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PHILOBIBLON AS A DIGITAL TOOL FOR HISTORIANS OF MEDIEVAL IBERIA

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ABSTRACT

This article provides a succinct review of the history and technological development of PhiloBiblon, one of the pioneer Digital Humanities projects for the study of the primary sources of the medieval and early modern literatures of the Iberian Peninsula. The warp and weft of its history are the four bibliographies that comprise it: BETA (Bibliografía Española de Textos Antiguos), BITECA (Bibliografía de Textos Antigos Galegos e Portugueses), and BIPA (Bibliografía de la Poesía Áurea). We describe how the program functions on the web, paying particular attention to the use of PhiloBiblon's key identifiers. Then we explain the proposed evolution of the project from siloed databases to Linked Open Data via FactGrid, a Database for Historians. Precisely because of this pending change, we wish to show medievalists other than literary and linguistic specialists, especially historians, how to make good use of PhiloBiblon.

KEYWORDS

PhiloBiblon, databases, Digital Humanities, Middle Ages, Digital History, Wikidata

CAPITALIA VERBA

PhiloBiblon, Repositorium datorum, Studia Humanitatum digitalium, Mediaevum, Historia digitalis, Wikidata.

In the modern humanities, any research activity called 'ancillary,' such as descriptive or enumerative bibliography, has been *ipso facto* perceived as of secondary importance. The word, however, comes from Latin ANCILLA, 'handmaiden,' which in fact implicitly admits that such activities are considered indispensable to others, including, indeed, research in the humanities. We thus proudly acknowledge the ancillary essence of PhiloBiblon, stressing that it is, precisely, this quality which makes it possible for colleagues around the world to move ahead with their study of the medieval and early modern Iberian cultures and literatures, secure in the knowledge that our project has already laid an indispensable foundation of factual information.

Because of its multidisciplinary nature as a database of texts in all fields, we believe that any scholar interested in the Iberian Middle Ages should take advantage of what PhiloBiblon has to offer. But at the same time, we are aware of how difficult it may be to use a database not primarily designed for one's own research interests. In this paper we shall take, by way of example, research in history in order to show how historians of medieval and early modern Iberia may obtain useful data concerning cultural, political, scientific, or legal history. The bulk of the works included in PhiloBiblon are not works of imaginative literature, fiction or poetry, but rather texts from the fields of law, history, science, agriculture, theology, or philosophy, among many others. Therefore, we shall draw upon both the recent past and the foreseeable future of our project, pointing out different ways in which our fellow historians might make good use of the database to enhance both qualitatively and quantitatively the results of their research efforts.

1. What is PhiloBiblon?

Any medievalist will recognize that our project owes its name to the 14th-century description of an ideal library written by Richard de Bury, or Richard Aungerville, bishop of Durham from 1333 to 1342.¹ Seven hundred years later, PhiloBiblon has become the most comprehensive catalogue in existence of the romance vernacular sources of medieval and early modern Iberian culture. It is also the bio-bibliographical database management system designed to classify the primary sources themselves, both manuscript and printed, the texts they contain, the individuals involved with the production and transmission of those sources and texts, and the libraries holding them, along with relevant secondary references and authority files for persons, places, and institutions.²

^{2.} Faulhaber, Charles B. "PhiloBiblon, Information Technology, and Medieval Spanish Literature: A Balance Sheet", *Humanitats a la xarxa: Món medieval. Humanities on the Web: The Medieval World*, Lourdes Soriano, Helena Rovira, Marion Coderch, Glòria Sabaté, Xavier Espluga, eds. Bern: Peter Lang, 2014: 15-43, especially 16.



^{1.} Brown-Syed, Christopher. "The Love of Books: The PhiloBiblon of Richard de Bury". *Library and Archival Security*, 19/1 (2004): 76-81.

As Ángel Gómez Moreno points out, the seed for a census of the primary sources of the medieval Iberian literatures had already been planted by Ramón Menéndez Pidal at the beginning of the 20th century.³ For this reason, it is not at all surprising to find his student, Homero Serís, patiently collecting records on card files at the Centro de Estudios Históricos, a project that José Simón Díaz took over after the end of the Spanish civil war and Serís's exile from Spain.⁴ Despite Simón Díaz's efforts, Franco's Spain lacked the resources to carry out a comprehensive project. And, even worse, when it became possible to envision a digital version in the 1970s, Spain lacked the computing infrastructure to make it feasible.⁵

It was therefore entirely understandable that the first step towards the creation of a computerized census of medieval Spanish manuscripts should have been taken outside of Spain. The initial impetus came from two remarkable scholars: Lloyd Kasten and John Nitti, creators of the *Dictionary of the Old Spanish Language* (DOSL) at the University of Wisconsin, Madison.⁶ This was originally conceived by Antonio Garcia Solalinde in 1936 as a replacement for the *Diccionario histórico de la lengua española*, when the Real Academia Española project ended abruptly because of the Spanish Civil War⁷ period Solalinde, Menéndez Pidal's student and Kasten's mentor, who had come to Madison in 1924, decided to continue the work in the U.S., employing the same methodology used in Spain, i.e., copying word forms from medieval texts into a card file.⁸ Solalinde died in 1937, but a group that included Kasten published a two-volume mimeographed *Tentative Dictionary* in 1946.⁹

By the 1970s, the Madison team had compiled more than 12 million citations on index cards, but it was clear that decades of work would be necessary to bring out even the first volume of the dictionary. ¹⁰ Kasten and Nitti therefore proposed to the National Endowment of the Humanities the creation of a citational lexicon similar to the well-

^{10.} A more detailed description of the entire process can be read at: Gago Jover, Francisco. "Hispanistas en los Estados Unidos: breve historia del Seminario de Estudios del Español Medieval y el Hispanic Seminary of Medieval Studies", *Crítica textual para Dummies*, José Manuel Frajedas Rueda, blog ed. 20 March 2022 http://ecdotica.hypotheses.org/tag/madison.



^{3.} Gómez Moreno, Ángel. *Breve historia del medievalismo panhispánico: primera tentativa*. Madrid-Frankfurt am Main: Iberoamericana-Vervuert, 2011: 74.

^{4.} Beardsley, Theodore S. "Necrology. Homero Serís (1879-1969)". Hispanic Review, 37/4 (1969): 549-555

^{5.} Valero Cortés, Mateo; Mompín Poblet, Josep. *Ciencia y tecnología. España, siglo XXI.* Madrid: Instituto de España-Editorial Biblioteca Nueva, 2012: 9. 20 March 2022 http://www.mompin.es/HistoriadelainformaticaenEspana9.htm.

^{6.} See: Perea Rodríguez, Óscar; Faulhaber, Charles. "Esbozos sobre la evolución y el futuro de un pionero de las humanidades digitales hispánicas: el proyecto PhiloBiblon". *Revista Digital Universitaria de la UNAM*, 17/1 (2017): 1-17, especially 3-4.

^{7.} Casares, Julio; Fernández Ramírez, Salvador; Lapesa, Rafael; Gili Gaya, Samuel. *Diccionario histórico de la lengua española*. Madrid: Real Academia Española, 1960 (first edition: 1933).

^{8.} On the evolution of this project, see: Kiell, Matthew. "A Dictionary on a Disk". *Humanities. National Endowment of the Humanities*, 9/3 (1998): 8-10.

^{9.} Boggs, Ralph Steele; Kasten, Lloyd; Keniston, Hayward; Richardson, H.B. *Tentative Dictionary of Medieval Spanish*. Chapel Hill: University of North Carolina, 1946.

known *Oxford English Dictionary* (OED).¹¹ Because experience had shown that reliance on modern printed editions as sources risked the introduction of inauthentic word forms, they realized that as a first step they needed to compile a catalogue of pre-1500 manuscripts and incunabula to provide the texts from which lexical examples would be drawn; but no existing bibliographical instrument was capable of providing such a catalogue. They therefore decided to create an in-house database to remedy this lack.¹²

With a project as extensive as DOSL, however, it is no surprise that the outcome of their project was not in fact a dictionary of Old Spanish, although its initial nucleus, the three-volume dictionary of the 21 prose works of Alfonso X the Wise, was in fact published, but not until 2002, that is, three years after Kasten's death.¹³

Nonetheless, at the very beginning of their work, guided by the belief that the inhouse database would be useful to other scholars as well as to DOSL, they decided to publish the *Bibliography of Old Spanish Texts* (BOOST₁), with Jean Gilkison and Anthony Cárdenas as graduate student compilers under the supervision of Nitti. ¹⁴ The landscape-format volume –a photo-offset reproduction of computer print-out–published in 1975 is the *opus antecessor* of the current PhiloBiblon project. ¹⁵ This fact makes it a chronological peer of Father Roberto Busa's concordances to the works of Saint Thomas Aquinas, ¹⁶ the project universally cited as the foundation of the academic discipline once called Humanities Computing and today rebaptized as Digital Humanities. ¹⁷

These initial 966 records published in BOOST₁ were extracted primarily from the only reasonably comprehensive catalogues of medieval manuscripts available at the time: the two volumes that José Simón Díaz had dedicated to medieval Spanish literature (1963-1965) and the three volumes of Father José Zarco Cuevas' ground-breaking catalogue of the Castilian-language manuscripts held

^{17.} On this change and evolution, read: Svensson, Patrik. "Humanities Computing as Digital Humanities". *Digital Humanities Quarterly,* 3/3 (2009): 20 March 2022 http://www.digitalhumanities.org/dhq/vol/3/3/000065/000065.html; Rojas Castro, Antonio. "Las Humanidades Digitales: principios, valores y prácticas". *Janus. Estudios sobre el Siglo de Oro*, 2 (2012): 74-99, especially p. 75.



^{11.} Berg, Donna Lee. A Guide to the Oxford English Dictionary. Oxford: University Press, 1993: 6-7.

^{12.} Faulhaber, Charles. "PhiloBiblon and the Semantic Web. Notes for a Future History", *La literatura medieval hispánica en la imprenta (1475-1600)*, María Jesús Lacarra, Nuria Aranda García, eds. Valencia: Universitat de Valencia, 2016: 75-93, especially 77.

^{13.} Kasten, Lloyd A.; Nitti, John. *Diccionario de la prosa castellana del Rey Alfonso X*. New York: Hispanic Seminary of Medieval Studies, 2002 (3 vols.). Please note how all of these texts are currently available at Gago Jover, Francisco. *Digital Library of Old Spanish Texts*. New York: Hispanic Seminary of Medieval Studies, 2011-16. 20 March 2022 http://www.hispanicseminary.org/textconc-en.htm.

^{14.} Nitti, John. "Computers and the Old Spanish Dictionary". *Computers and the Humanities* 12 (1978): 43-52, especially 45-46.

^{15.} Cárdenas, Anthony Cárdenas; Nitti, John Nitti; Gilkison, Jean, eds. BOOST₁: Bibliography of Old Spanish Texts. Madison: Hispanic Seminary of Medieval Studies, 1975.

^{16.} Schmidt, Robert W. "An Historic Research Instrument: The Index Thomisticus". *The New Scholasticism*, 50/2 (1976): 237-249, especially p. 249.

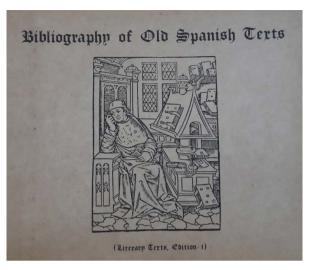


ILLUSTRATION 1. FRONT COVER OF BOOST₁. ILLUSTRATION
PROVIDED BY THE AUTHORS

by the Escorial library (1924-1929). The volume was published by the Hispanic Seminary of Medieval Studies, then located at the University of Wisconsin-Madison and currently managed by the Hispanic Society of America in New York City. 19

BOOST₂, the subsequent edition (1977), had another important particularity—it was enriched not only with more data but also with post-1500 manuscripts and printed editions in an effort to begin to turn it into a database of medieval Spanish literature, including texts written before but not documented until after 1501;²⁰ the number of records almost doubled, to a total of 1,869.²¹

The third edition, BOOST₃, was the first undertaken by a team of scholars from outside the Hispanic Seminary of Medieval Studies, but with strong ties to the Madison campus, including Charles Faulhaber, Brian Dutton, Ángel Gómez

^{21.} Cárdenas, Anthony Cárdenas; Nitti, John Nitti; Gilkison, Jean, eds. BOOST₂: Bibliography of Old Spanish Texts. Madison: Hispanic Seminary of Medieval Studies, 1977.



^{18.} Faulhaber, Charles B. "PhiloBiblon, Information Technology"...: 17, describes how Simón Díaz's *Bibliografía de la literatura española* was integrated into the project. Zarco Cuevas, Julián. *Catálogo de los manuscritos castellanos de la Real Biblioteca de El Escorial*. Madrid: Imprenta Helénica, 1924-1926 (vols. I-II); and Zarco Cuevas, Julián. *Catálogo de los manuscritos castellanos de la Real Biblioteca de El Escorial*. San Lorenzo del Escorial: Imprenta del Real Monasterio de El Escorial, 1929 (vol. III).

^{19.} See: Gago Jover, Francisco; Kasten, Lloyd; Nitti, John; Jonxis-Henkemans Wilhelmina, eds. *Prose Works of Alfonso X el Sabio*. 20 March 2022 http://www.hispanicseminary.org/t&c/ac/index-en.htm.

^{20.} Faulhaber, Charles B. "Bibliography of Old Spanish Texts: Evolution of a Data Base", *Databases in the Humanities and Social Sciences. Proceedings of the International Conference on Databases in the Humanities and Social Sciences held at Auburn University at Montgomery, July 1987*, Lawrence J. McCrank, ed. Medford: Learned Information, 1989: 213-221.

Full Citation File 00

1859 AUTH VIZCONDE: MATEO
GITT COMPENSIO DE CIRIGIA SPOT 15TH (1411) PREL MADRID:
NACIONAL, Z141 STIL UNAVAILABLE OPDT 15TH SPRL UNAVAILABLE.
/ALONSO FERRANDES NOTE 140 FOLS, 285 X 205 MM., 2 COLS, PAPER
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1844 AUTH XIMENES DE CISNEROS: GARCIA
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15TH SPRL MONTSERRAT. /JOHANN LUSCHNER [1] NOTE 270 FOLS. 137
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BIBLIOTHEQUES DE BELGIQUE, 110, SEE KURZ. HANDBUCH DER
HERISCHEN BILDDRUCKE DES XV JAHRHUNDERTS. 172, SEE
ALBAREDA LA IMPRENTA DE MONTSERRAT (SEGLES XVXXVI)
N ANALECTA MONTSERRATENSIA (1919), P. 13. / ACCORDING TO THE
MONASTIC RECORDS DO COPIES OF THIS EDITION WERE PRINTED. BIBS
GOFF, INCUNABULA IN AMERICAN LIBRARIES (1944), X-20, CATALOGUE
OF BOOKS PRINTED IN THE XYTH CENTURY NOW IN THE BRITISH
MUSEUM, X (1971), P. 80.

1842 AUTH YAÑES DE MENDOZA: FERNANDO
GTIT TUMBO EL ACUDAD DE SEVILLA SPOT 15TH (1437) PREL MADRIDNACIONAL, 1992 STIT PREVILLEGIOS E LAS CARTAS DE LAS LIBERTADES
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(1335) SPRI. SEVILLA, 19FERNAND GARCIA NOTE FOLS. 247, 302 10
MM. BIRS INVENTARIO GENERAL DE MANUSCRITOS DE LA BIBLIOTECA
NACIONAL ILI (1956)

1843 AUTH YAÑEZ: RODRIGO

AUTH YAÑEZ: RODRIGO
GITT POEM DE ALFONSO XI SPOT 14TH PREL SAN LORENZO DE EL
ESCORIAL: MONASTERIO, /Y.III.9 STIT UNAVAILABLE OPDT 14TH (134)
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ALBALAES HAND. / SEE CATALAN: POEMA DE ALFONSO XI, PP. 29-32.
BROS SIMON DIAZ: BIBLIOGRAFIA DE LA LITERATURA HISPANICA, III
(1931). 1381: MENENDEZ PIDAL: CRESTOMATIA DEL ESPAÑOL
MEDIEVAL II. (1946), P. 444. ZARCO CUEVAS: CATALOGO DE LOS
MANUSCRITOS CASTELLANOS DE EL ESCORIAL. III (1921). PP. 48-49; TEN
CATE: FOEMA DE ALFONSO XI. (11942). P.

1844 AUTH YAÑEZ: RODRIGO
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MS. YJII.9, / SEE CATALAN: GRAN CRONICA DE ALFONSO XI (1976), P.
114. BIBS SIMON DIAZ: BIBLIOGRAPIA DE LA LITERATURA HISPANICA. 1582: MENENDEZ PIDAL: CRESTOMATIA DEL ESPAÑOL

1845 AUTH ZADIQUE DE UCLES: JACOBO
GTIT DICHOS DE SABIOS Y FILOSOFOS SPIDI 15TH (1402) PREL SAN
LORENZO DE EL ESCORIAL: MONASTERIO, BILLIS STIL LIBRO DE
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MUY BUENAS OPDT 15TH SPRL UNAVAILABLE NOTE FOLS. 127R-150R, 2014
X 195 MM, 2 COLS, PAPER AND PARCHMENT, GOTHIC AND COURT
HANDS. / ALSO CONTAINED IN THIS CODEX ARE MISCELLANEOUS
RELIGIOUS TREATISES BY VARIOUS AUTHORS BIBS ZARCO CUEVAS:
CATALOGO DE LOS MANUSCRITOS CASTELLANOS DE EL ESCORIAL, 1
(1874) PR. 18.0

1866 AUTH ZADIQUE DE UCLES: JACOBO, (TRANS.),

AUTH ZADIQUE DE UCLES: JACOBO, (TRANS.), ANONYMOUS GITT DICHOS DE SABIOS Y FILOSOFOS SPOT 151H PRELSAN LORENZO DE EL ESCORIAL MONASTERIO, /B.II.7 STIT UNAVAILABLE OPDT 151H SPRI. UNAVAILABLE MOTE FOLS. 101V-190Y, 7M X 710 MM., 2 COLS. BIBS ZARCO CUEYAS. CATALOGO DE LOS MANUSCRITOS CASTELLANOS DE EL ESCORIAL (1924), P.P. 3)

1867 AUTH ZADIQUE DE UCLES: JACOBO, (TRANS.),

ANONYMOUS
GITT DICHOS DE SABIOS Y FILOSOFOS SPOT 15TH PREL SAN LORENZO DE GTIT DICHOS DE SABIOS Y PILISONOS SPOT 151H PRELSAN LORENZO DE EL ESCORIAL, MONASTERIO, (BILVI) SOTTU UNAVAILABLE OPDT 15TH SPRI. UNAVAILABLE NOTE 61 FOLS, 202 X 135 MM, PAPER, GOTHIC HAND. BIRS ZARCO CUEVAS: CATALOGO DE LOS MANUSCRITOS CASTELLANOS DEEL ESCORIAL, (1924), P. 49

AUTH ZAMORA: JUAN ALFONSO DE, (TRANS.), CICERON: MARCO TULIO GITT OFICIOS DE CICERON SPDT 15TH PREL MADRID: BARTOLOME MARCH, 1934/11 STITL LOS OFICIOS OPDT UNAVAILABLE SPRL UNAVAILABLE NOTE FOLS. 1-XCIII. / BOUND WITH THE "BONIUM" BOTH WORKS HAVE THEIR OWN FOLLATION. BIBS FOULHABER: "SOME PRIVATE AND SEMI-PRIVATE SPANISH LIBRARIES: TRAVEL NOTES." LA CORONICA LASPING 1934 DE CORONICA, 4 (SPRING, 1976), 86

1849 AUTH ZORITA: ANTON DE, (TRANS.), BONET:

NAMENT AND DE. (TRANS.), BUNET: HONORATO GITT ARBOL DE BATALAS SPOT 15TH MID PREL SAN LORENZO DE EL ESCORIAL-MONASTERIO, ALLI9 STIT UNAVAILABLE OPDT 15TH SPRIL UNAVAILABLE OPDT 15TH SPRINGS ARGO CUEVAS: CATALOGO DE LOS MANUSCRITOS CASTELLANOS DE EL ESCORIAL, 1(1924), 7-197.

ILLUSTRATION 2. LAST PAGE OF BOOST₂. ILLUSTRATION PROVIDED BY THE AUTHORS.

Moreno, and David Mackenzie.²² In this last printed version (1984), the number of records almost doubled again, to a total of 3,378.²³

With a public history going back 45 years, PhiloBiblon is one of the oldest surviving Digital Humanities projects in the world as well as unquestionably el primer proyecto de Humanidades Digitales con textos en español.²⁴

^{24.} Gago Jover, Francisco. "Reseña de PhiloBiblon". Digital Philology 1/2 (2012): 323-337; Hernández Lorenzo, Laura. "Humanidades Digitales y literatura española: 50 años de repaso histórico y panorámica de proyectos representativos". Janus. Estudios sobre el Siglo de Oro, 2 (2012): 562-595, especially 564.



^{22.} Faulhaber, Gómez Moreno, and Mackenzie had been graduate students in Madison, while Brian Dutton would become a professor there in 1987.

^{23.} Faulhaber, Charles B.; Gómez Moreno. Ángel; Mackenzie, David; Nitti, John; Dutton, Brian, eds. BOOST; Bibliography of Old Spanish Texts. Madison: Hispanic Seminary of Medieval Studies, 1984.

BIBLIOGRAPHY OF OLD SPANISH TEXTS

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villarense OPDT 1200-1220 [?] NOTE Parchm. and paper. 84 ff., 218 x 155 mm. Occupies ff. 26v-35v. LANG Aragonese [?], Navarrese [?] BBBL Exposición antiólgica del tesoro documental, bibliográfico y arqueológico de España. Madrid, 1959, n. 120 (pp. 81-83); Simón Díaz, J. Bibliografía de la literatura hispánica. Madrid, 1953, III: 1327; Cooper, L. El Liber regum. Archivo de Filología Aragonesa. Anejo 5. Zaragoza, 1960 CNUM 0386

3376 Zaragoza: Universitaria, I-27

SPDT 1487 [?] AUTH Salazar, Luis de TITL Rezos declarados por Luis de Salazar, Credo, Pater Noster y Ave Maristella de Luis de Salazar opri 1400-1509 SPL Murcia PASC Roca, Lope de la NOTE 6 ff. There is a 1957 (Valencia) facsimile edition by Antonio Pérez Gómez in the Segunda floresta de incunables. LANG Castilian BBL. Dutton, B. Catálogo/Indice de la poesta cancioneril del siglo XV. Madison, 1982, 87*LS; Vindel, F. El arte lipográfico en Espada durante el siglo XV. Madriol, 1945-51, VIII, 2224-8; SCHUM [691

3377 Zaragoza: Universitaria, I-105; Cracow: Jagielloáska; Evora: Universitaria

SPDT 1500-02-10 AUTH Pseudo-Seneca; Seudo-Séneca TITL Proverbios del Seudo-Séneca; Proverbios de Séneca TRAN Díaz de

Toledo, Pero OPDT 1400-1500 SPRL Toledo PRSC Hagenbach, Pedro NOTE 154 ff. LANG Castillian BRIL Faulhaber, C.B. Personal inspection (Zaragoza card file); Haebler, K. Bibliografia ibérica del siglo XV. La Haya, 1903-17, 619; Vindel, F. El arte tipográfico en España durante el siglo XV. Madrid, 1945-51, VI, 116-119; 32; Kawecka-Gryczowa, A., M. Bohonos, and E. Szandorowska. Incunabula quae in bibliothecis Poloniae asservantur. Bratislava, 1970, 4986 CNUM 1040

3378 Zaragoza: Universitaria, I-251; San Marino: Huntington; Madrid: PP. Recoletos [2]

SPDT 1500 [?] AUTH Fernando V; and Isabel I TITL Leyes hechas por la brevedad y orden de los pleitos OPDT 1499-05-26 SPBL Salamanca PRSC Nebrija's Gramática, Printer of LANG Castilian RBL Faulhaber, C.B. Personal inspection (Zaragoza card file); Vindel, F. El arte tipográfico en España durante el siglo XV. Madrid, 1945-51, II, 214: 132; Gesamtkatalog der Wiegendrucke. Leipzig, 1925-, 9774; Haebler, K. Bibliografía ibérica del siglo XV. La Haya, 1903-17, 356; Goff, F.R. Incunabula in American Libraries. New York, 1964, repr. 1973, F-85 CNUM 3707

Illustration 3. Last page of BOOST₃. Illustration provided by the authors.

2. PhiloBiblon on the Web

The web-based descendant of BOOST, which we now call PhiloBiblon, currently contains over 325,000 records for the corpus of medieval Iberian texts. ²⁵ This exponential growth has been possible thanks to a combination of factors. When the project ceased to focus exclusively on providing support for DOSL, the new editorial team for BOOST₃ began aggressively to include all Spanish-language incunabula and all post-1501 manuscripts and early printed editions of medieval texts produced after 1501 as well, a policy already introduced for BOOST₂. In addition, the original descriptions taken from secondary sources were supplemented with additions based on first-hand inspection of manuscripts by a large number of scholars, but most especially by the compilers of that edition. ²⁶

Currently, all manuscripts of medieval Spanish works produced before 1800 may be included, together with selected items from the 19th and 20th centuries that may reflect now-lost originals. As for printed books —although there are still significant lacunae— most post-1501 editions are also included; systematically up to 1520, following the cut-off year established by two seminal works: Brian Dutton's *Catálogo-*

^{26.} Faulhaber, Charles B.; Gómez Moreno. Ángel; Mackenzie, David; Nitti, John; Dutton, Brian, eds. BOOST; Bibliography...



^{25.} Faulhaber, Charles B. "Bibliography of Old Spanish Texts"...: 214.

Índice (the forerunner to his *magnum opus* published in 1990-91),²⁷ and Frederick J. Norton's "A Descriptive Catalogue".²⁸

The second factor to consider with regard to the expansion of PhiloBiblon's data is that in the 1980s its database systems were adopted by three other research teams. The first was the *Bibliography of Old Catalan Texts* (BOOCT, currently BITECA = *Bibliografia de Textos Antics Catalans, Valencians i Balears*), whose first edition, compiled by the late Beatrice Concheff, was published in 1985 in the same format and using the same technology as BOOST₃.²⁹ Interestingly, BITECA has also been the last to be published in print, in 2013, by the team of Vicenç Beltran, Gemma Avenoza (†), and Lourdes Soriano.³⁰

The Portuguese team began work in 1988, using the new relational database system developed for BOOST for what was originally to be called the *Bibliography of Old Portuguese Texts* (BOOPT, currently BITAGAP = *Bibliografia de Textos Antigos Galegos e Portugueses*) under the direction of Arthur Askins, Harvey Sharrer, Aida Fernanda Dias (†), and Martha Schaffer.³¹ In the last decade more peninsular researchers have joined the project; Filipe Alves Moreira, Cristina Sobral, Maria de Lurdes Rosa, Pedro Pinto, Mariña Arbor, and Ricardo Pichel.

Each of these teams has focused on different aspects of their respective textual and manuscript corpora: BITECA has the most detailed codicological descriptions and BITAGAP the least detailed, while BITECA and BITAGAP have attempted a comprehensive catalogue of all texts, including all legal texts and all lyric poetry. BITAGAP also stands out for its exhaustive coverage of secondary bibliography.³² Almost all of the manuscripts and printed editions in BITAGAP and BITECA have been described first hand by members of the respective teams. BETA, on the other hand, has continued to rely on the second-hand descriptions of Simón Díaz and Zarco Cuevas, focusing instead on adding detailed codicological descriptions based on first-hand study of the manuscripts not catalogued by the two earlier scholars.³³ BETA's bibliographical references, like those of BITECA, do not attempt to be

^{33.} Faulhaber, Charles B. "PhiloBiblon, Information Technology"...: 23.



^{27.} See: Dutton, Brian. *Catálogo-Índice de la poesía cancioneril del siglo XV*. Madison: Hispanic Seminary of Medieval Studies, 1982; and *El cancionero castellano del siglo XV*, c. 1350-1520, ed. Brian Dutton. Salamanca: Ediciones de la Universidad de Salamanca, 1990-91 (7 Vols.).

^{28.} Norton, Frederick J. *A Descriptive Catalogue of Printing in Spain and Portugal, 1501-1520.* Cambridge: Cambridge University Press, 1978.

^{29.} Concheff, Beatrice J. Bibliography of Old Catalan Texts. Madison: Hispanic Seminary of Medieval Studies, 1985.

^{30.} Beltran, Vicenç; Avenoza, Gemma; Soriano, Lourdes. BITECA: Bibliografia de textos antics catalans, valencians i balears. Biblioteques i Arxius Valencians. Valencia: Acadèmia Valenciana de la Lengua, 2013.

^{31.} Sharrer, Harvey L. "The BITAGAP Project Since 1988: Expansion of the Corpus of Texts and Important Discoveries", *Humanitats a la xarxa: Món medieval. Humanities on the Web: The Medieval World,* Lourdes Soriano, Helena Rovira, Marion Coderch, Glòria Sabaté, Xavier Espluga, eds. Bern: Peter Lang, 2014: 169-184.

^{32.} Askins, Arthur L.-F.; Dias, Aida Fernanda; Sharrer, Harvey L. "A bibliografia de textos antigos galegos e portugueses na Internet". Revista portuguesa de história do livro, 2 (1998): 173-180.

comprehensive, focusing primarily on manuscript catalogues, codicological studies of individual manuscripts, editions of texts, biographical studies, and the ilk.³⁴

Even though a new printed edition of BOOST had been announced for 1989,35 the advent of a new technology altered that plan: the CD-ROM disk "seemed the perfect medium for realizing extensive hypermedia programs and databases."³⁶ Thus in 1992 the aforementioned projects (BETA, BITECA, and BITAGAP), together with a set of Digital Humanities tools,³⁷ were published in Spain on two CD-ROM disks by Micronet S.A.³⁸ Another CD-ROM package, also with two disks, was released in 1999,³⁹ as a result of a project which incorporated a new team member: Antonio Cortijo Ocaña. 40 Later that same year, a fourth disk, including just PhiloBiblon, was published by The Bancroft Library of the University of California, Berkeley. 41 This new format, the CD-ROM disk, was enthusiastically received by the academy, 42 hoping that it might inaugurate a new age for research on the Iberian Middle Ages. 43 But even though it has recently been claimed that these disks are significant resources for the Iberian Digital Humanities, 44 the fact is that polemical digital rights management policies adopted by some software companies have condemned them to an undeserved oblivion.⁴⁵ They are currently unusable on computers that use versions of Windows later than v. 3.1.

^{45.} Agenjo, Xabier. "Las bibliotecas virtuales españolas y el tratamiento textual de los recursos bibliográficos". Ínsula, 822 (2015): 12-15.



^{34.} For further information on these differences, see the home page for each bibliography: BETA. 20 March 2022 http://bancroft.berkeley.edu/philobiblon/bitagap_en.html. BITECA. 20 March 2022 http://bancroft.berkeley.edu/philobiblon/biteca_en.html.

^{35.} Faulhaber, Charles B.; Gómez Moreno, Ángel. "BOOST,". La Corónica, 14 (1986): 291-292.

^{36.} Ess, Charles. "'Revolution? What Revolution?' Successes and Limits of Computing Technologies in Philosophy and Religion", *A Companion to Digital Humanities*, Susan Schreibman, Ray Siemens, John Unsworth, eds. 2004: (Chapter 12). 20 March 2022 https://www.digitalhumanities.org/companion/ >.

^{37.} Described by: Marcos Marín, Francisco. Informática y humanidades. Madrid: Gredos, 1994: 181-189.

^{38.} Marcos Marín, Francisco; Faulhaber, Charles B., eds. *ADMYTE 0: Archivo Digital de Manuscritos y Textos Españoles*. Madrid: Quinto Centenario-Biblioteca Nacional-Micronet S.A., 1993; Marcos Marín, Francisco; Faulhaber, Charles B., eds. *ADMYTE I: Archivo Digital de Manuscritos y Textos Españoles*. Madrid: Quinto Centenario-Biblioteca Nacional-Micronet S.A., 1992.

^{39.} On the peculiarities of these CD-ROM disks and their apparently mistaken dates of release, see: Perea Rodríguez, Óscar; Faulhaber, Charles. "Esbozos sobre la evolución"...: 7-8.

^{40.} Marcos Marín, Francisco; Faulhaber, Charles B.; Gómez Moreno, Ángel; Cortijo Ocaña, Antonio, eds. *ADMYTE II: Archivo Digital de Manuscritos y Textos Españoles*. Madrid: Sociedad Estatal de Conmemoraciones Culturales Centenario-Biblioteca Nacional-Micronet S.A., 1999.

^{41.} Faulhaber, Charles B.; Askins, Arthur L-F.; Sharrer, Harvey L., eds. *PhiloBiblon. Electronic Bibliographies of Medieval Catalan, Castilian, Galician, and Portuguese Literature.* Berkeley: The Bancroft Library, 1999.

^{42.} Hernández Lorenzo, Laura. "Humanidades Digitales"...: 565.

^{43.} In words of Pellen, Renée. "Le CD-ROM: un nouvel âge pour la recherche? Étude d' «ADMYTE₁», base de textes espagnols médiévaux". *Revue de Linguistique Romane*, 61 (1997): 89-131.

^{44.} See: Rojas Castro, Antonio. "El mapa y el territorio. Una aproximación histórico-bibliográfica a la emergencia de las Humanidades Digitales en España". *Caracteres*, 3 (2013): 10-53.

The last project to join PhiloBiblon was BIPA (*Bibliografía de la Poesía Áurea*), managed since 1997 by José Labrador Herraiz and Ralph DiFranco.⁴⁶ BIPA is a database of the first lines of Spanish Golden Age poetry of the 16th-17th centuries found in both manuscript and printed sources, as established in the pioneer Labrador-DiFranco work, *Tabla de los principios de la poesía española*.⁴⁷ Its web site has been under construction since then because its compilers have declined to make it publicly available until it is more complete, asserting that to put an unfinished product on the web would betray its commitment to the National Endowment of the Humanities.

Because of space limitations, we shall say little concerning the technical evolution of PhiloBiblon.⁴⁸ Suffice it to say that what began at Madison as a UNIVAC mainframe flat-file database (FAMULUS) with ten fixed-length fields per record,⁴⁹ was first moved in 1985 to a flat-file SPIRES database with 19 variable-length fields at Berkeley and finally to a Revelation Technologies PC-based relational database (Rev G) in 1987.⁵⁰ This version was distributed on CD-ROM in 1992,⁵¹ eventually finding its place on the World-Wide-Web in 1997.⁵²

Currently PhiloBiblon runs on OpenInsight, a proprietary relational database management system of Revelation Software, the lineal descendant of Rev G, programmed by John May (Database Design & Engineering, Walnut Creek, California), who has been in charge of the technical aspects of PhiloBiblon since 1987, including the major 2002 change: the transportation of all data from an MS-DOS environment to the Windows OS.⁵³ During the initial steps of this challenging process, one more member joined the project: Óscar Perea Rodríguez, a pupil of Ángel Gómez Moreno at the Universidad Complutense, who had also collaborated on the ADMYTE 2 disk mentioned previously.

PhiloBiblon thus represents the outcome of 45 years of work by several generations of scholars on the application of database technology to the cataloguing of large text corpora. It has become *the* essential tool for the control of the entire corpus of the Romance literatures of medieval Iberia, the indispensable starting

^{53.} See Revelation Software: Revelation Software. 20 March 2022 http://www.revelation.com/>.



^{46.} See: Ralph DiFranco, Ralph; Labrador Herraiz, José J., eds. "BIPA (Bibliografía de la Poesía Áurea)", *PhiloBiblon*. 20 March 20222 https://bancroft.berkeley.edu/philobiblon/bipa_en.html.

^{47.} Labrador Herraiz, José J.; DiFranco, Ralph. *Tabla de los principios de la poesía española, siglos XVI-XVII*. Cleveland: Cleveland State University, 1993.

^{48.} Further information can be found in: Faulhaber, Charles B. "PhiloBiblon, Information Technology"...: 19-20.

^{49.} Faulhaber, Charles B.; Nitti, John; "BOOST, Debits and Credits". La Corónica, 11 (1983): 286-292.

^{50.} Milic, Louis T. "Stylistics from Mainframe to Microcomputer". *Digital Scholarship in the Humanities* 3/2 (1988): 122-124.

^{51.} See: Faulhaber, Charles B. "PhiloBiblon: Problems and Solutions in a Relational Data Base of Medieval Texts". *Linguistic & Literary Computing*, 6 (1991): 89-96.

^{52.} Faulhaber, Charles B.; Gómez Moreno, Ángel. "De BOOST a BETA: de Madison a Berkeley", Los códices literarios de la Edad Media. Interpretación, historia, técnicas y catalogación, Pedro M. Cátedra, Eva B. Carro-Carbajal, Javier Durán-Barceló, eds. San Millán de la Cogolla: Cilengua-Instituto de Historia del Libro y de la Lectura, 2009: 283-292.

point for any serious research on medieval Iberian literatures and cultures. ⁵⁴ For all these reasons, philologists and researchers in the Iberian languages and literatures have been PhiloBiblon's primary beneficiaries since the start, but the database has been little used by students and scholars from other disciplines despite its potential interest for their work. To repeat: we seek here to show those scholars, especially historians of the Iberian Middle Ages, how they can make a good use of the database. ⁵⁵ But first we must explain how PhiloBiblon's relational tables work.

3. PhiloBiblon Identifiers (ID)

At the dawn of this century, each of PhiloBiblon's bibliographies contained 650 individual data fields distributed among ten relational tables. In order to make PhiloBiblon available on the web in 1997, the first task was to convert the MS-DOS ASCII text files to HTML files and then upload them to a server at Berkeley.

N database of Catalán, Calidan, Portuguese & Spatish manuscripts
Título:
Autor:
Palabras o números clave:
manid PhiloBiblon: texid PhiloBiblon:
Archivo: ○BETA ○BITAGAP ○BITECA ●TODAS LAS BIBLIOGRAFÍAS
Comenzar búsqueda Borrar todos los campos
PhiloBiblon Search Engine (in English) Help: (Por favor, léase autes de realizar una búsqueda)
El programa buscará el texto introducido en las casillas de búsqueda "Titulo" o "Autor" exclusivamente en esos campos. En cambio, aquello que se introduzca en el campo "Palabras o números clave" se buscará por todo el registro. Se puede buscar un MANID (número de identificación de un manuscrito o edición impresa) o TEXID (número de identificación de un texto), o bien limitar la búsqueda a una de las tres bibliografias de PhiloBiblon.
Opciones de búsqueda:
 Puede utilizar los operadores booleanos and ("y"), or ("o") o not ("no") para combinar los términos buscados. Puede utilizar el asterisco "*" como comodin de búsqueda al final de las palabras buscadas. Los signos diacríticos forman parte de la búsqueda y deben introducirse. Si usted no sabe cómo introducirlos, consulte: The PhiloBiblon HELP Page
00

ILLUSTRATION 4. PHILOBIBLON WEB SEARCH PAGE (2002). ILLUSTRATION PROVIDED BY THE AUTHOR.

^{55.} As explained, with regard to BITAGAP, by Moreira, Filipe Alves. "A BITAGAP e o estudo da historiografia medieval portuguesa (a propósito da nove versão desta base de dados)". *Medievalista*, 12 (2012). 20 March 2022 http://doi.org/10.4000/medievalista.677>.



^{54.} Faulhaber, Charles B. "PhiloBiblon, Information Technology"...: 18.

Indexes and files were made accessible online via the public domain indexing program SWISH (Simple Web Indexing System for Humans).⁵⁶ Similarly, a simple CGI script allowed internauts to search by author, title, or key words.

PhiloBiblon's web structure currently provides data from 1246 different fields distributed among ten interrelated tables in each of the three bibliographies, BETA, BITECA, and BITAGAP. In addition to the primary site, hosted by The Bancroft Library at the University of California, Berkeley,⁵⁷ there is a mirror site at the Universitat Pompeu Fabra in Barcelona established in 2106 by an agreement between Berkeley and the UPF thanks to the efforts of Charles Faulhaber, Mercè Cabo Rigol, María Morrás, Joan Trench, and Marc Esteve.⁵⁸

PhiloBiblon's search engine and web site has undergone a number of modifications since it was designed in 1997, most notably with the design of the current site in 2017 thanks to NEH support. It currently offers search options for six different entities:

1. Work (texid)	Primary source texts: Author, title, incipit/explicit, date, associated person, place of composition.
2. Library (libid)	Libraries and archives holding primary sources: City, name of the institution, current and former shelfmarks, including those of previous owners.
3. Institution (insid)	Organizations of historical interest from the Middle Ages to the present, including universities, churches and monasteries, guilds, families (<i>casas</i>), religious or military orders.
4. Person (bioid)	Biographical information for all persons related to medieval texts as well as to manuscripts and printed books: Names (original and translated), titles (ecclesiastical, nobiliary, government), birth and death places and dates, profession, religious affiliation.
5. Reference (bibid)	Secondary sources: Author, title, date and place of publication, publisher, associated person (e.g., editor).
6. MsEd (manid)	Manuscripts and printed books: City, holding library, current or former shelfmark, date and place of copying or printing, scribe or printer, publisher or patron, previous owner or any other associated person.

^{58.} *PhiloBiblon* (Universitat Pompeu Fabra mirror site). 20 March 2022 http://philobiblon.upf.edu/philobiblon/.



^{56.} Faulhaber, Charles. "PhiloBiblon and the Semantic Web"...: 78.

^{57.} PhiloBiblon (Berkeley site). 20 March 2022 http://bancroft.berkeley.edu/philobiblon/>.

The abbreviated list above does not do justice to the wealth of information that the search options can provide. For example, under **Manuscript / Printed edition** users can search for the original manuscript of a text (provided it is possible to determine that fact) or for copies of it, either contemporary or later. Printed editions include both incunables, whose texts are by definition medieval, as well as 16th and 17th century editions of medieval texts. In addition, specific searches can include:

- **City**: The name of the city, in its native language, shows the location of the library that holds the manuscript or copy of a printed edition.
- **Library**: Current or former name of the library that holds, or held, a given manuscript or copy of a printed edition.
- **Shelfmark**: Both current and former shelfmarks in the holding library, as well as the shelfmark of a previous owner.
- **Date**: PhiloBiblon has attempted since the very beginning to remedy the lack of tools to date with accuracy manuscripts that contain medieval Spanish texts. ⁵⁹ One can search for complete or partial dates. A search for "1435" will return manuscripts copied on any day of that year, as well as undated manuscripts that based on internal or external evidence have been dated to include that year (For example, 1435; 1435 *a quo*, 1435 *ad quem*; 1401? 1435?; 1395? 1435?; etc.).
- **Place of production**: The name of a city or place, in its native language, where a manuscript was written or a book was printed.
- **Scribe or printer**: Search for a scribe using any form of the name. For a printer, use the name in its original form (For example, in BETA, "Christofol Kofmann" rather than "Cristóbal Cofman"). In order to verify the original form of any given name, make an initial search in Person.
- **Previous owner**: Search for any person or institution that formerly owned the manuscript or copy of a printed book by the person's name or title, by the name of a monastery, museum, auction house, etc.
- **Associated person**: This field accommodates any individual not previously categorized as scribe, printer, or previous owner, such as binders, illuminators, annotators, etc. Searches here can be made by any form of the name.

PhiloBiblon web users can thus seek information about a text, a manuscript or early printed edition, a specific copy of a text in a manuscript or printed edition, an individual, a library, or an item in the reference bibliography.

In addition to the indexed fields listed above, the "Simple search" field at the top of each search page provides for key word searches of fields that have not been indexed as such, for example, "binding, condition, collation, hand (script), graphic materials", and especially "notes". Searches are not case sensitive.

^{59.} Franchini, Enzo. "Prolegómenos para crear un banco de datos sobre la datación de obras literarias de la Edad Media española", *Actas del XIII Congreso Internacional de la Asociación Hispánica de Literatura Medieval*, José Manuel Fradejas Rueda, Deborah Anne Dietrick, María Jesús Díez Garretas, Demetrio Martín Sanz, eds. Valladolid: Universidad de Valladolidad, 2010: 829-844, especially 831.



One last thing to consider is the fact that each of the bibliographies uses its target language (Catalan for BITECA; Spanish for BETA;⁶⁰ and Portuguese/Galician for BITAGAP) not only for data, but also for metadata. Similarly, each follows the bibliographical conventions peculiar to its own scholarly tradition. However, in order to make PhiloBiblon as helpful as possible to the greatest number of users, all of the web pages have been made available in Catalan, Galician, Portuguese, and Spanish, as well as English, the *lingua franca* of current scholarship.

The OpenInsight database management system numbers each record automatically, creating thereby a unique identification number (ID) for any catalogued entity. In order to illustrate the IDs used for the six entities listed above, let us look at the results of a search for the well-known *Memorias* of Leonor López de Córdoba, the first autobiography written in Spanish, ⁶¹ and an excellent example of a text written by a medieval woman. ⁶² We shall give a brief description of these IDs and the table to which they belong (for example, **texid** = WORK), closing with the implications for the use of each of these IDs in PhiloBiblon.

The first thing to keep in mind is that each of the four bibliographies has its own numbering system. This means that it is imperative to name the bibliography used in order to avoid confusion.⁶³ Thus, BETA **bioid** 3168 is Leonor López de Córdoba (see below), but BITAGAP **bioid** 3168 is pope Boniface IX, and BITECA **bioid** 3168 is the Catalan inquisitor Nicolau Eimeric. The images reproduced below show the results of a search for both title, *Memorias*, and author, "Leonor López de Córdoba," in the WORK search page.

Any search will return a list of records with results listed in alphabetical order and witnesses in chronological order. In this case, there is only one record that fulfils the search criteria. A click on the record desired will bring up a more detailed description.⁶⁴

The record number for the *Memorias* is therefore BETA **texid** 3650, its unique ID. Every one of the texts listed in PhiloBiblon has its own unique record number. For example, there are *nine* different translations of the *Epistola de cura rei familiaris*, the letter commonly attributed to St. Bernard of Clairvaux but now ascribed to Bernardus Silvestris. In many cases they share the same title in the manuscripts, but the unique **texids** assigned to them (1712, 2211, 3658, 4227, 4228, 4229, 4230, 9755, 10472) allow the witnesses of each translation to be identified unequivocally.

^{64.} A complete list of tips and advice on how to perform searches in PhiloBiblon can be found here: *PhiloBiblon*. 20 March 2022 http://bancroft.berkeley.edu/philobiblon/help_en.html#searchesgeneral/>.



^{60.} BETA focuses on texts written in medieval Castilian Spanish, including also any material of cultural interest written in Leonese, Navarre, Aragonese, and Mozarabic, as well as *aljamiado* texts in Hebrew or Arabic script in any of these dialects.

^{61.} Gómez Redondo, Fernando. Historia de la prosa medieval castellana. III: Los orígenes del humanismo. El marco cultural de Enrique III y Juan II. Madrid: Cátedra, 2002: 2334.

^{62.} Juan Lovera, Carmen. "Doña Leonor López de Córdoba (1362-1430). Relato autobiográfico de una mujer cordobesa escrito hacia 1400". *Boletín de la Real Academia de Córdoba*, 117 (1989): 255-275.

^{63.} On how to cite our data, see: *PhiloBiblon*. 20 March 2022 http://bancroft.berkeley.edu/philobiblon/copyright_en.html/>.

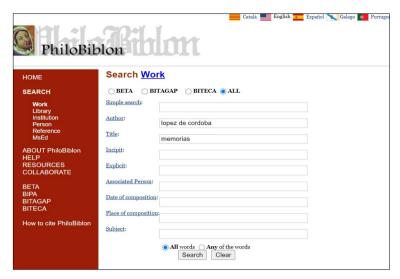


ILLUSTRATION 5A. PHILOBIBLON SEARCH RESULTS: BETA TEXID 3650. ILLUSTRATION PROVIDED BY THE AUTHOR.





Illustration 5B. PhiloBiblon Search Results: BETA texid 3650. Illustration provided by the author.

The date of composition of a text is independent of the date of its witnesses. In fact, the López de Córdoba text offers an excellent, although extreme, example of how medieval texts have often been preserved in manuscripts copied years, even centuries, later. ⁶⁵ Although the *Memorias* were composed between 1400 and 1410, ⁶⁶ the earliest manuscript witness is dated ca. 1700-1710. ⁶⁷ Thus, the first ID in the table Work \rightarrow *Memorias* \rightarrow BETA **texid** 3650.

The next PhiloBiblon ID is **manid**, again with a unique record number assigned to each primary source —manuscript or printed— containing a work composed in the Middle Ages.⁶⁸ In the case of the *Memorias*, there are five extant primary sources (marked in red as Witnesses) and listed in chronological order from earliest to latest:

```
Lad no. of Witness 1 cmam 6633
City, library, collection & Sevilla: <u>Biblioteca Capitular y Colombina</u>, 63-9-73 (BETA <u>manid 3943</u>)
call number
                                                       I number

Copied 1701 ca. - 1710 ca. (Ayerbe)
in witness ff. 195r-203r
                                                           Numers au. 174-204.
Triffej Lenear [Jepte de Ciroloba, Memorias, escrito 1400 ca.
Cogna de un institutación artiguro que se halla en el archivo de San Páblo de Cordoba de Orden de Predicadores, escrito por Deña Leonor Lopez de Cordoba, hijo del Maestre Martin Lopez de Cordoba, donde refiere la muerte designacida de su Padre socia-105 (in Ministerio).
                   Incipit & Explicios

(1.59) En el membre de Doo Pales y del lajo y del Espristo Santo ... e Santos y Santas dela Certe del Cricio amen

tecto. [159] Te en incepte de Doos Pales y del lajo y del Espristo Santo ... e Santos y Santas dela Certe del Cricio amen

tecto. [159] Te en incepte que son a fiscorpiana vieren cono yo Dela Leonor Lope de Condon ... [2031] ... y ass vinenes a mis casas a Condon

References

References

Amaneuro [1590]. Amaneuro Instructo-endesica el acreso autobosticolis de Leonor Lope de Condon Liberatio Pales (Resina del Instruma Molicia).
                                                         Subject Historia
 ID no. of Witness 2 cmm 11248
City, library, collection & Call number call number
                                                           Copied 1730 ca (Perea)
                 Location in witness ff. 363r-373v
                     Tint(s). Learn Liper de Cordoba, Memorias, escrito 1400 ca.

Tint(s). Learn Liper de Cordoba, Memorias, escrito 1400 ca.

Relacion de los tramjos que padeco D'Leoner Lopez de Cordona despus- que S. A. la sparió de 100 casa y lodo, 361r (Peros).

Incipit de Espicion.

Respector de Cordona despus- que S. A. la sparió de 100 casa y lodo, 361r (Peros).
                                                               note [7507] care inclusive the total or rate of the tray of the rappy of the rapput comment. [7518]— yet in the rappet of the rappet comment of the rappet o
ID no. of Witness 3

2mm 6507

City, library, collection & Cordoba: Archivo y Bublioteca del Palario de Viana, leg. 157, exp. 7 (BETA manid 3930)

call member
Corocha (f. 1r) 1733 (f. 1r)
TBridy) L'esser Lisper de Crincha, Memorias, escrito 1400 ca.
TBr. os. Vilvers d'armi 17123
Chy, library, collectos de Maria (Real Academia de la Fistoria 93747 (BETA manid 5201)
cal mumber
                                                         Copied 1800 ca (Perea)
                                                         a witness ff. 66r-81v

Title(s) Leonor López de Córdoba, Memorias, escrito 1400 ca.
                                                                                             RELACION DE los Trabasos que padeció Doña Leonor Lopez de Cordoba, Dama y Privada de Reyna D<sup>a</sup> Cafaalina Despues que perdio la gracia de Su Alteza y antes en el Reynado de Don Henrique II de Castilla, 66r (Perea)
                   Incipit di Exploito:

(To file a compare de De Debre de la Compare de Debre de Debre de La Compare de Compare 
                       ID no. of Witness 5 cmm 15502
```

ILLUSTRATION 6. PHILOBIBLON SEARCH RESULTS: 5 WITNESSES FOR BETA TEXID 3650. ILLUSTRATION PROVIDED BY THE AUTHOR.

^{68.} Copid is used only for a second or subsequent copy of a given printed book and is therefore linked to the manid of its "master" copy, usually catalogued in one of the major national libraries. See: Perea Rodríguez, Óscar; Faulhaber, Charles. "Esbozos sobre la evolución"...: 11-12.



^{65.} Lacarra, María Jesús. Don Juan Manuel. Madrid: Síntesis, 2006: 54.

^{66.} Gómez Redondo, Fernando. Historia de la prosa...: 2335.

^{67.} Perea Rodríguez, Óscar. "'Por mi Señora, la Reina Catalina'. Las donaciones de Leonor López de Córdoba al monasterio cordobés de San Pablo (1409)", *Poder, piedad y devoción. Castilla y su entorno (siglos XII-XV)*, Isabel Beceiro Pita, ed. Madrid: Sílex, 2014: 189-226.

```
MsED → Córdoba, Archivo Histórico Palacio de Viana → BETA manid 3930.
```

MsED → Córdoba, Biblioteca

Linking the texid and the manid is the **cnum** (**C**ontrol **Num**ber), the record of a given text in a given manuscript or printed book, the unique ID of a given witness.

Although medieval Iberian texts have often been transmitted in a single manuscript,⁶⁹ it is also common for a codex to contain more than one work, although in the case of the *Memorias*, none of them do. In the previous screen shot, one can see highlighted in red the five witnesses of the *Memorias*, followed by the **cnum** of each one. In short, five different manuscripts (**manid**) containing the same text (**texid** 3650) make a total of five unique sources (**cnum**) for this medieval work:

```
texid 3650 + manid 3930 = cnum 6607
texid 3650 + manid 3943 = cnum 6633
texid 3650 + manid 5200 = cnum 11248
texid 3650 + manid 5201 = cnum 11249
texid 3650 + manid 6269 = cnum 15502
```

Closely related to this search is **libid**, a unique record number assigned to each library which holds primary sources. In the case of the five manuscripts containing the *Memorias*, however, we only have four **libids**, because two of the manuscripts are located in the same library, the Real Academia de la Historia:

```
BETA manid 3930 → Córdoba, Archivo Histórico de Viana→ libid 801
BETA manid 3943 → Sevilla, Biblioteca Capitular y Colombina → libid 334
BETA manid 5200 → Madrid, Real Academia de la Historia → libid 213
BETA manid 5201 → Madrid, Real Academia de la Historia → libid 213
BETA manid 6269 → Córdoba, Biblioteca Pública Provincial → libid 155
```

As one might suppose, the four IDs mentioned so far, **manid**, **texid**, **cnum**, and **libid**, are those most commonly used by philologists, book historians, and experts in textual criticism, for they uniquely identify texts, manuscripts, witnesses, and libraries. But two other identifiers might be of great use to historians as well.

The first is **bioid**, a unique code assigned to any individual related in some way to any other entity in the database. This includes a relation to a given **texid** as author, translator, editor, subject, but also to a given **manid** as scribe, printer, dedicatee, patron, owner... What matters even more is the fact that each **bioid** is also connected to that of any other individual who is in some way related to the person it identifies. For instance, BETA **bioid** 3168, the record for Leonor López de



MsED → Sevilla, Biblioteca Capitular y Colombina, 63-9-72 → BETA manid 3943.

MsED → Madrid, Real Academia de la Historia, 9/5445 → BETA manid 5200.

MsED → Madrid, Real Academia de la Historia, 9/5747 → BETA manid 5201.

^{69.} López Estrada, Francisco. Introducción a la literatura medieval española. Madrid: Gredos, 1966: 50-51.

Córdoba, offers everything historians may need in order to map the entire network of her known personal and social relations, based on data from primary sources as well as from secondary bibliography.

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| Danie of Person
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Illustration 7. PhiloBiblon Search Results: BETA bioid 3168. Illustration provided by the author.

Another example of how the **bioid** can serve as an important historical resource is shown by the case of Alfonso el Inocente (BETA **bioid** 2684), the younger half-brother of queen Isabel la Católica as well as of King Enrique IV, raised up in 1465 as the legitimate king against his half-brother by a faction of the nobility during the 'Farsa de Ávila,' which also burned Enrique in effigy.⁷⁰ As a result of Alfonso's presence in a poem written by Nicolás de Guevara that same year (BETA **texid** 10087),⁷¹ PhiloBiblon's record of the "monarca inocente" provides all the connections needed to identify the poets and troubadours who accompanied his court from 1465 to 1468 and played a cultural role in this ephemeral but important socio-literary milieu.

The "density" of this network of relationships is greatest, obviously for well-known authors and for members of the royal family and the great noble families.

The last PhiloBiblon ID to be mentioned is **bibid**, a record of all secondary sources that provide information related to any of the entities in the database. For example, if a modern study deals with a primary source, its **bibid** will be connected to the relevant **manid**; on the other hand, if the study concerns the author's life, it will be connected to his or her **bioid**.

^{71.} On the identity of this poet, see: Beltran, Vicenç. "Guevara", Actas del IX Congreso Internacional de la Asociación Hispánica de Literatura Medieval, Carmen Parrilla, Mercedes Pampín, eds. Noia: Toxosoutos, 2005, I:43-81.



^{70.} Morales Muñiz, Dolores Carmen. *Alfonso de Ávila, rey de Castilla*. Ávila: Fundación Gran Duque de Alba, 1988: 96-98.

4. PhiloBiblon as a Tool for Historians

The interest in expanding the database for use by historians is also a result of the technical evolution of PhiloBiblon. Over the years, its technological infrastructure has become increasingly outdated. For instance, data entry is entirely manual and limited to a single user at a time, while the regular uploading to the web entails a number of inefficient technical operations. Moreover, and more importantly, it is not aligned with the current global standards based on Linked Open Data (LD) and the Semantic Web.⁷² Therefore PhiloBiblon is currently adopting a Wiki format based on FactGrid, a Database for Historians.⁷³ This project, coordinated by Olaf Simons at the Universität Erfurt, has a well-established set of practices and principles based on Wikibase. This technological transformation will enable new research by unlocking PhiloBiblon's rich data universe and opening that universe to the world. At the same time it will continue to stimulate awareness of the need to recover the primary manuscript and printed sources of medieval Iberian culture by highlighting those that remain unedited and unstudied.

We are now in the process of adapting our data to the simple Wikibase model, which consists of LD triplestores (triples) based on entities (Q) and properties (P = LD predicates), each with a unique FactGrid id number. Each triple can be qualified with sub-statements and footnoted with references. Development of PhiloBiblon's Wikibase data model will consist first in identifying PhiloBiblon controlled vocabulary with existing P# (for example, P21: written by) in FactGrid and creating new ones if necessary. These P# will then be used to link Q# at the item level: Thus "Claros varones de Castilla (Q393538) written by (P21) Fernando de Pulgar (Q393534)."

The vast majority of PhiloBiblon's 422,000+ entities do not have FactGrid Q#. They will be added automatically as part of the data ingest process, in which we are being assisted by the two most recent members of the PhiloBiblon research team: Patricia García Sánchez-Migallón and Almudena Izquierdo Andreu, both trained at the Universidad Complutense under the guidance of Ángel Gómez Moreno and Álvaro Bustos. This is an ongoing process funded under a pilot grant by the National Endowment for the Humanities (PW-277550-21), which will end in May of 2023. The complete mapping of all of PhiloBiblon's records to FactGrid will require an additional two years of work, always assuming adequate financial support.

^{73.} See: *Factgrid. A database for historians*. 20 March 2022 http://database.factgrid.de/wiki/Main_Page. 74. On the challenges of the new technology, read: Faulhaber, Charles B. "PhiloBiblon y el mundo Wiki". *Magnificat. Cultura i literatura medievals*, 9 (2022) [forthcoming].



^{72.} For a detailed description of this evolution, read Faulhaber, Charles B. "PhiloBiblon and the Semantic Web. Notes for a Future History", *La literatura medieval hispánica en la imprenta (1475-1600)*, María Jesús Lacarra, ed. Valencia: Universitat de Valencia, 2016: 75-93.



ILLUSTRATION 8. PHILOBIBLON HOME PAGE AT FACTGRID. ILLUSTRATION PROVIDED BY THE AUTHOR.

Aside from the database's new architectural design, there are many other factors that should encourage historians to use PhiloBiblon. Nevertheless, we must acknowledge that their reluctance to take advantage of our database may stem from the fact that we specifically omit notarial documents, and this for a purely practical reason —there are millions of them— unless they are of cultural interest. But what makes a notarial document a text of cultural interest?

One factor is simply the number of copies. Most notarial documents are unique, but in some cases their interest transcends the merely instrumental. The *Memorias* serves as an excellent example. Its whole essence is notarial, a text dictated to a notary by a woman in order to justify her turbulent life;⁷⁵ nevertheless, its exposition of facts and events surrounding the Trastamaran wars aroused such great interest from the 18th century onward that it was copied at least five times.⁷⁶ In fact, this growing appeal has also turned other notarial documents related to the author of the *Memorias* into cultural artifacts as well, despite the exiguous number of copies.

The first example is Fernando de Antequera's 1408 protest (BETA **texid** 4278) against Leonor's political manoeuvres on behalf of Catherine of Lancaster, dowager queen of Castile and mother of King Juan II, known in a unique copy.⁷⁷ Another unique copy is Leonor's deed of gift to the monastery of San Pablo de Córdoba (BETA **texid** 13668), held at the Library of Congress and discovered by Perea Rodríguez

^{77.} Severin, Dorothy S. "A Letter of Complaint from Fernando de Antequera about Leonor López de Córdoba in PN2", *Nunca fue pena mayor. Estudios de literatura española en homenaje a Brian Dutton*, Ana Menéndez Collera, Victoriano Roncero López, eds. Cuenca: Universidad de Castilla-La Mancha, 1996: 633-644.



^{75.} Rivera Garretas, María Milagros. Textos y espacios de mujeres (Europa, siglos IV-XV). Barcelona: Icaria, 1995: 160.

^{76.} Perea Rodríguez, Óscar. "Algunos documentos nuevos sobre Leonor López de Córdoba", *Estudios de frontera 8. Mujeres y fronteras*, Francisco Toro Ceballos, José Rodríguez Molina, eds. Alcalá la Real: Ayuntamiento de Jaén-Diputación de Jaén, 2011: 373-385.

in 2010 (BETA **bibid** 5330);⁷⁸ he also published the modern edition of this crucial document (BETA **bibid** 8680).⁷⁹

Many other notarial documents like the *Memorias* have become texts of cultural or historical significance because of their intrinsic importance, as reflected in the number of copies. For instance, King Juan I of Castile's rhetorically effective speech to the Parliament summoned at Segovia in 1386 stands out as a courageous defence of the realm against the pretensions to the throne of John of Gaunt, Duke of Lancaster, the father of Catherine of Lancaster, son-in-law of king Pedro I and father-in-law of king Enrique III.⁸⁰ This text (BETA **texid** 2019) has been preserved in 16 different primary sources, demonstrating *ipso facto* its importance as a cultural artifact.

Another noteworthy example is that of Francisco Hernández Coronel, a financial agent and money lender straddling the late 15th and early 16th centuries, a member of a powerful *converso* family, the descendants of Rabbi Meir Melamed, ⁸¹ who was baptized as Fernán Núñez Coronel after his conversion to Christianity in 1492. ⁸² Even though his life as a banker is well-known, ⁸³ especially as a lessor of the Castilian royal fisc, ⁸⁴ thanks to his PhiloBiblon record (BETA **bioid** 3918) it is now possible to recognize him as the author of two notable and quite different literary artifacts: first, a Petrarchan-influenced poem gathered in by Hernando del Castillo in his *Cancionero general* (1511); ⁸⁵ and second, a memorial dunning Emperor Charles V for the monies owed to his family by the Crown as a result of a wide array of financial operations. ⁸⁶

We hope that the examples provided here will stimulate the use of PhiloBiblon among researchers of medieval and early modern Iberia working in the fields of history, history of art, philosophy, law, science, religion, and other disciplines. We are confident that they will be pleasantly surprised.

^{86.} Perea Rodríguez, Óscar. "La peligrosa fidelidad de los conversos a la monarquía hispánica: el memorial de agravios de Francisco Hernández Coronel al Rey Católico (1515)", Les minorités face au problème de la fidélité dans l'Espagne des XVe-XVIIe siècles, Rica Amran, ed. Paris: Indigo-Université de Picardie Jules Verne, 2013: 61-79.



^{78.} Perea Rodríguez, Óscar. "Algunos documentos nuevos"...: 379-380.

^{79.} Perea Rodríguez, Óscar. "'Por mi Señora, la Reina Catalina'"...: 189-190.

^{80.} Perea Rodríguez, Óscar. "Anglofilia y anglofobia en la Castilla medieval: Thomas Becket y el duque de Lancáster en la arenga de Juan I de Trastámara ante las Cortes de Segovia (1386)", *La espiritualidad y la configuración de los reinos ibéricos (siglos XII-XV)*, Isabel Beceiro Pita, ed. Madrid: Dykinson, 2018: 197-238.

^{81.} Perea Rodríguez, Óscar. "Francisco Hernández Coronel, poeta converso del 'Cancionero general'", *Homenaje al profesor Eloy Benito Ruano*. Madrid: Sociedad Española de Estudios Medievales- Universidad de Murcia: Servicio de Publicaciones- Consejo Superior de Investigaciones Científicas, 2010: II, 611-626.

^{82.} Carrete Parrondo, Carlos. "La Hacienda castellana de Rabbi Meir Melamed (Fernán Núñez Coronel)". *Sefarad*, 37/1-2 (1977): 339-349.

^{83.} Carretero Zamora, Juan Manuel. "Los arrendadores de la Hacienda de Castilla a comienzos del siglo XVI (1517-1525)". Studia Histórica. Historia Moderna, 21 (1999): 153-190.

^{84.} Ladero Quesada, Miguel Ángel. "La receptoría y pagaduría general de la Hacienda regia castellana entre 1491 y 1494 (de Rabí Meir Melamed a Fernán Núñez Coronel)". *En la España Medieval*, 25 (2002): 425-506.

^{85.} Perea Rodríguez, Óscar. "Francisco Hernández Coronel"...: 618-620.

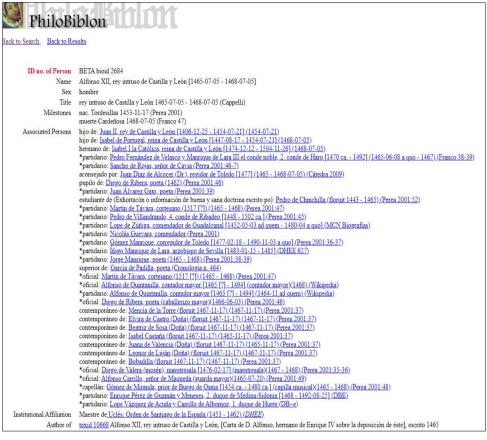


ILLUSTRATION 9. PHILOBIBLON SEARCH RESULTS: BETA BIOID 2684. ILLUSTRATION PROVIDED BY THE AUTHOR.

