

# Bulgarian Catholic Books (1878-1944): A Digital Bibliographic and Geographic Information System Platform in Pursuit

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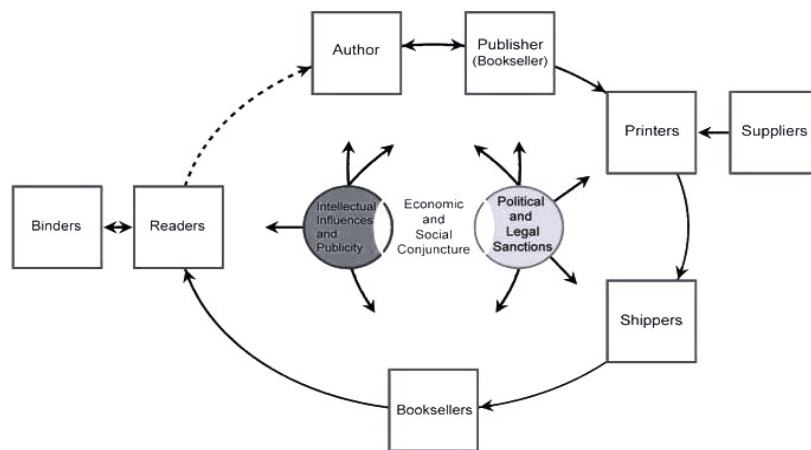
**Abstract.** This paper deals with the structure and the ongoing technological development of a digital bibliographic product dedicated to Bulgarian Catholic books published between 1878 and 1944. It examines the structural components of the bibliographic repertoire and their functionalities as a matter of the user interface. It also explores the analytical capabilities and potential of the system's functions as a tool in cross-disciplinary research in Book History, particularly in the context of bibliographic analysis and publishing trends.

**Keywords:** Bulgarian Catholic Book Printing, 1878-1944, Digital Bibliographic Repertoire, GIS, Book History.

## 1 Introduction to Book History Digital Projects

It is essential to present the theoretical principles upon which it is based to ascertain the necessity, benefits, and applications of digital technologies in a given scientific discipline. Book history is a relatively young scholarly field that is focused on the factors that have directly and indirectly impacted the development of the written and printed word. The field combines a complex set of methodological approaches that aim to elucidate the book's manifold appearances and social functions in specific societies and periods. The discipline of the History of the Book provides the necessary framework for examining a wide range of aspects, including the communication between author and publisher, publishing practices and technological processes, the distribution of the raw materials, and the influence of technological innovations and shortcomings on the quality of publishing outcomes. Additionally, it addresses book distribution networks and the overall logistics of the book trade sector, as well as reader reception and public response to certain literary works. These broad thematic areas invariably reflect the

socio-political and intellectual climate of the period and the specific conditions that were prevalent during that historical era. (Darnton 1982, 68; Darnton, 2007)



**Fig. 1.** Darnton's Communication Circuit, Darnton, Robert. (1982). "What is the history of books?". *Daedalus* 111(3), 68.

At the close of the 20th century, the concept of utilising Geographic Information Systems (GIS) in the field of Book History was introduced. The scholars proposed that by mapping the locations of authors, publishers, printers, and distributors, a more profound comprehension could be achieved, as it would reveal the interplay between these pivotal entities in the printed word system. (Black et al., 1998) The hypothesis presented by the authors who's application is still actively discussed (Black, Martin & MacDonald, 2021) was well accepted by researchers and successfully employed shortly thereafter in several large-scale research national and European projects related to book history. The further development of the GIS as a tool in Book History and other major literary studies. (Ogborn & Withers 2010; Gregory et al., 2014) The integration of Geographic Information Systems (GIS) into scientific research has been shown to enhance the depth and interdisciplinary nature of research in the humanities. This successful multidisciplinary approach is exemplified by Charles Travis's book, which details the most prominent humanities projects that incorporate the utilisation of spatial and geographical data. (Travis, 2015) The evolution of science, driven by geographical systems, can be traced from its inception to the present through the Esri GIS Bibliography information system, which aims to collate scientific achievements based on GIS. (Esri)

One particularly notable project was Bibliopolis, which created an online database of the national history of the printed book in the Netherlands between 1460–1910. (Delft, 2004) Another successful initiative is The Atlas of Early Printing, which offers a GIS platform allowing researchers to study the history of early printing in Europe during the second half of the fifteenth century. (The Atlas, 2014)

Foreign projects in the book history field that have been undertaken include the University of Oxford's The 15cBOOKTRADE Project (ERC 2014-2019). The objective of the project is to trace the provenance of incunabula (1450 to 1500 ) present in library collections by means of geographical visualisation. The project's database comprises a comprehensive set of data pertaining to the commercial prices of incunabula, their distribution within the market, ownership information, illustrations, paratexts, and other elements associated with layout and marginalia. (Xing et al., 2023)

In the last decade, a plethora of digital projects have come to the fore in the realm of Bulgarian humanities and book history, exhibiting sufficient scientific potential. A pioneering example is the project entitled “History of the Bulgarian Book from the Liberation to the Independence (1878–1908)” (DMU 03/50). This project comprises an interactive map that reflects various parameters, qualitative, and quantitative aspects of the Bulgarian book, including the number of published books, publishers, and bookstores. Notably, it was the first project to introduce GIS to meet the specifics of Book History in Bulgaria by incorporating a substantial empirical material of 15,800 bibliographic records of books. (Zagorov & Boyadzhiev, 2013)

The most up-to-date work in the field is the project “Digitisation of the Repertoire of Books from the Bulgarian Revival (1801–1878)” DN 05/2. This project reflects the most contemporary shifts in the digital development in Book History and Bibliography. (Knigopis, n.d.) The main product comprises a Bibliographic Information Retrieval system and a Geographic Information System (GIS) of the old-printed Bulgarian books published between the beginning of the 19th century and the Liberation of Bulgaria (1800–1878). (Zagorov, 2019; Zagorov & Encheva, 2022) The GIS has also been found to be suitable for different Library Science initiatives. For example, a relevant scientific project from last year aims to combine in one system all ongoing and completed digital library projects in Bulgaria. (Yancheva, 2024)

## **2 Bulgarian Catholic Books (1878-1944) Digital Bibliographic Repertoire and GIS Components**

The present project pertains to a new and hitherto unexamined research topic of significance to the contemporary Catholic religious group in Bulgaria. (Angelova, 2024) The project, akin to the aforementioned examples, involves the development of an online platform to reflect the geographical distribution and to systematise bibliographic information on books related to Bulgarian Catholics. In the context given, the key points that are necessary for the creation of a successful and scientifically applicable digital product in this field can be defined as follows:

- A clear methodology, objectives and chronological period of the scientific problem;
- A prototype of the digital platform based on the theoretical formulations in the field and previous experience;
- A detailed preliminary systemised bibliographic data covering the given chronological span;

- A set of technological tools to implement in the prototype in digital environment.

The majority of in-depth research on the subject of Catholic literary heritage has centered on the distinctive features of the language in the early stages of the development of the Catholic manuscript and printed tradition of the 17th-18th centuries. (Tsonev, 1929; Stoyanov, 1957 – 1958; Dinekov, 1980; Stantchev, 1995) The linguistic heritage of Bulgarian Catholics has been the subject of detailed study by Ljubomir Miletić and Mariana Cibranska-Kostova. (Miletić, 1900; Cibranska-Kostova, 2016) In the context of contemporary research, Magdalena Abadzhieva has made significant contributions to the field. Her most recent monograph focuses on the Catholic literary culture during the Bulgarian Revival in the 19th century. (Abadzhieva, 2020; Abadzhieva, 2024)

Regarding to the research framework, there is a notable absence of studies examining the authorship, publication, printing and comprehensive geographic distribution of Catholic texts in Bulgaria during the period spanning from 1878 to 1944. The factors that predetermined the appearance of certain texts in our spiritual space are not well understood. Furthermore, the historical and social mechanisms that rendered them visible to publishers and printing houses remain obscure.

In the book history field a significant issue pertaining to the subject has been identified by Vasil Zagorov and Plamena Zlatkova who's research showed an existing deficiency in bibliographic data of Catholic books after 1878 until 1913. The hypothesis concerning so-called "bibliographic blind spots" is of particular relevance to the analysis of book production across the Strandzha region. It is asserted that the lack of bibliographic evidence is attributable to the region's late accession to Bulgaria in 1913. (Zagorov & Zlatkova, 2016) A number of Bulgarian editions from the Adrianople Catholic School (Kertev, 1936; Georgiev, 2016) were discovered and continue to be found in the repositories of various Catholic dioceses, which are not currently recorded in the Bulgarian National Bibliography. The absence of these books was determined by cross-checking reference sources containing the most complete data on Catholic books. Specifically, the cross-checking was done in the Nine-volume Repertoire Bulgarian Books 1878-1944, the Catholic Calendar SS Cyril and Methodius (1936), and the electronic catalogue of the National Library SS Cyril and Methodius, which claims to comprise the printed production published in Bulgaria so far.

In the context of bibliographic completeness and the visualisation of data, a functional framework is proposed for the display of each individual bibliographic record. The following components are to be included in each record:

- A primary record view for the bibliographic and additional information on the physical characteristics of each record, including the language, font, print colour, price, and references to the individual numbering in the various references;
- An International Standard Bibliographic Description (ISBD) section for each book. The use of the ISBD is intended to utilise bibliographic information when citing or using it when compiling new reference resources;
- A section containing a record of the Machine-readable Cataloguing 21 (MARC 21) bibliographic format by which descriptive fields and subfields numbers and

tags are marked, following the elements in the bibliographic record. The use of the format is useful in order to increase utilisation. MARC 21 can be downloaded and applied as metadata to other databases and platforms or used in the cataloguing process in library institutions;

- Concerning the geographical parameters, all entered bibliographic records are intended to be topographically visualised using GIS, which contains a set of filters that increase the analytical potential of the bibliographic database. As highlighted, the availability of GIS is one of the primary objectives of the project concept, and through it, it will be possible to clearly differentiate the Catholic publishing centres in Bulgaria.

To achieve the desired outcomes, a range of technologies are to be integrated into the system. The backend is built on PHP, running on Apache or Nginx servers, with features designed to manage user selections and resource requests. Front-end interactivity is powered by jQuery. Key technologies include SSL for secure data transmission, a CDN to optimise content delivery speed, and Google Maps integration, which will help users locate relevant locations of the bibliographic data. An example of a successful Bulgarian system actively used by researchers, based on similar technological solutions, is the Bibliography of the Bulgarian Revival Books (1801 – 1878). (Knigopis, n.d.)

### **3 Digital Bibliographic Platform Content and its Analytical Features as a Research Instrument**

The bibliographic database contains a relatively small number of monographs, records, offprints and editions that are released as annuals (yearbooks, almanacs, reports, anthologies) without clear affiliation to either monographic or serial publications. Preliminary projections for the total number of records at this stage of the project suggest that bibliographic records will not exceed 500 items, although this number is still subject to fluctuation. Currently, 388 books have been bibliographically retrieved and systematised, some of which do not appear in the Bulgarian retrospective bibliography. These editions were discovered during visits to the libraries of the Catholic Diocese of “St. John XXIII” for the Eparchy of Saint John XXIII of Sofia for Catholics of the Byzantine-Slavic rite in Bulgaria, and the Monastery of the Holy Eucharist Sisters in Sofia. It is expected that the quantity of newly discovered editions will further increase as visits to libraries in the region of Malko Tarnovo, Burgas and Plovdiv are planned.

Regarding navigating the bibliographic database and GIS, two functionalities are provided: a search engine and faceted filters. The search engine allows for the undertaking of basic and advanced queries. The advanced search terms correspond to each component of the bibliographic description, including the main title, parallel title, language, authorship, source (i.e. whether the authorship is identified by the imprint of the book or by a secondary source), number of volumes, place and date of publication, publishing house, series title, sub-series title, format, print color, currency, and so forth.

Two standard horizontal filters have been integrated to facilitate the organisation and display of results. The first pertains to the number of results displayed on each page

(25, 50, 100), while the second has a relevance function that enables the ordering of books according to their year of publication and page count, as well as their author and title. The latter can be arranged in both alphabetical and reverse alphabetical orders.

The vertical multi-faceted filter is comprised of three categories of filtering options: firstly, a chronological slider that enables the user to set the desired range for the list of search results; following, standard filters with checkboxes of different values; and finally, an option for additional refinement and analyticity of the results (section 'Other'), which are indexed individually by specialised indicators in the bibliographic records per se. The criteria used to filter the search results are as follows: year of publication, authorship, place of printing, and language. The predicate values are displayed in detail and can be selected using checkboxes, which include author names, cities, font types, and languages currently in the database.

The 'Other' filter provides additional attributes, including bibliographic references, digital copies, hyperlinks to the National Library e-catalogue, illustrations, maps, portraits, binding, typography, price, title page images, censorship, and more. All of the above system search and filtering options can be combined quite effectively, without limit on the combinations. The results of the user query are visualised in the main departments of the platform, the bibliographic database and the GIS.

## 4 Conclusions

The paper set out the methodology of the Bulgarian Catholic Books (1878-1944) project in the context of the digital platform's current prototype and adaptation stage. Moreover, the information infrastructure of the future digital product has already been approved as a relevant and flexible research tool in the field of Book History, aligning with current trends and requirements in digital humanities.

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