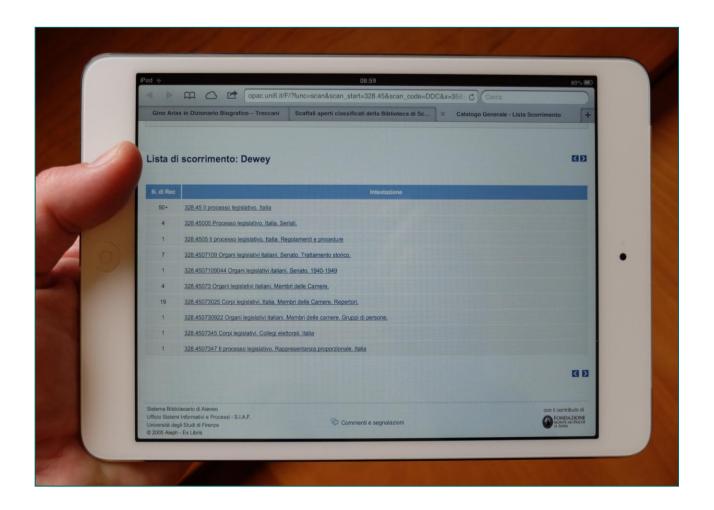


- On the website it is possible to indicate where the documents of a particular discipline are.
- This is a particularly important orientation, because this is the first question users ask when faced with a floor of open shelves, and it is a question which a conventional signage system applied to shelves cannot answer.
- O By clicking one of the classes contained in the summary of the divisions for example 320 Political science, 330 Economics, or the main class 900 History and geography users can see in light red on the screen, for all the sections of the floor, what and where the relevant shelves are.



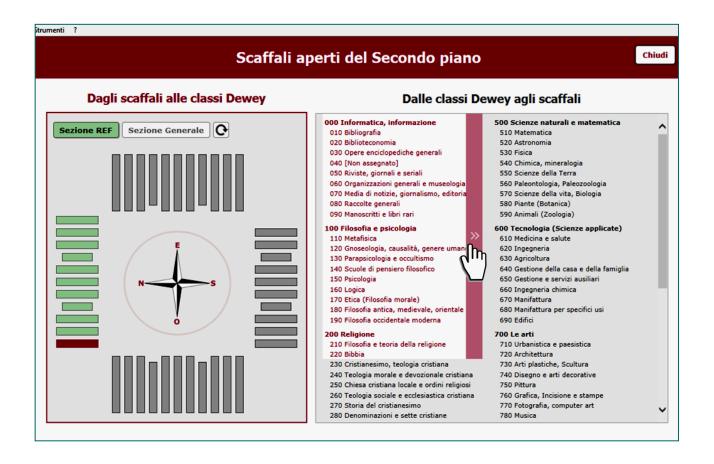


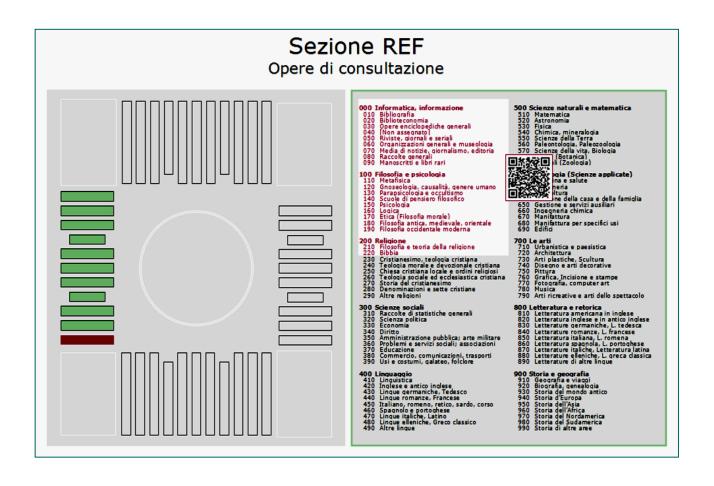




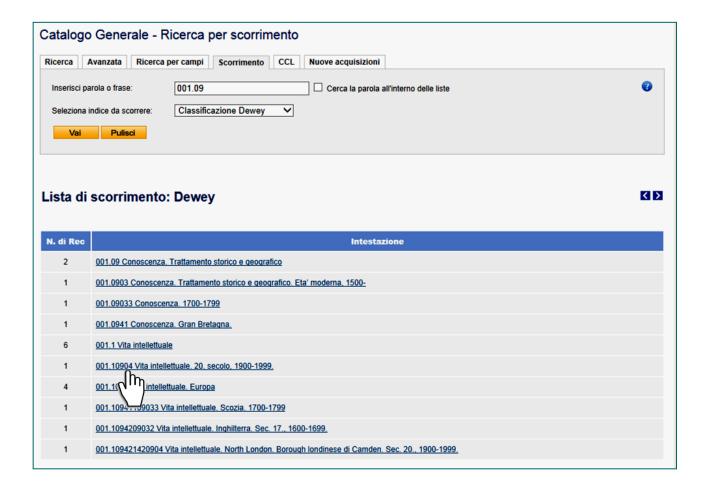
- Starting from the context information, the content information is displayed and the list of classes highlighted in the conceptual context information is explored in depth.
- The function of the content information is to list all the classified subjects assigned to the documents located on a particular shelf.
- O Together with the conceptual context, it represents the hierarchical organization established by the classification scheme for the classified subjects.
- The content information consists of the notations and their descriptions concerning the documents located on each shelf. That is data contained in the catalogue.

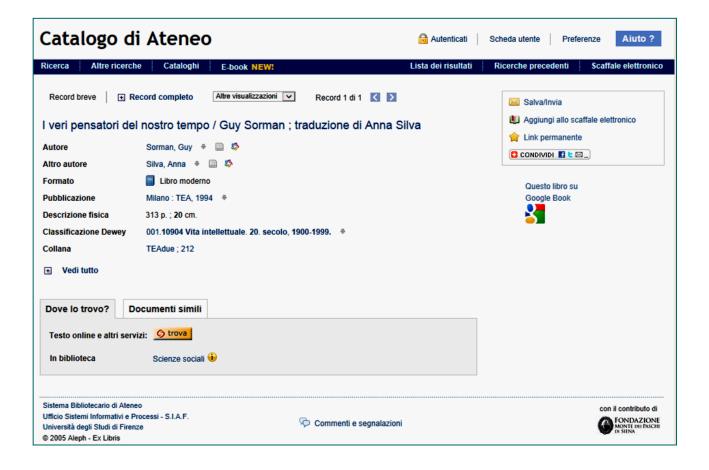
- The best place to obtain the content information is *the library website*, through direct access to the catalogue starting from the specific red bar relevant to the conceptual context information relating to a particular shelf.
- O Similarly, with the QR code a link to the catalogue is also obtained from each context information sign displayed on the end caps of the shelves *in the library*.





- The link to the catalogue presents a complete list of the notations and their descriptions relevant to each highlighted shelf in the context information.
- From this list, for each classified subject one can see the documents located on the shelf, check whether the documents are currently available or on loan, examine the complete records and search the catalogue further.





Content information Relationships between classified subjects

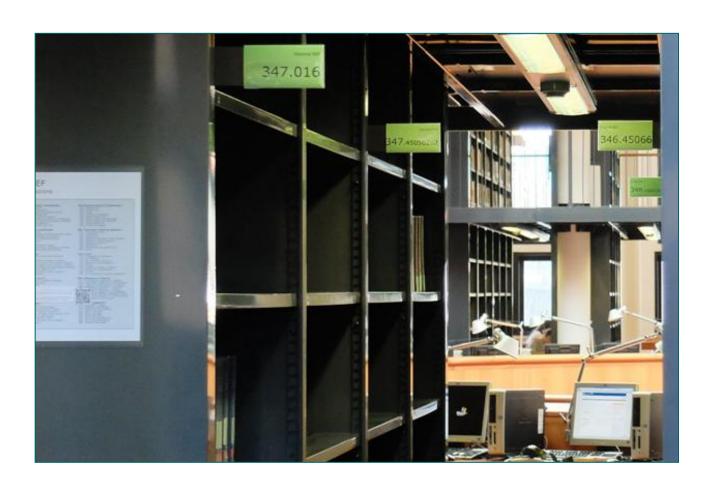
• The list of classified subjects is coherent with the classification structure because, following the principle of hierarchy, each classified subject involves all the superordinated subjects included in the classification.

This relationship, implicit in any notation, is made explicit in a hierarchic context as the list of notations and their descriptions, and it can therefore be grasped by users.

Content information Relationships between classified subjects

- In addition to its implicit relationships, each classified subject has relationships with other subjects, especially those which share one or more concepts within different disciplines.
- If these relationships are recorded in the catalogue, it is possible to give users the opportunity of a network of search paths that otherwise would not be evident due to the division by disciplines.
- For the signage system the link to the catalogue is the key for informing users of the presence of other documents that could interest them, classified with different notations.

Location information



Location information

- Location information facilitates the retrieval or the returning of specific items on shelves.
- O Its function is to provide reference points to be used as a starting-point for following the decimal number sequence on the book labels, up to the label bearing the classification number being searched for.
- It indicates the classification number with which one side of the shelf or a part of it begins.
- In the library two projecting panels are put, one at the beginning of the shelf and one half-way down, placed high up on each side and readable from either side.
- O The signs are made of fixed plastic supports and of removable elements of plastic laminated paper, on which the classified notations are printed. The background of the removable elements is of the same colour as the labels used in the corresponding section.

Information architecture

- O Since the earliest phase of the project, this signage system has been intended to achieve what is currently defined as cross-media communication.
- This signage is an integrated system in which integration regards firstly the media, and secondly the data.
- The data is the context information on the signs and on the website, and the content information in the electronic catalogue linked to the website.
- The data is from different sources but, however, convergent and coherent:
 - the list of notations and their descriptions in the catalogue converges, complementing it, with the conceptual context information on the signs and the website;
 - these signs and website images, being coherent with each other, provide users with a constant cognitive framework.

An atlas of classification

- This signage system aims to make class indexing effective, and therefore fully usable. For this reason it orients users towards the logic behind the shelf arrangement and can therefore be considered a form of user education.
- O User orientation requires spatial coordinates and conceptual coordinates: the spatial coordinates are detected shelf by shelf in the map of the sections of the library floor, the conceptual coordinates in the DDC summary of the divisions. The result is an *atlas of classification*, where the cartography is made of signs but also of images on electronic support, integrable with the images on the signs, and available online.

Signage for the electronic catalogue

- O The direct link between the information relating to the shelves in the website and the catalogue data restores visibility to the catalogue. Unlike the old card catalogue, the electronic catalogue is not material: it does not occupy space in the library. Many users tend to do without it, as if it did not exist or it were not necessary: the consequence is that a relevant part of the documentary offer of the library is known, and therefore used, only partially.
- o For the user who approaches the classified arrangement of the open shelves, the possibility to access the catalogue directly, keeps the door open to new searches: because of its material presence, the open shelf could be considered in turn signage for the electronic catalogue.

The in-progress project, at present

- At present, in the Library of Social Sciences the signs for the context information and the location information have been prepared and applied to half of the open shelves of the second floor.
- o The link to the catalogue has not been activated because in the OPAC, browsing by class cannot correspond to the documents of a particular shelf: the filters to identify the notations and their descriptions relevant to a particular section and to a particular shelf have yet to be defined. As a demonstration, in the website the links to the catalogue were activated only from the section REF.

The in-progress project, at present

- A Web application is being developed, the main routines of which have been realized.
- It is not yet available to the public, but it can be seen at: http://www.sba.unifi.it/CMpro-v-p-748.html>.
- The application was developed using JavaScript (jQuery library) and it can be used in a desktop environment with a screen/window resolution of not fewer than around 1000 pixels.
- The adaptation for mobile devices is in development.

The in-progress project, at present

- The display for the web application is divided into two functional areas, which alternately act as *exploration* and *display of the results of the exploration*; a red frame indicates the functional area which acts as exploration.
- O In the left functional area, the exploration 'From the shelves to Dewey classes' allows the user to analyze the sections on the floor from shelf to shelf, showing on the right the context information and the content information relating to each shelf.
- O In the right functional area, the exploration 'From Dewey classes to the shelves' indicates, for each class of the DDC Table, the relevant shelves in all the sections on the floor, highlighted on the left in light red; they can then be analyzed by activating the exploration 'From the shelves to Dewey classes' in the left functional area.

Thank you!

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