An Exploration of Functional Requirements of Bibliographic Records (FRBR): An Annotated Bibliography

by

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Introduction and Scope

The following bibliography covers the prevailing research on Functional Requirements of Bibliographic Records (FRBR). Introduced as a conceptual model in its present form in 1998, FRBR has among its principle aims to provide the means to describe the bibliographic universe with special emphasis on enhancing users access to all the possible records in all their various forms and expressions. Each of the articles presented in this bibliography approaches their particular research from the standpoint of whether and to what extent FRBR can replace or at minimal supplement existing cataloguing rules used to record, describe, identify and access bibliographic material. The bibliography covers articles published between 2002 and 2011 with a focus on those articles devoted to empirical research and or analysis into the practical applicability of the FRBR model to bibliographic reality as it exists in online catalogs databases and other information retention systems.

Description

The birth and emergence of FRBR as a vision and set of concerns surrounding how bibliographic records may best be structured and described represents an evolution in a fifty-year history begun by the International Federation of Library Associations and Institutions (IFLA) in the development of cataloguing theory and uniform practices that would be applicable on an international scale. Before FRBR these efforts were articulated and promoted first in the Paris Principles of 1961 and then in the International Standard Bibliographic Description for Monographic Publications (ISBD) established in 1971, which has “served as the bibliographic foundation for a variety of new and revised national and international cataloguing codes” in the years to follow.

These earlier efforts to establish standardized and international cataloguing rules worked well enough before the introduction and ongoing development of automated systems to create and process bibliographic data, the emergence and growth of large-scale databases with international reach and the growth of shared cataloguing facilitated by advancements in electronic media and publishing. These changes in the environment under which cataloguing standards have operated combined with a growing sense among public service and metadata librarians that how users access and use bibliographic data was just as critical in the development of rules and standards as the need to capture the pure bibliographic reality represented by the book, article or musical score.

Out of a 1990 IFLA sponsored seminar on Bibliographic Records in Stockholm, the seeds that would give official birth to FRBR were established by way of a report produced by a study group established 1992 by the IFLA for that purpose. This report, which was finalized and approved by the Standing Committee of the IFLA Section on Cataloguing at their 63rd Annual Conference in 1997, would provide the seminal voice to the specific objectives and conceptual framework for a new way of thinking about bibliographic requirements known as FRBR.
The 1997 final report had two primary objectives: to provide a clearly defined, structured framework for relating the data that are recorded in bibliographic records to the needs of the users of those records; and second, to recommend a basic level of functionality for records created by national bibliographic agencies. As for meeting the first objective the study calls for the development of a framework to identify and define those entities of interest to users of bibliographic records, the attributes of each entity, and the types of relationships that operate between entities by taking a user-focused approach. These entities are now well-recognized as the core concepts in the FRBR world. The most recognizable and most studied of these are work, expression, manifestation and item, representing Group 1 of the model. The concept of work, while the most abstract of all the entities, poses the least problems for the model when attempts are made to apply to live data. Allyson Carlyle, a leading authority on FRBR, concludes “there is no single material object one can point to as the work. We recognize the work through individual realizations or expressions of the work but the work exists only in the commonality of content between and among the various expressions of the work.”

Literature Review

To date the prevailing research into FRBR has been preoccupied principally with the question of whether the model is sufficiently equipped to fulfill the aspirations established by the model’s founders in the 1997 final report, namely to describe the bibliographic universe, presumably better than the Anglo American Cataloguing tradition. The question is not unimportant. Rather, a failure to answer this question in the affirmative means that the entire FRBR discussion over the last 14 years has been nothing more than a mental exercise, which explains and justifies the preoccupation. The approach and methodology adopted to answer this very question varies among the articles presented here. Articles like the one authored by Marie-Louise Ayers has as its context a bibliographic environment designed entirely on the FRBR model. (Ayres, 2005) This provides Ayes a reliable framework from which to evaluate other record types not covered by the general bibliographic environment. Early research like the one provided by Hickey, O’Neill and Toves focuses on a large union catalog like WorldCat. (Hickey, 2002)

To answer the fundamental question posed above, the majority of articles has focuses their research antennae on more specific areas of the bibliographic universe. The most interesting of these include two articles by Patrick Le Boeuf. One evaluates FRBR as a descriptive model from the standpoint of musical works. (Le Boeuf, 2005) The other, which he coauthors with David Miller, assesses the potential of FRBR from the viewpoint of performance performing, namely dance. (Miller & Le Boeuf, 2005) A similar focus is found in Yann Nicolas’ 2005 research on the viability of the FRBR model in relations to bibliographic records dealing with folklore and the oral traditions. (Nicolas, 2005) Another article focuses its research on Korean books working from the contention that the viability of FRBR might be best assessed by looking how the model performs with resources of different languages. (Kim & Moon, 2010)
These articles all have one thing in common: they each, whether implicitly or explicitly, promote the idea that the Anglo-American cataloguing rules have run their course and that compared to the promise of the FRBR model is an unfulfilling approach to describing at least these particular quatrains of the bibliographic universe. Other research avoids going this far in their critique of the Anglo-American Cataloging tradition. One such research is Lee and Jacob’s 2011 article that, while recognizing the limitations of MARC based cataloging rules to describe all types of bibliographic resources sees a continuing role for the Anglo-American Cataloging tradition with FRBR fulfilling the descriptive void MARC leaves behind. (Lee & Jacob, Library Resources & Technical Services)

From the outset FRBR appears more applicable to monographs but serials and online journal databases make up a significant portion of the library universe. Serials and continuing resources present special problems that books and other resources do not by virtue of their being living entities that undergo rather frequent title changes. Several articles attempt to investigate how the FRBR model could successfully approach these issues. Perhaps the most seminal of these is Ed Jones 2005 article that raises the issue of successive entry, which FRBR might be unique situated to solve. (Jones, 2005) C. Naun’s article coming two years later examines the problem by adding to the mix the issue of online journals. (Naun, 2007)

Other articles have focused their research on an evaluation of the degree to which certain MARC 21 7xx fields can be mapped according to the FRBR model. The degree to which such fields can be mapped suggest that such data could be converted to a FRBR context. Two articles are of particular interest and relevance. One is Pat Riva’s 2004 article, which uses Barbara Tillett’s taxonomy of seven classes of bibliographic relations to highlight the degree to which these tags can be mapped according to FRBR. (Riva, 2004) A more recent research to examine the degree to which MARC 21 linking entry fields could be mapped along the lines of FRBR Group 1 entities is Matthew Mayernik’s 2010 article. Mayernik follows Riva’s direction but assesses mapping success according to “power law analysis,” which he describes as a mathematical expression that describes an inverse exponential relationship between two phenomena.” (Mayernik, 2010)

A fundamental assumption of the founders and proponents of FRBR is that users’ ability to identify, find, select and obtain resources of interest would be dramatically enhanced if the information systems they use were designed on the FRBR model. Rather surprisingly, however, very little research has come forward to date to test this assumption. One exception is Jan Pisanski and Maja Žumer 2010 article using mental models of potential users to test their latter’s comparability with FRBR. The authors’ research confirms the assumption although admittedly their sample was too small to draw any far reaching conclusions. (Pisanski & Žumer, 2010) Kerry Kilner’s 2005 article also focuses its research

An additional shortcoming in the current research into FRBR is the rather little attention given to the other entities that make up the FRBR model. The Group 2 entities of persons and corporate bodies and families and the entities concept, object, place and event covered in Group 3 are practically ignored in the research covered in the discussion on FRBR to date and the research covered in this bibliography.

All the articles covered in this bibliography, while largely devoted to an examination of the viability of FRBR to describe chunks of the bibliographic universe, provide in the course of fulfilling that function a useful and competent overview of the central principles and framework of the model. One can read any one of these articles without any background of knowledge of FRBR and still come away with an understanding of the broad strokes of FRBR core structure and aspirations.

Bibliography


Abstract: “AustLit: Australian Literature Gateway - the world's first major FRBR implementation - was developed as a co-operative service involving eight universities and the National Library of Australia in 2000-2001. This paper traces the reasons for adopting the FRBR information model, implementation experiences, and user responses to the service. The paper also considers the ways in which AustLit's nature as an academically oriented, value-adding service produced by a tightly knit group of contributors facilitated the adoption of the model, and how this might differ from a more standard bibliographic production and exchange economy. In particular, the paper raises issues about re-purposing existing MARC records for FRBR storage and display in the context of the MusicAustralia project.”

Annotation: This 2005 research is uniquely positioned to evaluate the ability of the FRBR model to describe the bibliographic universe having as it dataset an entire database and user interface focused on writers and literature designed entirely on the FRBR model. Against this background and the subsequent conclusion that the FRBR model succeeds in describing bibliographic relationships beneficial to users, the author investigates whether this success would be duplicated with musical records. Building on Le Boeuf 2001 research, the author examines in detail a number of musical works, most vocal works, to draw attention to modeling issues as it relates to the description of work and expression. For the author, the central question is whether such variations in vocal performance be described or modeled as a “single expression” or “should such expressions themselves include subcategories.” The author identifies some key issues
unique to music records, namely that they are more likely to “exist in more than one expression and manifestation than most other forms of cultural production,” of crucial importance for future study and evaluation of FRBR as a viable model and alternative to traditional modes for describing bibliographic data.

Authority: The author was manager of Special Collections at the University of New South Wales and project manager of AustLit: Australian Literature Gateway. The author holds a PhD in Australian Literature. The Australian Library Journal is an internationally recognized journal that showcases the best of Australian library and information research and practice and is an academic journal as per Ulrichsweb.

Search Strategy: I selected DialogClassic as the focus for one of my selected search strategy because the aggregator allows the option of searching across several databases at once. I selected four databases to search, ERIC, SocScience Search, Library Literature and Information Science and Arts and Humanities. For this particular article I utilized a search that combined a title search and abstract field search using the keyword “FRBR” to obtain the largest set of relevant records as possible.

Database/Search Engine: DialogClassic

Search Method: Keyword in title and abstract fields

Search String: FRBR/ti, ab.


Abstract: “OCLC is investigating how best to implement IFLA’s Functional Requirements for Bibliographic Records (FRBR). As part of that work, we have undertaken a series of experiments with algorithms to group existing bibliographic records into works and expressions. Working with both subsets of records and the whole WorldCat database, the algorithm we developed achieved reasonable success identifying all manifestations of a work.”

Annotation: Building on the work of Bennett, Lavoie, and O’Neill, this research is one of the first investigations into the practical challenges of applying the FRBR model. Using the OCLC WorldCat database as the context for the study, the researchers provide a concise, through and groundbreaking exploration in to the limitations and possibilities of applying the FRBR model to real databases. With a principal focus on expressions and drawing examples from two different data sets, the authors concluded that while it is possible to approach the division of records into expressions when such divisions are based solely on information already contained in the bibliographic record and the concept of work provided the greatest functionality needed by users.
**Authority:** Dr. Hickey is a cofounder of the office of Research at OCLC and has been chief scientist at OCLC since 1994. In addition to working on FRBR work-level algorithms, he leads a group investigating how to harvest and derive relationships from diverse metadata objects. Dr. O’Neill is a former faculty member at the School of School of Information and Library Studies at the University at Buffalo and was later Dean of the Matthew A. Baxter School of Library and Information Science at Case Western Reserve University. His research interests include authority control, subject analysis, database quality, preservation, collection management, bibliographic relationships, and Web characterization.

**Scholarly/Peer-Review Status:** D-Lib is an electronic publication peer review journal with a focus on digital library research and development, including new technologies, applications, and contextual social and economic issues. D-Lib Magazine appeals to a broad technical and professional audience. The journal’s scholarly status is confirmed by Ulrichsweb.

**Search Strategy:** Selected Google Scholar Advanced Search option with the expectation that not being confined to control vocabulary I might be able to retrieve additional articles not covered in fee-based databases but which would still meet the scholarly or academic threshold. Restricted search to a field search on the keyword FRBR restricted further to the subject area Social Sciences, Arts and Humanities.

**Database/Search Engine:** Google Scholar

**Search Method:** Keyword/Title Field

**Search String:** allintitle: FRBR


**Abstract:** “The purpose of this study is to investigate the characteristics of Korean books by analyzing their "work types" based on the Functional Requirements for Bibliographic Records (FRBR) model. Design/methodology/approach - A total of 1,000 Korean books were randomly chosen from the Korean National Bibliography (KNB) 2008 at the National Library of Korea, and the frequency of each work type was investigated. Findings - Of the Korean books that were studied, 16.9 per cent (single works, 2.7 per cent and multiple works, 14.2 per cent) were found to be multiple manifestations, and the rates of literature and social science works were relatively high. Research limitations/implications - The FRBR model was applied to a sample of 1,000 Korean books and was not representative of all Korean books. Practical implications - The usefulness of the FRBR model was found to be limited to some complex works and can be improved by applying its work types in an extended way. Originality/value - In the study, the work types of Korean books were analyzed based on the FRBR model for the first time using this model."
Annotation: While acknowledging the benefits of prior research into the usefulness of applying the FRBR model to bibliographic records in general, this research contends that this usefulness may be more objectively assessed by analyzing works with various language backgrounds. This marks a critical and important leap forward in the research on the practical applicability of the FRBR model to the bibliographic universe. Focusing Their study on 1,000 Korean books, the authors aimed to determine how applicable is the FRBR model, particularly at the level of expressions and manifestations. Drawing 100 books from each of the 10 Dewey Decimal Classification classes, this research concludes that (with 16.9 percent of all work study fell within the model), greatest potential to benefit users from the FRBR model is it allows them to conduct both broad and exact searches for materials particularly when related material is included within the expressions and manifestations framework.

Authority: Jeong-Hyen Kim is an Assistant Professor at the Department of Library and Information Science, Chonnam National University, Kwangju, South Korea. His other publication is entitled “Designing a knowledge base for automatic book classification.” Program is an academic journal with emphasis on the practical applications of new technologies and techniques and their costs, but reviews or emerging technologies and research and development in relevant fields are also published.

Scholarly/Peer-Review Status: Program: electronic library and information systems is a scholarly/academic journal as per Ulrich web. The journal's website describes the journal's as is a refereed journal which covers all aspects of the management and use of information technology in libraries and archives, museums and galleries, information centres, the information industry in general and the Web as a global and decentralized digital library. The journal's scholarly status is confirmed by Ulrich's web.

Search Strategy: Used Library Literature and Information Science (Full Text) as a means of focusing the search to articles specific to information science research. LLIS also provided the capability of combining field searching with the use of controlled language with the further ability to refine the initial search results to peer review articles and scholarly journals, which is what occurred here.

Database/Search Engine: Library Literature and Information Science (Full Text)

Search Method: Field Search; Controlled Vocabulary

Search String: TI FRBR and AB FRBR and (SU FRBR (Conceptual Model) and (Information Retrieval)


Abstract: “The promulgation of the entity-analysis model set forth in Functional Requirements for Bibliographic Records (FRBR) has led to its experimental application to a variety of collections of existing bibliographic records. Records for continuing
resources (CR) have been deliberately excluded from these applications due to perceived difficulties in applying the model. These difficulties derive from a variety of sources: the imprecision of the more abstract FRBR Group 1 entities (work and expression), divergent definitions of two concepts central to bibliographic records the work and authorship when applied to continuing resources, and the relative merits of various mechanisms (e.g., main entries, MARC 21 linking entry fields) available for collocating records for CR. Additionally, because a particular library may own a single CR work as a sequence (overlapping or otherwise) of partially complete manifestations, the Group I hierarchy of the FRBR model tends to be inefficient for presenting these holdings to the user in a concise manner. Reprinted by permission of the publisher.

**Annotation:** While prior research into FRBR has focused almost exclusively on bibliographic records (books and monographs), this research represents the first important study to date to approach the question of FRBR practical applicability to serials and continuous resource records. The research provides a sober yet invaluable conclusion on the constraints in applying the FRBR model to Continuing Resources. The research brilliantly traces these constraints to a critical change in the way serials that undergo a title change are treated bibliographically in the last 40 years with the emphasis on successive entry versus latest entry. For Jones, the latter easily fits into the FRBR model, whereas the former does not. The research analyzes a range of journal titles from the Conser database to confirm the projected hypothesis.

**Authority:** The author has a deep background in the area of cataloging and continuing resources as the current Assistant Director of Assessment and Metadata Services at the National University in San Diego and the former Head of the Conser Office at Harvard University. Mr. Jones has a number of scholarly publications to his name covering issues relating to serials and metadata, with several publications devoted specifically to FRBR. The present article has been cited 11 times.

**Scholarly/Peer-Review Status:** As described by its website, *Library Resources & Technical Services (LRTS)*, published by the American Library Association, is a peer-reviewed journal that takes a critical approach to the questions and challenges facing librarians and libraries with regard to such areas of interests as collections, continuing resources, scholarly communication, acquisitions and cataloguing. *LRTS* publishes both research papers and thoughtful explorations of operational issues that have value and implications for other libraries. The journal’s scholarly status is confirmed by Ulrichsweb.

**Search Strategy:** Selected Google Scholar Advanced Search option with the expectation that not being confined to control vocabulary I might be able to retrieve additional articles not covered in fee-based databases but which would still meet the scholarly or academic threshold.

**Database/Search Engine:** Google Scholar

**Search Method:** Author and Keyword
Search String: FRBR author:"Ed Jones"


Abstract: “This paper discusses how the AustLit: Australian Literature Gateway's interpretation, enhancement, and implementation of the International Federation of Library Associations and Institutions' Functional Requirements for Bibliographic Records (FRBR Final Report 1998) model is meeting the needs of Australian literature scholars for accurate bibliographic representation of the histories of literary texts. It also explores how the AustLit Gateway's underpinning research principles, which are based on the tradition of scholarly enumerative and descriptive bibliography, with enhancements from analytical bibliography and literary biography, have impacted upon our implementation of the FRBR model. The major enhancement or alteration to the model is the use of enhanced manifestations, which allow the full representation of all agents' contributions to be shown in a highly granular format by enabling creation events to be incorporated at all levels of the Work, Expression, and Manifestation nexus.”

Annotation: Against the background of the Australian Literature Gateway's efforts to produce a comprehensive record of Australian literature from the 1780s to the present, the “information space” of this research differs from earlier research focusing on large scale databases or library and union catalogs. In assessing the FRBR model with the construction of a subject-specific reference work as the focus, the research is one of the first efforts to place at the forefront of the assessment of FRBR evaluation of user benefit. Unfortunately, the dataset used in the research is rather too small to provide any conclusive conclusions. Although the authors claimed to have compared, merged and messaged more than 350,000 records, only a few applicable records or presented for detailed analysis of their application to FRBR.

Authority: At time of publication the author was the Executive Director of the Australian Literature Gateway and a University of Queensland Research Fellow.

Scholarly/Peer-Review Status: As described by its website, *Cataloging & Classification Quarterly* is a scholarly journal emphasizing full-length research and review articles, descriptions of new programs and technology relevant to cataloging and classification, considered speculative articles on improved methods of bibliographic control for the future, and solicited book reviews. To assist in achieving the journal's goal of excellence, articles are refereed. The journal's scholarly status is confirmed by Ulrich's web.

Search Strategy: I selected DialogClassic as the focus for one of my selected search strategy because the aggregator allows the option of searching across several databases at once. I selected four databases to search, ERIC, SocScience Search, Library Literature and Information Science and Arts and Humanities. For this particular article I utilized a search that combined a title search and abstract field search using the keyword "FRBR" to obtain the largest set of relevant records as possible.

Abstract: “In this paper, the FRBR model is approached through Umberto Eco’s semiotic analysis of the translation notion as developed in his Dire quasi la stessa cosa: esperienze di traduzione. Eco's taxonomy of forms of interpretation is used as a basis for a tentative abstract definition of what constitutes a mere expression of a given musical work and what constitutes a new, distinct musical work. The issues of aggregates of musical works, fragments of musical works, and works of vocal music, are also addressed. FRBR can be used as a basis for a model for the complex processes involved in the production and reception of musical works. And FRBR highlights complex bibliographic relationships that put musical works at the very center of myriads of interrelated systems that make up the catalog, which is viewed as a set of circular objects such as atoms or solar systems rather than as a straight linear listing. “

Annotation: Taking Umberto Eco’s 2003 publication on the semiotic aspects of “translating” as its point of departure, Le Beef’s research is a seminal exploration and critique of the FRBR model. The research brilliantly illustrates the specific weaknesses of the model around the key entities of work and expression centering on the problem of boundaries when investigated in the context of the complexities, first of translating texts from one language and culture to another and second, and, most predominately, of musical composition that lends itself neatly into the FRBR model when it comes to the entity expression. To highlight the problem, the research presents the case of a Martha M. Yee, a cataloger who recognized the problem in using the authorized heading for America when cataloging a recording of the famous Marian Anderson 1939 Lincoln Memorial concert because that some has the same melody as God Save the King.

Authority: Patrick Le Boeuf, archiviste-paléographe, is Library Curator, Bibliothèque nationale de France, Department for Standardization. He is a member of the IFLA Cataloguing Section’s Standing Committee, chair of the IFLA FRBR Review Group, chair of the IFLA Working Group on the dialog between FRBR and the CIDOC CRM, and co-chair (with Martin Doerr) of the FRBR/CRM Harmonization Group. The author has several publications focusing on FRBR, with the current publication having been cited 7 times.

Scholarly/Peer-Review Status: As described by its website, Cataloging & Classification Quarterly is a scholarly journal emphasizing full-length research and review articles, descriptions of new programs and technology relevant to cataloging and
classification, considered speculative articles on improved methods of bibliographic control for the future, and solicited book reviews. To assist in achieving the journal's goal of excellence, articles are refereed. The journal's scholarly status is confirmed by Ulrich's web.

**Search Strategy:** I selected DialogClassic as the focus for one of my selected search strategy because the aggregator allows the option of searching across several databases at once. I selected four databases to search, ERIC, SocScience Search, Library Literature and Information Science and Arts and Humanities. For this particular article I utilized a search that combined a title search and abstract field search using the keyword “FRBR” to obtain the largest set of relevant records as possible.

**Database/Search Engine:** DialogClassic

**Search Method:** Keyword in title and abstract fields

**Search String:** FRBR/ti, ab.


**Abstract:** “Machine-Readable Cataloging (MARC) is currently the most broadly used bibliographic standard for encoding and exchanging bibliographic data. However, MARC may not fully support representation of the dynamic nature and semantics of digital resources because of its rigid and single-layered linear structure. The Functional Requirements for Bibliographic Records (FRBR) model, which is designed to overcome the problems of MARC, does not provide sufficient data elements and adopts a predetermined hierarchy. A flexible structure for bibliographic data with detailed data elements is needed. Integrating MARC format with the hierarchical structure of FRBR is one approach to meet this need. The purpose of this research is to propose an approach that can facilitate interoperability between MARC and FRBR by providing a conceptual structure that can function as a mediator between MARC data elements and FRBR attributes.”

**Annotation:** Beginning from the premise that neither MARC nor the FRBR model are sufficient in themselves to provide a universally applicable standard for the management of bibliographic information, the research represents an important comprise and perhaps a necessary first step in the transition away from MARC to a more robust system for describing the bibliographic universe. The authors research this critical assessment using a mapping process that draws together the structural similarities among related elements in each system, which represents a departure from previous efforts relying on one-to-one mapping. The conclusion reached by the study could ease traditionalists in supporting a continuing role for MARC in describing the bibliographic universe for some time to come.
Authority: Dr. Elin K. Jacobs is an Associate Professor at the School of Library and Information Science at the University of Indiana, Bloomington. With a research interest in cognitive categorization, Dr. Jacobs have authored and coauthored several other articles and publications. Lee Seungmin, (now Dr. Seungmin), is a former doctorate student at the University of Indiana, who has co-authored one other work with Dr. Jacobs covering the area of cataloguing.

Scholarly/Peer-Review Status: As described by its website, Library Resources & Technical Services (LRTS), published by the American Library Association, is a peer-reviewed journal that takes a critical approach to the questions and challenges facing librarians and libraries with regard to such areas of interests as collections, continuing resources, scholarly communication, acquisitions and cataloguing LRTS publishes both research papers and thoughtful explorations of operational issues that have value and implications for other libraries. The journal’s scholarly status is confirmed by Ulrichsweb.

Search Strategy: Web of Science was selected for its citation index and the ability to search more than one relevant database at once with the option of conducting a basic Boolean search on searchable fields. The search used was a keyword search on the title field combined with a topic search again using the keyword FRBR. I restricted the search to the databases SocScience Search and Arts & Humanities within a specific time frame.

Database/Search Engine: Web of Science

Search Method: Keyword/Title Field


Abstract: “Library catalog systems worldwide are based on collections of MARC records. New kinds of Functional Requirements for Bibliographic Records (FRBR)-based. catalog retrieval systems, displays, and cataloging rules will build on ever-growing MARC record collections. Characterizing the kinds of information held in MARC records is thus all important step in developing new systems and rules. This study examined the incidence and prevalence rates of MARC fields in two different sets of library catalog records; a random selection of bibliographic records from the Library of Congress online catalog and a selection of records for two specific works, Lord of the Flies and Plato’s Republic. Analysis showed that most fields were, used in only a small percentage of records, while a small number of fields were used in almost all records Power law functions proved to be a good model for the observed distribution of MARC fields. The results of this study have implications for the design of new cataloging procedures a well as for the design of catalog interfaces that are based. on the FRBR entity-relationship model.”
Annotation: The value of this recent research to cataloguing research and to the issue of the applicability of the FRBR model more specifically may lie in the question at the heart of the research endeavor and that is if FRBR is to become the primary way to describe the bibliographic universe it must take into account the way that universe is currently described. The research approaches this question by a detailed and highly organized analysis of Marc field distribution using a random sample of records from the Library of congress as well as the Marc records from two specific works. The author’s findings illustrate relative consistency in the distribution of such fields allowing the author to conclude that the more prevalent fields like the 7xx fields, are highly suited to “FRBRization” as such fields contain implicit links capable of exploiting bibliographic relationships, which is the cornerstone of the FRBR model.

Authority: At time of publication the author was a PhD student in the Department of Information Studies at the University of California, Los Angeles.

Scholarly/Peer-Review Status: As described by its website, Library Resources & Technical Services (LRTS), published by the American Library Association, is a peer-reviewed journal that takes a critical approach to the questions and challenges facing librarians and libraries with regard to such areas of interests as collections, continuing resources, scholarly communication, acquisitions and cataloguing LRTS publishes both research papers and thoughtful explorations of operational issues that have value and implications for other libraries. The journal’s scholarly status is confirmed by Ulrichsweb.

Search Strategy: I selected Web of Science Citation Index Search to find related research articles on FRBR using P. Riva’s 2004 article as the focus of the search for additional articles either citing Riva’s article or articles that Riva articles itself cites. I limited my search to the SocScience and Arts and Humanities databases.

Database/Search Engine: Web of Science Citation Index

Search Method: Author; Keyword

Search String: Author= (Riva, P*) AND Topic=(FRBR)


Abstract: “Since it is obviously impossible to “hold” live performances in library collections (in contrast to recorded performances and motion pictures), such creations are barely accounted for in library catalogues and cataloging prescriptions, even as a topic in subject headings. The way AACR and the Anglo-American cataloging tradition deals with performing arts is discussed at length. Conversely, specialized institutions have developed their own rules for the description of live performances: the Dance Heritage Coalition (New York) creates authority records for choreographic works, and the Département des Arts du Spectacle at Bibliothèque nationale de France creates
bibliographic records for theatrical, operatic, and choreographic performances. As a conclusion, a tentative modeling of performing arts as bibliographic entities, strictly based on FRBR, is proposed.”

Annotation: Together with Le Boeuf’s publication entitled “Musical works in the FRBR model or quasi la stessa cosa” from the same year, the present article is an indispensible fixture in the field FRBR research. In describing the gaps in conventional cataloging rules covering live performance, a gap the author concludes could be filled with the application of the FRBR model, the authors offers perhaps the evidence to date on what role the FRBR model has to play in the future of cataloging and the best critical assessment of conventional cataloging rules. Using a detailed examination of specific live performances of dance, opera and to a lesser extent, drama, and the authors provides an invaluable illustration of the limitations of the Anglo-American cataloging rules to fully describe an entire body of historical records given its dependence on traditional concepts like holdings and copies.

Authority: David Miller is Head of Technical Services, Levin Library, Curry College. Patrick Le Boeuf, archiviste-paléographe, is Library Curator, Bibliothèque nationale de France, Department for Standardization. Miller has authored or coauthored numerous publications in such areas as cataloging, metadata and information retrieval systems. Le Boeuf has written several peer-review articles on FRBR. This particular collaboration has been cited 3 times.

Scholarly/Peer-Review Status: As described by its website, Cataloging & Classification Quarterly is a scholarly journal emphasizing full-length research and review articles, descriptions of new programs and technology relevant to cataloging and classification, considered speculative articles on improved methods of bibliographic control for the future, and solicited book reviews. To assist in achieving the journal’s goal of excellence, articles are refereed. The journal’s scholarly status is confirmed by Ulrichsweb.

Search Strategy: Used Library Literature and Information Science (Full Text) as a means of focusing the search to articles specific to information science research. LLIS also provided the capability of combining field searching with the use of controlled language with the further ability to refine the initial search results to peer review articles and scholarly journals, which is what occurred here.

Database/Search Engine: Library Literature and Information Science (Full Text)

Search Method: Field Search; Controlled Vocabulary

Search String: TI FRBR and AB FRBR and (SU FRBR (Conceptual Model) and (Information Retrieval)

Abstract: “This paper presents a case study in the development of an online journal finding aid at the University of Illinois at Urbana-Champaign (UIUC), with particular emphasis on cataloging issues. Although not consciously designed according to Functional Requirements for Bibliographic Records (FRBR) principles, the Online Research Resources (ORR) system has proved amenable to FRBR analysis. The FRBR model was helpful in examining the user tasks to be served by the system, the appropriate data structure for the system, and the feasibility of mapping the required data from existing sources. The application of the FRBR model to serial publications, however, raises important questions for the model itself, particularly concerning the treatment of work-to-work relationships.”

Annotation: Following preceding studies on the application of FRBR to online catalogs, Naun’s research is unique and critical to the ongoing discussion of FRBR’s capacity to describe the bibliographic universe in that the focus of this research is a large database devoted entirely to the recording serials and continuing resources for print and online. Not unlike earlier studies, this research focuses on the problem of successive entry and the limitations of this approach to describe the entire history of a serial work when gaps exist in the holdings. The author concludes that the Group 1 hierarchy is “an obvious model for organizing content from different providers.”

Authority: The former Senior Coordinating Cataloguer at the University of Illinois Urbana-Champaign, the author has authored or coauthored widely on such topics of interests to librarians and information scientists including cataloging issues and information retrieval.

Scholarly/Peer-Review Status: As described by its website, Library Resources & Technical Services (LRTS), published by the American Library Association, is a peer-reviewed journal that takes a critical approach to the questions and challenges facing librarians and libraries with regard to such areas of interests as collections, continuing resources, scholarly communication, acquisitions and cataloguing LRTS publishes both research papers and thoughtful explorations of operational issues that have value and implications for other libraries. The journal’s scholarly status is confirmed by Ulrichsweb.

Search Strategy: Selected Google Scholar Advanced Search option with the expectation that not being confined to control vocabulary I might be able to retrieve additional articles not covered in fee-based databases but which would still meet the scholarly or academic threshold.

Database/Search Engine: Google Scholar

Search Method: Keyword

Search String: FRBR

Abstract: “The treatment of bibliographic information in library catalogues is biased by the primacy of printed written resources. This legitimate bias hinders oral tradition resources from being accurately described and accessed. This kind of resource is important in any society, but central in indigenous societies, at least for the comprehension of the printed written resources of these societies. The FRBR Model allows a better treatment of oral tradition works, versions, and items. It can express the essential fact that oral tradition works are independent even when their manifestations are not, collective and not anonymous, plural but not impossible to grasp. One deep doubt remains concerning the compatibility of the FRBR notion of expression and the notion of version.”

Annotation: In line with the research provided by Miller and Le Boeuf, P Le Boeuf, the current research examines the issue of performance from the standpoint of oral history centering on the hypothesis that the FRBR model is a good instrument for capturing The bibliographic condition of oral tradition resources. In demonstrating the limitations of the Anglo-American Cataloging tradition to give these resources “any bibliographic existence,” the author uses as the bases of the analysis the Māori language and collections found in the National Library of New Zealand as well as colonial documents in which oral history are indeed components parts that are concealed within traditional cataloguing rules. The author concludes that the universal scope of the FRBR model provides a bibliographic outlet for the oral tradition resources.

Authority: The author is a Metadata Librarian and chair of the AFNOR Working Group on metadata for electronic dissertations with additional publications on the FRBR model.

Scholarly/Peer-Review Status: As described by its website, Cataloging & Classification Quarterly is a scholarly journal emphasizing full-length research and review articles, descriptions of new programs and technology relevant to cataloging and classification, considered speculative articles on improved methods of bibliographic control for the future, and solicited book reviews. To assist in achieving the journal's goal of excellence, articles are refereed.

Search Strategy: Used Library Literature and Information Science (Full Text) as a means of focusing the search to articles specific to information science research. LLIS also provided the capability of combining field searching with the use of controlled language with the further ability to refine the initial search results to peer review articles and scholarly journals, which is what occurred here.

Database/Search Engine: Library Literature and Information Science (Full Text)

Search Method: Field Search; Controlled Vocabulary

Search String: TI FRBR and AB FRBR and (SU FRBR (Conceptual Model) and (Information Retrieval)

Abstract: “This paper recaps the most important findings of a study of mental models of the bibliographic universe and compares layperson’s mental models to the conceptual model of the Functional Requirements for Bibliographic Records, upon which most new developments in the world of cataloguing are at least partly based. Furthermore, it positions the study in the grander scheme of related developments and suggests some further steps to be taken. Method. The study used three tasks: cards sorting, conceptual mapping and comparison task to elicit people's mental models. Analysis. Cluster analysis, consensus graphs and simple statistics were used to analyze data. Results. The study revealed that participants’ mental models were, on average, like that of the Functional Requirements for Bibliographic Records. The only noticeable difference was the positioning of 'original expression' together with 'work'. Conclusions. Further research is suggested, including similar studies, studies of related developments, such as Resource Description and Access, studies of essential elements for bibliographic description, studies of visualization and the possibility of the re-use of data related to the Functional Requirements for Bibliographic Records.”

Annotation: Research on FRBR has assumed that users of bibliographic information would be the principle beneficiaries from the implementation of the FRBR model being one of the central core principles of the model. As a consequence, specific efforts to test such assumptions have been largely lacking in the prior research. The authors here fill that void superbly using the study of mental models from non-librarians to determine whether such mental models did indeed resemble the conceptual framework the FRBR model expects. None of the participants in the study had any knowledge of the FRBR. In order to control the study even further the questions made no reference to libraries or catalogues. Although the sample was small, the authors found sufficient alignment to conclude the potential benefit to users with the adoption of the FRBR model.

Authority: Jan Pisanski is a Teaching Assistant and a Researcher at the Department of Library and Information Science and Book Studies, Faculty of Arts, University of Ljubljana, Slovenia. Maja Žumer is a Professor at the Department of Library and Information Science and Book Studies, Faculty of Arts, University of Ljubljana, Slovenia.

Scholarly/Peer-Review Status: As described by its website, Information Research is an open access, international, peer-reviewed, scholarly journal, dedicated to making accessible the results of research across a wide range of information-related disciplines. It is privately published and edited by Professor TD Wilson. It is hosted and given technical support by Lund University Libraries, Sweden and editorial support by the University of Borås, Sweden. This status is confirmed by Ulrichsweb.

Search Strategy: I selected DialogClassic as the focus for one of my selected search strategy because the aggregator allows the option of searching across several databases at once. I selected four databases to search, ERIC, SocScience Search, Library Literature and Information Science and Arts and Humanities. For this particular
article I utilized a search that combined a title search and abstract field search using the keyword “FRBR” to obtain the largest set of relevant records as possible.

**Database/Search Engine:** DialogClassic

**Search Method:** Keyword in title and abstract fields

**Search String:** FRBR/ti, ab.


**Abstract:** “Bibliographic relationships have taken on even greater importance in the context of ongoing efforts to integrate concepts from the Functional Requirements for Bibliographic Records (FRBR) into cataloging codes and database structures. In MARC 21, the linking entry fields are a major mechanism for expressing relationships between bibliographic records. Taxonomies of bibliographic relationships have been proposed by Tillett, with an extension by Smiraglia, and in FRBR itself. The present exercise is to provide a detailed bidirectional mapping of the MARC 21 linking fields to these two schemes. The correspondence of the Tillett taxonomic divisions to the MARC categorization of the linking fields as chronological, horizontal, or vertical is examined as well. Application of the findings to MARC format development and system functionality is discussed. Reprinted by permission of the publisher.”

**Annotation:**
The ability to successively map MARC 21 linking entry fields (7xx fields) to FRBR highlights Pat Riva’s research. The linking entry fields are particularly relevant to the FRBR model as these fields are design to draw out the relationships between different bibliographic records. Riva is one of the very early attempts to evaluate the applicability of the FRBR model from the vantage point of the bibliographic structure the FRBR model aspires to replace. Examining 2300 elements in total, Riva’s findings conclude that approximately 1200 MARC data elements can be mapped to the entities, attributes and relationships defined by FRBR.

**Authority:** Pat Riva is a Romance Languages Cataloger and a Bibliographic Database Specialist at McGill University Library, Montreal, Quebec Canada.

**Scholarly/Peer-Review Status:** As described by its website, *Library Resources & Technical Services (LRTS)*, published by the American Library Association, is a peer-reviewed journal that takes a critical approach to the questions and challenges facing librarians and libraries with regard to such areas of interests as collections, continuing resources, scholarly communication, acquisitions and cataloguing *LRTS* publishes both research papers and thoughtful explorations of operational issues that have value and implications for other libraries. The journal’s scholarly status is confirmed by Ulrichsweb.
**Search Strategy:** Used Library Literature and Information Science (Full Text) as a means of focusing the search to articles specific to information science research. LLIS also provided the capability of combining field searching with the use of controlled language with the further ability to refine the initial search results to peer review articles and scholarly journals, which is what occurred here.

**Database/Search Engine:** Library Literature and Information Science (Full Text)

**Search Method:** Field Search; Controlled Vocabulary

**Search String:** TI FRBR and AB FRBR and (SU FRBR (Conceptual Model) and (Information Retrieval)

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**Personal Statement**

Having never prepared an annotation bibliography, I had the initial impression it would not be too unlike constructing a bibliography for a research paper with one or two additional but minor challenges. The conventional wisdom that first impressions are often wrong could not be any more applicable in this case. An annotated bibliography is nothing remotely like a bibliography for a research paper, as demonstrated by a number of revelations I had in the course of executing this project.

The first revelation, although not the most important was that there are different types of annotations. There are critical annotations and then there are all the others. Although a rather subtle different, it proved one that easily mastered. The second but most important revelation involved the distinction between scholarly, peer-review articles that constituted research and those that did not. Identifying and locating the former proved the biggest challenge in completing the project as early in the project I found many highly scholarly articles that would be of enormous interest and use to anyone eager to learn about Functional Requirement for Bibliographic Records. Two in particular have seminal importance for the literature on FRBR. Barbara Tillett’s 2005 article entitled “What is FRBR: A conceptual model for the bibliographic universe.” (Tillett, 2005) The other is Allyson Carlyle’s 2006 article entitled “Understanding FRBR as a conceptual model: FRBR and the bibliographic universe.” (Carlyle, 2006)

The third and fourth revelations have noting to do with the content of the annotation but with the information retrieval process itself. The third revelation is that there is significant overlap across databases. The same article located in Library Literature and Information Science might also be found in Web of Science. The fourth revelation is the level of peer-review and research-level articles available through Google scholar. The obvious shortcomings of the search engines is the lack of links to other research tools like Refworks.

I certify that:
• This assignment is entirely my own work.
• I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.
• I have not submitted this assignment to satisfy the requirements of any other course.

Signature: [Signature]
Date: 12-07-2011