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The Cultural Heritage of Printing in the 15-18th Centuries as Digital Resources – a Reconnaissance

ABSTRACT

Digitization as an element of technological development has contributed to the removal of many information barriers related to access to the achievements of writing and printing culture. Thanks to numerous programs of developing and subsidizing work on intellectual property, digital libraries, museums and archives have been created, offering access to their collections online. Digital forms of priceless manuscripts, old prints, documents of social life and other manifestations of culture are not only a way of conservation and preservation of the originals or the presentation of library magazines, but also sources for research. The content of the Digital Library Federation – DLF, which associates 138 data providers, will be used as an example of digitized old prints along with ways of describing, searching, displaying results and special add-ons that make their use simple and effective. As a result of the research, 38,629 items marked as old prints were found in the database, supplied by 38 institutions, the most numerous being those provided by the Jagiellonian Digital Library and the Lower Silesia Digital Library, with the predominance of 18th and 17th century and Latin and Polish prints.

KEY WORDS: old print, digital library, metadata, search

STRESZCZENIE

Dziedzictwo kultury druku XV-XVIII w. w zasobach cyfrowych – rekonstruans

Cyfryzacja jako element rozwoju technologicznego przyczyniła się do zniesienia wielu barier informacyjnych związanych z dostępem do osiągnięć kultury pisma i druku. Dzięki licznym programom opracowywania i dofinansowywania prac nad dorobkiem umysłowym, znajdującym się w zasobach m.in. bibliotek, powstały biblioteki, muzea i archiwa cyfrowe, oferujące dostęp do swoich zbiorów z poziomu internetu. Formy cyfrowe bezcennych rękopisów, starych druków, dokumentów życia społecznego i innych przejawów kultury są nie tylko zabezpieczeniem i ochroną oryginałów czy też prezentacją bibliotecznych magazynów, lecz także źródłami do badań. Na przykładzie zawartości zasobów Federacji Bibliotek Cyfrowych, zrzeszającej 138 dostawców danych, przedstawiony zostanie zasób zdigitalizowanych starych druków oraz sposoby ich opisywania, przeszukiwania, wyświetlania wyników, a także dodatki specjalne, dzięki którym korzystanie z nich jest proste i efektywne. W wyniku badań w bazie stwierdzono obecność 38 629 obiektów oznaczonych jako starodruki, dostarczonych przez 38 instytucji, przy czym najliczniej udostępniane przez Jagiellońską Bibliotekę Cyfrową oraz Dolnośląską Bibliotekę Cyfrową, z dominującą przewagą druków XVIII- i XVII-wiecznych oraz łacińsko- i polskojęzycznych.

SŁOWA KLUCZE: stary druk, biblioteka cyfrowa, metadane, wyszukiwanie

The printing culture, whose dynamic development was initiated by Johannes Gutenberg's invention, continues to evolve – from single, very low-volume and very costly first editions, through mechanization, automation and increasing accessibility, to on-demand printing – and it has gained new allies in making its output available: digitization and the Internet.

The chances and opportunities offered by the digitization of cultural material are not only to increase accessibility and reach more users and audiences, but also to secure resources that are often invaluable. The presence of copies – whether in the initial phase in the form of microfilms, photographs, or scans saved on external media, or nowadays in the form of digitized copies available online – has reduced the need for direct access

to priceless cultural monuments not only in manuscript and print, but in all its manifestations.¹ Both the libraries and the archives reserve in their terms of use that if a digital copy is held, the original documents or prints shall not be made available to users.²

A special kind of library resources are old prints, for which the year 1800 is the time caesura adopted in Poland, and their earliest variety are the *incunabula* (published until 1500).³ The preserved, especially the oldest and the most popular prints of their time, in single copies, require special protection and security for future generations. In addition to adapted storage and accessibility rules, it is becoming increasingly common for digital copies to be made and placed in the resources of digital libraries, where they can be used for scientific, teaching and dissemination purposes, with appropriate exposure and a full bibliographic description. At the same time, the add-ons and facilities offered by the mechanisms of digital libraries and the growing availability of the Internet⁴ allow for comfortable use of digital versions.

- 1 In addition to the benefits of digital libraries, digitization increasingly is used by museums, for example, The Palace Museum of King John III Sobieski in Wilanów (cf. *System Informacji Przestrzennej Muzeum Palacu Króla Jana III Sobieskiego w Wilanowie*, <http://gis.muzeum-wilanow.pl/gis/>, access: 15.06.2019), Muzeum Zamkowe w Malborku (cf. muzeumzamkowemalborku.wkraj.pl, <https://muzeumzamkowemalborku.wkraj.pl/html5/index.php?id=34844#69093/353,-2>, access: 15.06.2019) and archives, e.g., Narodowe Archiwum Cyfrowe (cf. *NAC. Archiwum Cyfrowe*, <https://www.nac.gov.pl/>, access: 26.06.2019) and the Search the archives website (cf. *Szukaj w archiwach*, <https://www.szukajwarchiwach.gov.pl/>, access: 26.06.2019).
- 2 E.g. a provision in the Regulations on the use of the National Library's collections which is an annex to the Order No. 82/2018 of the Director of the National Library of 23 August 2018: "6. The Library's collections are made available in the form of a copy (microfilm or digital reproduction), or the original if no copy is available" (<https://www.bn.org.pl/download/document/1535200550.pdf>, access: 20.06.2019), while in the Regulations of the Jagiellonian Library, "4. The originals of microfilmed, digitized and facsimile editions are not available. Microfilms and digital copies from the Section collections are made available in the Audiovisual Document Reading Room. In the case of persons who prepare editions of texts, it is possible to make the original available" (*Regulamin_BJ_2017*, https://bj.uj.edu.pl/documents/4148353/135333180/Regulamin_BJ_2017.pdf/73c477b2-2b81-4dec-9cae-660bfbebf7c, access: 20.06.2019, and the Regulations on Making the Special Collections Available to the Scientific Library of the Polish Academy of Sciences and the Polish Academy of Sciences in Krakow in force since 1 June 2018 it is stated: | "2.5. In the case of microfilmed or digitized works, originals are made available only in exceptional circumstances with the permission of the Head of Special Collections or the Director of the Library" (*reg_zb_spec.*, http://149.156.51.45/pliki/reg_zb_spec.pdf, access: 20.06.2019).
- 3 H. Mieczkowska, *Stare druki*, in: *Encyklopedia książki*, Vol. 2, K-Z, eds. A. Żbikowska-Migoń, M. Skalska-Zlat, Wrocław 2017, pp. 546-550.
- 4 According to the data of the Central Statistical Office (GUS), in 2018 the percentage of people using the Internet was 77.5% and 84.2% of households had access to the Internet (detailed data

The subject of this article is to present selected resources of old prints, present in Polish digital collections,⁵ presented on the example of the content of the multi-search engine of the Digital Libraries Federation (further on: DLF)⁶ co-created by 138 institutions and sharing 6,362,572 items, including 4,947,581 as open access, 4,001,074 journal files in total, 1,052,661 articles, 361,615 books and 20 other types of items.⁷

To analyze the old print resources on the Internet using elements of data mining, bibliomining, quantitative and content analysis methods, the FBC multisearch was used, allowing to search the abundant resources through simple search (according to six fields: full description, title, author, keywords, object type, identifier) and advanced (selection from 18 elements) searches: all fields, title, author, subject and keywords, description, publisher, contributor, date, resource type, format, resource identifier, source, language, links, scope, rights, journal title,

in the report: *Spoleczeństwo informacyjne w Polsce w 2018 roku*, <https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2018-roku,2,8.html>, access: 20.06.2019).

- 5 More on digital libraries, cf. e.g.: *Biblioteki cyfrowe*, eds. M. Janiak, M. Krakowska, M. Próchnicka, Warszawa 2012; *Digitalizacja piśmiennictwa*, ed. D. Paradowski, Warszawa 2010; A. Januszko-Szakiel, *Narodowy program długoterminowej archiwizacji cyfrowego zasobu nauk i kultury – propozycja dla Polski*, in: *Wokół zagadnień trwałej ochrony zasobów cyfrowych*, ed. A. Januszko-Szakiel, Kraków 2013, pp. 173-199; M. Kowalska, *Digitalizacja zbiorów w bibliotekach polskich – próba oceny doświadczeń krajowych*, “Biuletyn EBIB,” Iss. 11/2006 (81), <https://repozytorium.umk.pl/bitstream/handle/item/410/EBIB.pdf?sequence=1> (access: 29.06.2019); *Kultura cyfrowa – digitalizacja*, <http://www.digit.mkidn.gov.pl/> (access: 29.06.2019); A. Lewandowska, M. Werla, *Jak czytelnik porusza się po bibliotece cyfrowej? Analiza wzorców zachowań 2009*, <http://lib.pnsc.pl/dlibra/docmetadata?id=223&from=publication&showContent=true> (access: 07.07.2019); B.M. Morawiec, *Biblioteki cyfrowe. Tworzenie, zarządzanie, odbiór*, Gliwice 2016; Z. Osiński, *Biblioteki i archiwa cyfrowe nową formą udostępniania źródeł do badań nad dziejami najnowszyi Polski*, “Folia Bibliologica” 2013/2014, Vol. LV/LVI, pp. 75-89; G. Piotrowicz, *Cyfrowa konwergencja bibliotek, archiwów i muzeów w erze informacji*, in: *Dobra kultury w Sieci*, eds. E. Herden, A. Seidel-Grzezińska, K. Stanicka-Brzezicka, Wrocław 2012, pp. 23-39; R.T. Prinke, K. Wislocki, *Cyfryzacja bibliotek: początki i teraźniejszość*, in: *Biblioteki i archiwa na jednolitym rynku cyfrowym*, eds. K. Chałubińska-Jentkiewicz, K. Kaka-reko, J. Sobczak, Poznań 2018, pp. 7-26; *Program digitalizacji dóbr kultury oraz gromadzenia, przechowywania i udostępniania obiektów cyfrowych w Polsce 2009-2020*, <https://www.nck.pl/badania/raporty/program-digitalizacji-dobr-kultury-oraz-gromadzenia-przechowywania-i-udostepniania-> (access: 29.06.2019); A. Trembowiecki, *Digitalizacja dla początkujących*, Warszawa 2014; A. Wałek, *Standardy metadanych w polskich bibliotekach cyfrowych i wybranych projektach międzynarodowych*, in: *Dobra kultury w Sieci*, op. cit., pp. 81-90; M. Werla, *Web 2.0 i (polskie) biblioteki cyfrowe*, “Biuletyn EBIB,” Iss. 2 (129)/2012, http://www.ebib.pl/images/stories/numery/129/129_werla_.pdf (access: 30.06.2019).
- 6 *FBC – zbiory polskich instytucji kultury on-line*, <https://fbc.pionier.net.pl/> (access: 20.06.2019).
- 7 *Archiwum baza źródeł danych—Federacja Bibliotek Cyfrowych*, <http://fbc.pionier.net.pl/prozrodla/?mode=stats#statsheader> (access: 20.06.2019).

place of publishing and their combinations), allowing you to combine up to five criteria and use Boolean operators. Additional filters allow narrowing the results obtained (availability of the item – open access, scheduled for digitization, restricted access; license – public domain, reserved rights, Creative Commons – BY-NC-ND, Creative Commons – BY-NC-SA, Creative Commons – BY-ND; date range; type of content – magazine, article, book, document of social life, photography, music, old print, manuscript, postcard, graphics, Doctoral dissertation, archive document, map, image, official document, sound document, drawing, electronic document, file, video document, thesis, dissertation, other; language – 87 types; data provider – 138 contributors).

Initially, two queries were used: “Old printing” and “old print”⁸ produced the following results: in the first case – 15,492, in the second – 55,025.⁹ The second result, where filtering was applied, was adopted for further action. The following was obtained:

- item availability: open access – 51,660, planned to digitize – 3,176, limited access – 189;
- license: public domain – 41,958, rights reserved – 13,062, Creative Commons BY-NC-ND – 2, Creative Commons BY-NC-SA – 2, Creative Commons BY-ND – 1,
- the date ranges from 1 to 2019 – refillable (detailed analysis of the criteria further on).
- content type: old print – 41,497, magazine – 4,200, book – 4,128, document of social life – 3,078, official document – 348, graphics – 314, articles – 202, figure – 175, musical items – 104, archive document – 96, manuscript – 90, photo – 29, map – 9, electronic document – 6, file – 2, Ph.D. thesis – 2, other – 744;
- language (chunks of over 100 results): Latin – 23,509, Polish – 18,794, German – 13,916, French – 2100, Old Greek (until 1453) – 681, Italian – 662, Hebrew – 179, English – 158, other languages – 52;
- data provider (chunks above 1000 results): Jagiellonian Digital Library (hereinafter: JBC) – 8,965, Lower Silesian Digital Library (hereinafter: DBC) – 7,764, CBN Polona (hereinafter: CBNP) – 7,290, Digital Library of Wielkopolska (hereinafter: WBC) – 6,189, Digital Library of Wrocław University (hereinafter: BCUWr) – 5,761, West Pomeranian Digital Library “Pomerania” (hereinafter: ZBC) – 4,428, the Pomeranian Digital Library (hereinafter: PomBC) – 2,766, the Elbląg Digital Library (hereinafter: ECB)—2,488, Digital Repository

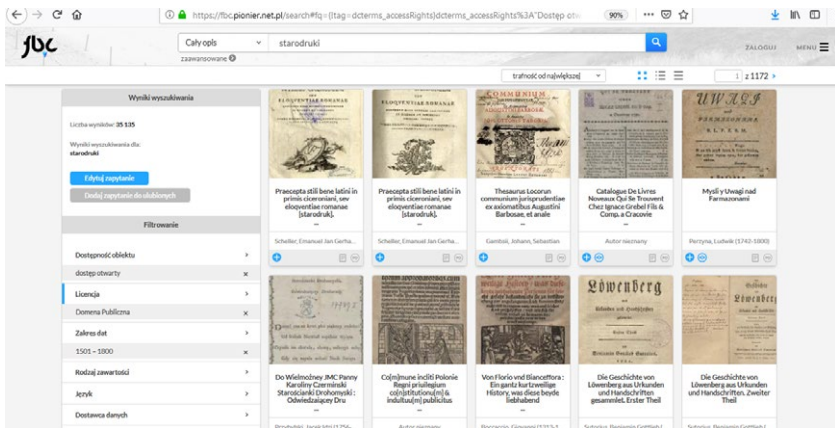
8 H. Mieczkowska states the term “old print” is incorrect (Cf. H. Mieczkowska, *Stare druki*, op. cit., p. 546).

9 Statistical data from 8 July 2019.

of Research Institutes (hereinafter: RCIN) – 1,366, Silesian Digital Library (hereinafter: ŚBC – 1296).

The next step was to narrow down the results according to the criterion of content type of “old print,” which reduced the number of results to 41,497, including the availability of: “Open access” – 38,626, “restricted access” – 3, total – 38,629.¹⁰

Figure 1. Presentation of search results

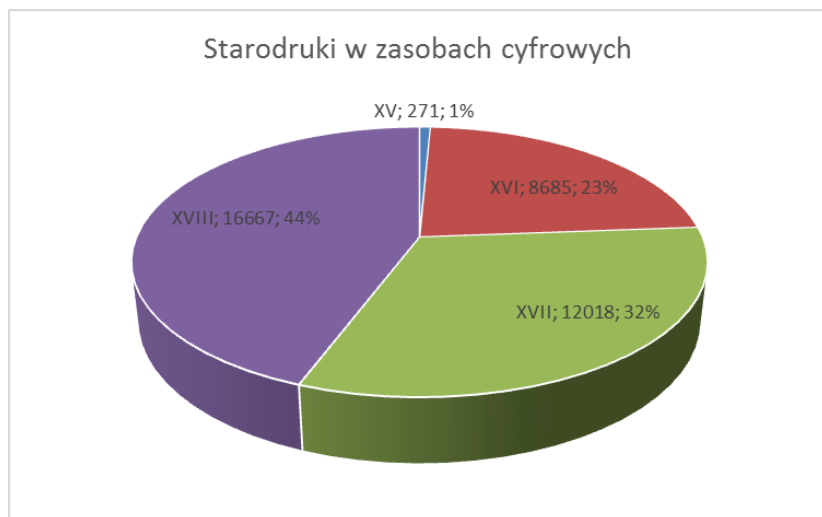


Source: https://fbc.pionier.net.pl/search#fq={!tag=dcterms_accessRights}dcterms_accessRights%3A%22Dost%20otwarty%22&fq=date%3A%5B1501-01-01T00%3A00%3A00Z%20TO%201800-12-31T23%3A59%3A59Z%5D&fq={!tag=dcterms_license}dcterms_license%3Amark%3Astarodruki.

When 38,629 items had been selected from the FBC resource, date range filtering was applied, separating them into four time groups (per century): 15th (1401-1500), 16th (1501-1600), 17th (1601-1700) and 18th (1701-1800). All statistics were limited to displaying the five most numerous teams. The 18th century was the best represented – 6,667 items (44% of the surveyed resource), the earlier the release date, the smaller the number of items: 17th century – 12,018 (32%), 16th century – 8,685 (23%), and 15th century – 271 (1%). The above data is showed in Graph 1.

10 The difference of 2868 were titles planned to be digitized.

Graph 1. Old books in digital resources



Source: the author's compilation based on data from FBC.

In the present resource of 38,626 items made available in an open access, 3 – limited access; according to the criterion of licenses – 29,385 in the public domain, and 9,244 had rights reserved. Among the 54 languages present in the resource, 18,343 items were in Latin language, 11,528 in Polish, 9,316 in German, 1,624 in French, and 623 in Old Greek. With 38 data providers, the highest score belonged to the JBC at 7,491 items, DBC at 6,073, WBC at 4,767, BCUWr at 3,928, and PomBC at 2,720. Overall, more than 5,000 items were provided by two institutions, in the intervals of 1,001-5,000 by 7 institutions, 101-1,000 by 16 institutions, and 1-100 by 13 institutions.

The first group of the oldest sources, the *incunabula*, is represented by 271 items (1% of the surveyed resource), all in open access 271, in public domain – 239, and with reserved rights – 32. The most numerous were prints in Latin – 263, the next group in statistics were only 4 objects in German, 3 each in Italian and Polish and 1 each in modern Greek (after 1453). of the 15 data providers (11% of all database contributors), 1 – the leaders in providing digitized fifteenth century sources were: BCUWr – 91, Płocka Biblioteka Cyfrowa (hereinafter PiBC) – 48, WBC and ŚBC – 47 each, and ZielBC – 1.

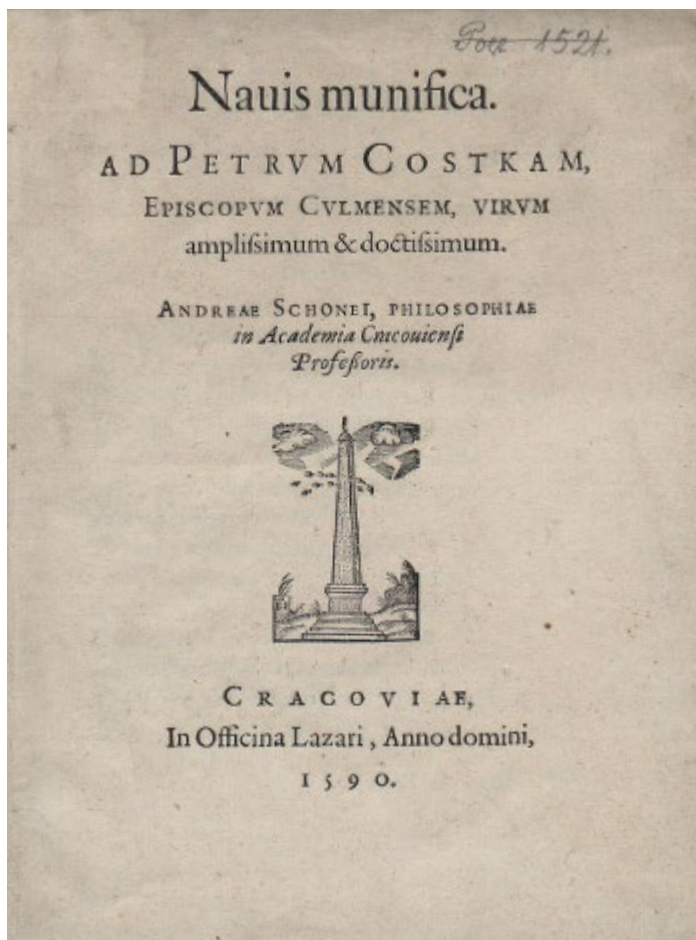
Figure 2. Mikolaj z Blonia, *Tractatus sacerdotalis de sacramentis deque divinis officiis*, Casper Elyan, Wrocław, ca 1475, k. 10



Source: <https://www.dbc.wroc.pl/dlibra/doccontent?id=1954>.

The 16th century prints (1501-1600) in the number of 8,685 items constitute 23% of the studied group, 5,038 of which are available in the public domain, and 3,647 have reserved rights. The most numerous, as in the first group, are Latin-language prints at 6,258, however, the next in terms of numbers are Polish publications – 1,306 results, followed by German publications – 914, Old Greek (until 1453) – 299, and Italian – 195. Among the 36 data providers (26% of the total) the most widely represented is DBC – 3,240 results, WBC – 1,508, BCUWr – 1,019, PomBC – 681, and JBC – 480.

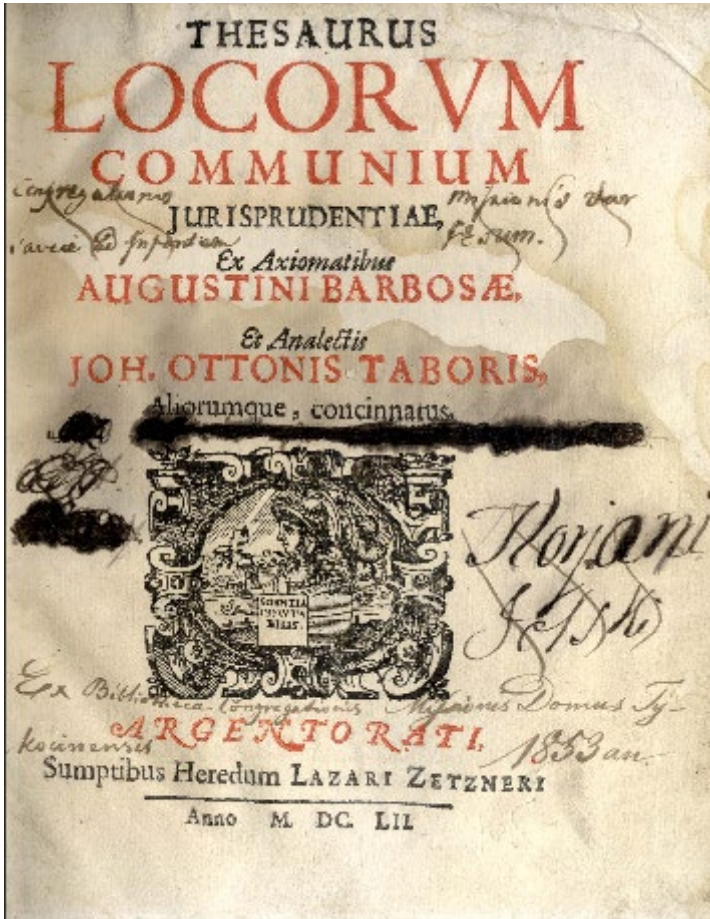
Figure 3. Andreas Schoneus, *Nauis munifica. Ad Petrum Costkam, Episcopum Culmensem, Virum amplissimum & doctissimum*, Drukarnia Łazarzowa, Kraków 1590



Source: <https://jbc.bj.uj.edu.pl/dlibra/doccontent?id=125135>.

The 17th century (1601-1700) is represented by 12,018 items (32% of the total), with as much as 12,017 in open access, 1 – in the limited, in the public domain – 10,203, with reserved rights – 1815. Also in this group, the highest number of prints was in Latin at 7,292, followed by German at 2,967, Polish 2,241, French – 265, and Old Greek – 250. Out of 38 data providers (28% of all contributors to the database) 2,230 items are from the WBC, 1,768 from JBC, 1,714 from BCUWr, 1,520 from ZBC “Pomerania” and 1,240 from EBC.

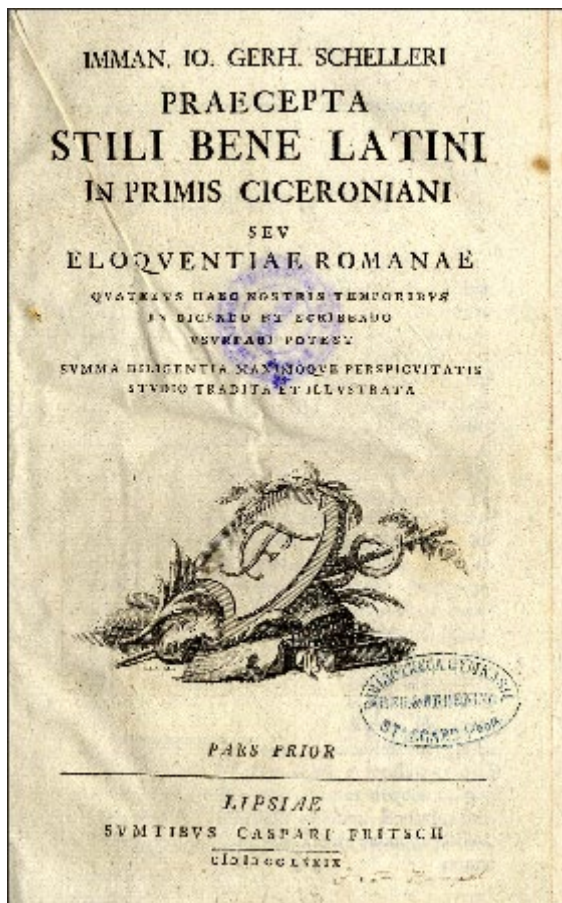
Figure 4. Johann Sebastian Gambsii, *Thesaurus Locorum communium jurisprudentiae ex axiomatibus Augustini Barbosae, et analecti Joh. Ottonis Taboris, Aliorumque, concinnatus* [starodruk]. T. I, (A-L), Sumptibus Heredum Lazari Zetzneri, Argentorati 1699



Source: <http://pbc.biaman.pl/dlibra/doccontent?id=18444>.

In the last group, eighteenth-century prints (1701-1800), there are 16,667 items, with as many as 16,666 in open access, 1 – restricted, 13,110 – in the public domain, 3,557 – with reserved rights. This time, the largest number was of Polish prints at 7,713, followed by 5,086 in German, 4,161 in Latin, 1,268 in French and 121 in Italian. of the 38 data providers the largest contributor was JBC with 5,194 items, DBC with 2,107 RCIN with 1,268, PomBC with 1,126 and BCUWr with 928.

Figure 5. Emanuel Jan Gerhard Scheller, *Praecepta stili bene latini in primis ciceroniani, seu eloquentiae romanae. Vol. 1, Sumtibus Caspari Fritsch, Lipsiae 1779*



Source: <http://pbc.biaman.pl/dlibra/doccontent?id=23296>.

The way data is presented is extremely important for the recipients of digital content. Due to different types of software, or rather, in most cases, different versions of the same program – dLibra¹¹ – two most frequently represented types of data description and presentation can be

11 dLibra is the first Polish system dedicated to digital resources, created in Poznan Supercomputing and Networking Center, used by various types of institutions (see: dLibra – DinGo, <https://dingo.psn.pl/dlibra/>, access: 29.06.2019; W.M. Kolasa, *dLibra Digital Library Framework – platforma do budowy bibliotek cyfrowych*, in: *Biblioteki cyfrowe: projekty, realizacje, technologie*, eds. J. Woźniak-Kasperek, J. Franke, Warszawa 2007, pp. 67-88).

distinguished. The oldest version of dLibra software (4.0) is now used by three resources that provide information about old prints: Tarnow Digital Library (hereinafter: TBC), Chelm Digital Library (hereinafter: ChBC) and Polonica Digital Repository (hereinafter: RCP); latest – JBC (version: Dingo dLibra 6.2.5) and ZBC (version: Dingo dLibra 6.1.5). The most popular among the 38 providers are dLibra 5.8.5 versions (9 providers) and dLibra 5.8.4 (7 providers). Using the possibility of adjusting the amount DublinCore of metadata format¹² to the needs of specific resources, older versions usually contain the following information (in various configurations): Title, Author, Publisher, Place of publication, Contributor, Date, Resource Type, Size, Resource Identifier, Source, Language, Law, Contact, Access Rights;¹³ later: Title, Author, Subject and Keywords, Description, Publisher, Place of publication, date of issue, Contributor, Resource type, Format, Resource Identifier, Source, Language, Relation, Law, Digitization, Location sources,¹⁴ the latest: Title, Variant Title, Author, Subject and Keywords, Description, Publisher, Place of publication/creation, date, resource type, format, source ID, the digital document, language, scope, legal status, location of the original source of funding, Comments, Electronic catalog.¹⁵

Data providers in each group present their collections using the following software versions: dLibra 5.8.5 – 9 dLibra 5.8.4 – 7 dLibra 5.7.2 – 5 dLibra 4.0 – 3 dLibra 5.8.0 – 2, Dingo dLibra 6.1.2 – 2, Dingo dLibra 6.1.5 – 2, Dingo dLibra 6.0.1-SNAPSHOT – 2, deMuseum – 1 Dingo dLibra 6.1.0-SNAPSHOT – 1 Dingo dLibra 6.0 – 1 Dingo dLibra 6.1.3 – 1 dLibra 5.8.3 – 1, Dingo dLibra 6.0.2 – 1.

- 12 DublinCore – standardized metadata format, consisting of a basic version of 15 elements of the description (cf. *DCMI: Home*, <http://dublincore.org/>, access: 29.06.2019; M. Nahotko, *Metadane: sposób na uporządkowanie Internetu*, Kraków 2004).
- 13 Based on the example of: P. Hadziewicz, *Prawda Obiasniona, Pozory Przymione, Ordinacyja Obroniona, To Iest: Odpowiedz Na Książkę: "Uwagi W Sprawie Ordinacyi Ostrogskiej". Oraz Wolność Oswobodzona Z Niewoli Swawolnej. Ubezpieczone Prawa, I Seymy, Wybawiona*, W Drukarzni Akademickiej Soc. Jesu, Wrocław 1756, <http://dlibra.biblioteka.tarnow.pl/dlibra/docmeta?data?id=110&dirds=1&tab=1> (access: 29.06.2019).
- 14 Based on the example of: H. Nicolai, *Diaskepsis Philosophica, De Magicis Actionibus Earumque Probationibus ... Praesidente ... Jacobo Martini, Logices & Philos. Pract. P.P.*, Christian Thamm, Wittenberg 1623, <http://pbc.gda.pl/dlibra/doccontent?id=29223> (access: 29.06.2019).
- 15 Based on the example of: B.K. Malicki, *Lexykon Francusko-Polski to iest Dikcyonarz Albo Zebrańie wszystkich Słów Francuskich = Lexicon Franco-Polonois c'est a dire Dictionnaire ou Assemblage de tous les mots Francois*, Mikołaj Aleksander Schedel, Kraków 1701, <https://jbc.bj.uj.edu.pl/dlibra/doccontent?id=314596> (access: 29.06.2019).

When using digital old-fashioned resources, it is worth taking a look at the additional features they offer users. In the oldest version of the program, i.e. dLibra 4.0,¹⁶ it is possible to export metadata (OAI-PMH and RDF formats) from the description screen, add it to bookmarks and share it in many social media, and, after logging in, propose new keywords. When the scans are opened (in the same or new browser window as full screen) a view of the .pdf file window with the following options appears: thumbnails in the left side panel, searching in the document (here additions: highlighting all, case-sensitive, whole words), page navigation, zooming in and out of the view (by automatic scale, real size, page matching, page width and percentages), printing, downloading, copying or opening the current position as a link in the new window. In addition, it is worth noting the extensive navigation that makes it easier to navigate the document. It allows browsing it page by page, going to the first and last page, scrolling vertically and horizontally, viewing two pages simultaneously, including ‘odd left’ and ‘even left’ layouts and no column division. In addition, scans can be rotated left and right which can be useful for reading handwritten notes. However, there are also useful mechanisms for selecting blocks of text and scrolling through the pages. The program also provides an opportunity to search for specific words in documents and highlight them all, taking into account case sensitivity and searching for whole words only.¹⁷ The source also includes information about the technical properties of the document: the name of the main file, its size, dates of creation and modification, the version of the program in which it was created (in this case Adobe Acrobat), the number of pages, their dimensions and the possibility of quick viewing online.

The latest version of dLibra – DInGO dLibra 6.2.5 – used by JBC offers the most options to support resource usage.¹⁸ In addition to the above, it allows you to view scans and metadata at the same time or hide the description of the displayed document, and from the list of files available, next to the metadata, one can choose from two formats – pdf and DjVu – and download the files also in two of the given formats. After logging in one can add a title to the favorites, and without logging in, retrieve

16 Based on the example of: W. Morawski, *Opisanie żywota i cudów błogosławionego ojca Władysława z Gielniowa ... zebrane z starych kroników ręką pisanych i znouu teraz przez Ks. Wincentego Morawskiego, lektora tegoż klasztoru z przydatkiem nowych cudów do druku podane...*, Mikołaj Lob, Kraków 1612, <http://www.repcyfr.pl/dlibra/doccontent?id=267> (access: 29.06.2019).

17 However, this is only possible in the scans that have undergone a process of OCR (*Optical Character Recognition*).

18 Based on the example of: J. Jonston, *Idea Vniuersæ Medicinæ Practicæ Libris XII absoluta*, Elsevier Lowijs, Amsterdam 1648, <https://jbc.bj.uj.edu.pl/dlibra/doccontent?id=117051> (access: 29.06.2019).

bibliographic description in two formats – RIS and BibTeX. It also affects the quality of information – by clicking on the icon of the triangle with an exclamation mark one can report an error.

On the other hand, in resources using the DInGO dLibra 6.0.1-SNAPSHOT¹⁹ software version it is possible to navigate the entire collection (next / previous / first / last object from the list), create a link to a specific view, and in the thumbnail view there is an option to choose the image type (content, watermark, binding, special) and its size (small, medium, large), as well as the browser type (Seadragon, Mooviewer, Leaflet). The hyperlink used to describe metadata schema – PLMET, is also a valuable feature.²⁰

An additional option only available from RCP was the fact that documents were scanned/photographed on a pad with a scale, which allows to estimate the size of the documents. In a few of them scans/photos appeared beginning with a color picker and the resource being developed.²¹

In conclusion, the progress of digitization has brought many benefits – both for institutional owners of old print collections and their users. Apart from facilitating access and reducing information, geographical, technological and procedural barriers, on top of protecting and securing invaluable resources, digitization, which is already present in almost every aspect of life, pursues one of the main objectives of the information society, that is, openness and accessibility. On the part of the user, the development of new technologies allows for access to resources without the limitations of the traditional, presentable way of sharing old prints. The increasing graphic quality of digital content, more accurate metadata and standardized description formats, and finally, multi-survey search engines with a wide range of search possibilities and numerous additional features offered by digital platforms offer many opportunities for using digital content.

19 Based on the example of: M. Maier, *Silentium Post Clamores, Hoc Est Tractatus Apologeticus, Quo causæ non solum clamorum seu Reuelationum Fratemitatis Germanicæ de R.C. sed & Silentii, seu non redditæ ad singulorum vota responsionis, vna cum malevolorum refutatione, traduntur & demonstrantur / scriptus Authore Michaelæ Maiero...*, Francof: publisher: Lukas Jennis, 1617, <http://www.bibliotekacyfrowa.pl/dlibra/publication/75090/edition/73235/content?> (access: 29.06.2019).

20 *Dokumentacja schematu metadanych PLMET*, online <https://confluence.man.poznan.pl/community/display/FBCMETGUIDE/Dokumentacja+schematu+metadanych+PLMET;jsessionid=5E04D88E587180202A720A8BDA675756> (access: 29.06.2019).

21 Based on the example of: *Kinder- und Bilder-Bibel, Oder: Auszug derer Biblischen Historien, Welche in ausserlesenen Figuren vorgestellt, nach einem kurtzen Unterrichts von denen Biblischen Büchern in Frag und Antwort abgefasset, mit angefügten erbaulichen Lehren, aus schönen Sprüchen der heiligen Schrift, wie auch denen geistreichen Gesängen erläutert werden*, Erfurth: Elias Sauerländer, 1752, <http://bibliotekacyfrowa.eu/dlibra/doccontent?id=46890> (access: 29.06.2019).

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