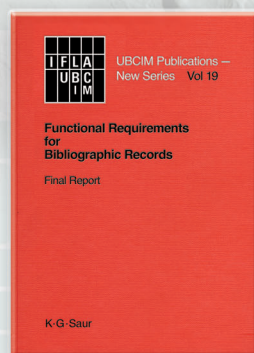


# What is FRBR?

## A CONCEPTUAL MODEL FOR THE BIBLIOGRAPHIC UNIVERSE

BARBARA TILLET

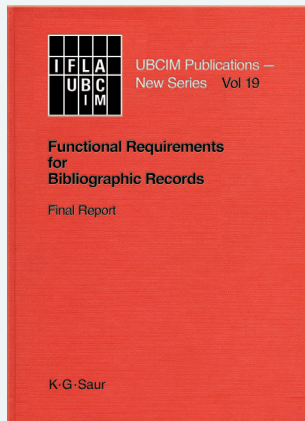


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## BACKGROUND

From 1992-1995 the IFLA Study Group on Functional Requirements for Bibliographic Records (FRBR) developed an entity-



relationship model as a generalized view of the bibliographic universe, intended to be independent of any cataloging code or implementation. The FRBR report<sup>1</sup> itself includes a descrip-

tion of the conceptual model (the entities, relationships, and attributes or metadata as we'd call them today), a proposed national level bibliographic record for all types of materials, and user tasks associated with the bibliographic resources described in catalogs, bibliographies, and other bibliographic tools.

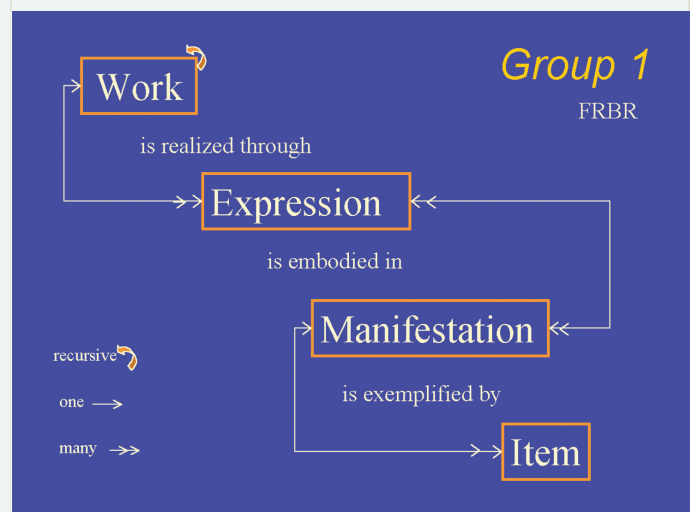
IFLA continues to monitor the application of FRBR and promotes its use and evolution. The IFLA Cataloguing Section's Working Group on FRBR, chaired by Patrick LeBœuf, has an active online discussion list and a Web site at <http://www.ifla.org/VII/s13/wgfrbr/wgfrbr.htm>. The Web site includes presentations, training tools, a hotlinked bibliography, and much more.

## TERMINOLOGY

FRBR offers us a fresh perspective on the structure and relationships of bibliographic and authority records, and also a more precise vocabulary to help future cataloging rule makers and system designers in meeting user needs. Before FRBR our cataloging rules tended to be very unclear about using the words “work,” “edition,” or “item.”<sup>2</sup> Even in everyday language, we tend to say a “book” when we may actually mean several things.

For example, when we say “book” to describe a physical object that has paper pages and a binding and can sometimes be used to prop open a door or hold up a table leg, FRBR calls this an “item.”

When we say “book” we also may mean a “publication” as when we go to a bookstore to purchase a book. We may know its ISBN but the particular copy does not matter as long as it's in good condition and not missing pages. FRBR calls this a “manifestation.”



When we say “book” as in ‘who translated that book,’ we may have a particular text in mind and a specific language. FRBR calls this an “expression.”

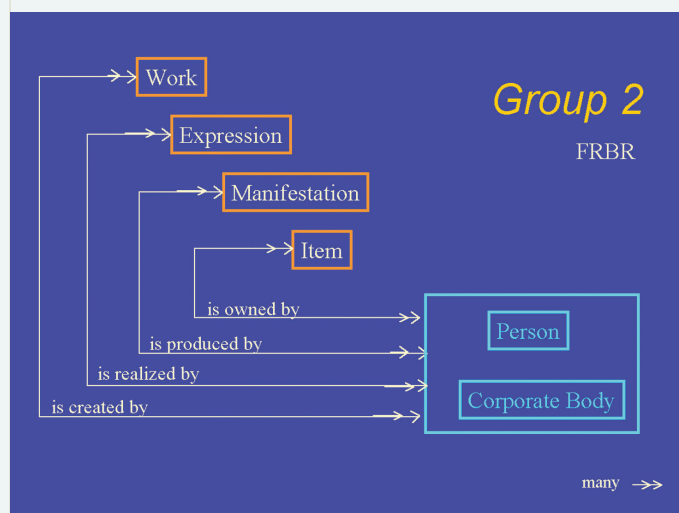
When we say “book” as in ‘who wrote that book,’ we could mean a higher level of abstraction, the conceptual content that underlies all of the linguistic versions, the story being told in the book, the ideas in a person’s head for the book. FRBR calls this a “work.”

## ENTITIES

The JSC is examining AACR2 to update the terminology to be clearer when we mean **work**, **expression**, **manifestation**, and **item**, following these FRBR “**Group 1**” entities.

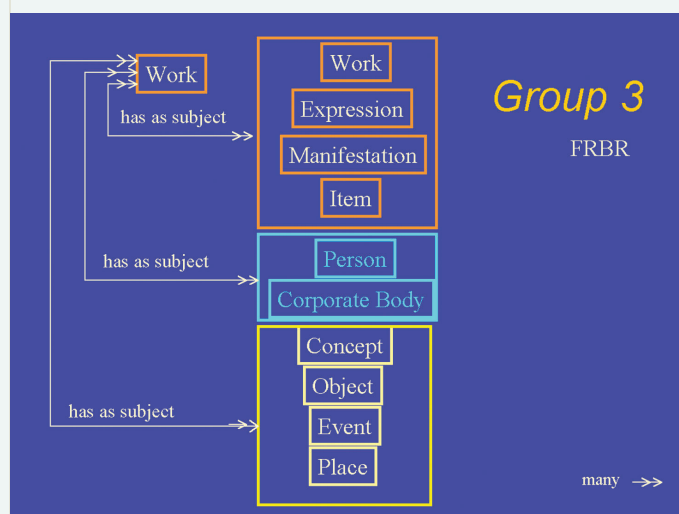
FRBR’s “**Group 2**” entities are **person** and **corporate body** that are related to “Group 1” entities through specific relationships. These relationships reflect the role of the person or corporate body with respect to the work, expression, manifestation, or item. FRBR’s model shows us how important such role information is for performing user tasks and for assisting a user to navigate through the bibliographic universe. (Note: This universe may be limited to our local catalog or may be the realm of global resources available through the Web.)

The value of this ‘role’ information becomes very apparent in light of FRBR. We need to regain the lost link of relator terms and codes in our bibliographic records. It is time to re-examine a change in cataloging



practice that abandoned use of “relator” terms and codes to cut cataloging costs. In hindsight we can see that decision was unfortunate for future users of our records and should be reversed to allow greater flexibility in manipulating bibliographic data and offering better information to users as they navigate our catalogs.

FRBR “**Group 3**” entities are the subjects of works. These can be **concepts**, **objects**, **events**, **places**, and any of the “**Group 1**” or “**Group 2**” entities. For example, you can have a work about another work or a work about a person or corporate body.



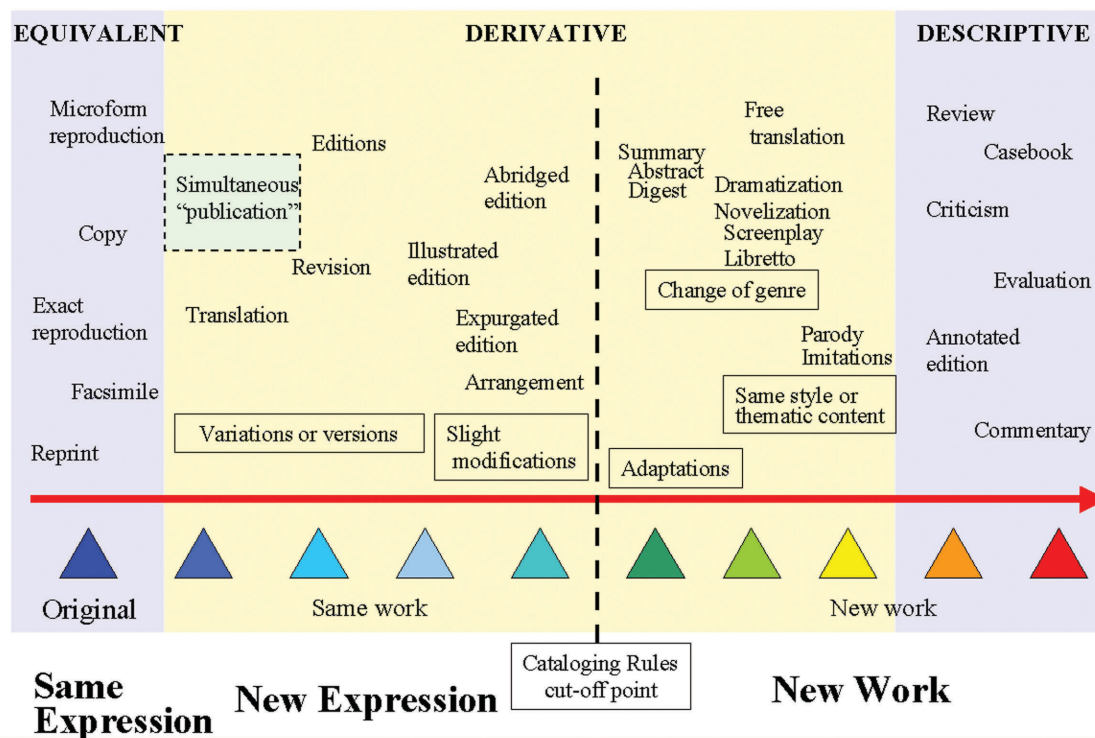
## BIBLIOGRAPHIC RELATIONSHIPS

A lot of attention has been given to the **inherent relationships** among the entities in the Group 1 hierarchy of work, expression, manifestation, and item. Additionally, there are many other rich content relationships that enable collocation of related items and navigation through the sometimes complex network of the bibliographic universe.<sup>3</sup>

**Content relationships** can be viewed as a continuum from works/expressions/manifestations/items. Moving left to right along this continuum we start with some original work and related works and expressions and

manifestations that can be considered “equivalent,” that is, they share the same intellectual or artistic content as realized through the same mode of expression. Next we come to works/expressions/manifestations that are related through a “derivative” relationship. These comprise a range of new expressions, such as translations, different performances, slight modifications and editions that move along the continuum across a magic line where they become a new work yet still related to some original work. To the far right on this continuum we find ‘descriptive’ relationships that involve new works describing some original work. FRBR reminds us of the importance of these relationships and keeps us focused on those of most importance to meeting user tasks.

### FAMILY OF WORKS



*Relationships in the Organization of Knowledge*, edited by Carol A. Bean and Rebecca Green, 2001, p. 23, "Bibliographic Relationships" by Barbara B. Tillett, Figure 2, © 2001 Kluwer Academic Publishers Boston, with kind permission of Kluwer Academic Publishers.

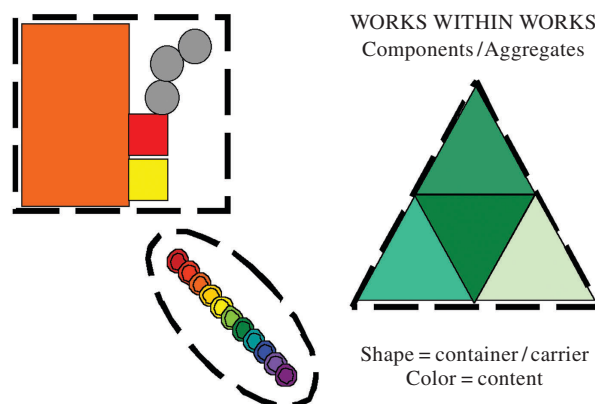


**Whole/part** and **part to part** relationships are also in FRBR. When we provide bibliographic control for electronic digital resources, we find these whole/part and part to part relationships especially relevant. For example, a Web site may be viewed as the “whole” and the components as its “parts,” or we may view the whole digitized resource and its components as the parts that will need to be tracked through technical metadata for storing and displaying that digital information.

The part to part relationships include ‘sequential’ and ‘accompanying’ or ‘companion’ relationships. Companion relationships can be either dependent or independent, which will influence how many bibliographic records we would make for the related works and their manifestations.

In fact the number of records we make is a decision made up front by the cataloger based on local policies reflecting local user needs. We may choose to catalog at various levels: the collection of works (FRBR calls this an aggregation), an individual work, or a component of a work. At the collection level we may include a description of all the parts and should provide access to each component. At the component level we should provide a link to relate to the larger “whole.” FRBR reminds us that these relationships are important factors for fulfilling user tasks regardless of what we choose to view as the “whole.”

## WHOLE-PART RELATIONSHIPS



*Relationships in the Organization of Knowledge*, edited by Carol A. Bean and Rebecca Green, 2001, p. 26, “Bibliographic Relationships” by Barbara B. Tillett, Figure 3, © 2001 Kluwer Academic Publishers Boston, with kind permission of Kluwer Academic Publishers.

## USER TASKS

So what are these FRBR user tasks? Briefly, they are **find**, **identify**, **select**, and **obtain**. ‘**Find**’ involves meeting a user’s search criteria through an attribute or a relationship of an entity. This can be seen to combine both the traditional “find” and “collocate” objectives of a catalog. ‘**Identify**’ enables a user to confirm they have found what they looked for, distinguishing among similar resources. ‘**Select**’ involves meeting a user’s requirements with respect to content, physical format, etc. or to reject an entity that doesn’t meet the user’s needs. ‘**Obtain**’ enables a user to acquire an entity through purchase, loan, etc., or electronic remote access.

Additionally, FRBR recognizes the importance of being able to **navigate**, and we could add other tasks relevant to specific users, such as tasks for rights management or preservation communities. These user tasks reinforce the traditional objectives of a catalog, as described by Cutter in 1876 to enable a user to find and to collocate works.<sup>4</sup>

## IMPACT ON CATALOGING RULES

Today FRBR provides an opportunity to re-examine our cataloging rules and principles. The Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules (JSC) is using FRBR not only to update terminology, but also to re-examine and hopefully improve the traditional linking devices of uniform titles in light of FRBR. Perhaps an expression-level citation or work-level citation can provide an improved reincarnation of traditional uniform titles that would offer more collocation and differentiation capabilities than current uniform titles. Other professional organizations such as IAML, IFLA, ALA, etc. will be engaged in this re-examination.

The JSC is also exploring the FRBR modes of expression and some of the attributes of manifestations to revisit GMDs (general material designators). Online system display capabilities (such as icons used in some systems today) might now be evaluated as an additional means for conveying information about the mode of expression and the type of carrier or container available, replacing GMDs as we know them today with a device that better meets user needs.

FRBR is reaching even beyond AACR. IFLA's first International Meeting of Experts on an International Cataloguing Code (IME ICC), July 28-30, 2003 in Frankfurt, Germany, will also provide an opportunity for re-examining the 1961 Paris Principles in light of FRBR and today's online environment.

## IMPACT ON BIBLIOGRAPHIC STRUCTURES

OCLC's initial research of FRBR with respect to its more than 40 million record database WorldCat has shown that over 80% of these records reflect a single manifestation per work.<sup>5</sup> We could interpret this to mean that we could let our local systems automatically create authority records for us based on the headings we construct according to cataloging rules when we get the first work of a creator. We would only need to do the more extensive work for the less than 20% of items, once we got the second or third manifestation (as suggested by Jennifer Younger several years ago<sup>6</sup>). More interestingly we could provide subject headings and classification to the authority record for the work—do it once there, rather than redundantly for each bibliographic record for each manifestation. Our bibliographic records today typically reflect particular manifestations.

Similarly, we could link the authority records for persons and corporate bodies with the related “work” authority records when there is a “creator” relationship to the work authority record. Authority records for “expressions” could also be linked to the person or corporate body authority records in a “realized by” relationship. These relationships could be used for the system to establish the citation form for the work and associated expressions that can then be used as the linking device for collocation and navigation. New models of bibliographic structures could evolve to better meet user needs.

## SYSTEMS DESIGN AND APPLICATIONS

FRBR promises to have a profound influence on future systems design. Vendors and bibliographic utilities, like VTLS, OCLC, and RLG have already embraced the FRBR conceptual model in designing their future systems. These and other vendors are engaged in discussion of FRBR through the JSC's Format Variations Working Group, led by Jennifer Bowen. Although somewhat slow to catch on in the United States, FRBR has been fundamental to recent system designs in Australia and Europe for many years.<sup>7</sup>

## CONCLUSIONS

FRBR's terminology, relationships, and user tasks are already assisting us to review our traditions in cataloging in light of today's digital environment. This work within IFLA has spread worldwide and provides a conceptual model to guide us for many years to come. IFLA together with other interested parties will continue to encourage the application of this model to facilitate international standardization and reduce costs for cataloging on a global scale.



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– Chief –

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LIBRARY OF CONGRESS



*Dr. Tillett is also the current Chair of the IFLA Cataloguing Section, a member of the Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules, and was a consultant to the IFLA Study Group on the Functional Requirements for Bibliographic Records along with Tom Delsey, Elaine Svenonius, and Beth Dulabahn. She is currently working with others on the extension of this model to authority control with chair, Glenn Patton, and the IFLA Working Group on Functional Requirements and Numbering for Authority Records with consultant, Tom Delsey.*

## NOTES

- <sup>1</sup> *Functional Requirements for Bibliographic Records, Final Report* / IFLA Study Group on the Functional Requirements for Bibliographic Records. – München : K.G. Saur, 1998. (UBCIM Publications, New Series ; v. 19) Also available as <http://www.ifla.org/VII/s13/frbr/frbr.htm> or <http://www.ifla.org/VII/s13/frbr/frbr.pdf>
- <sup>2</sup> Thanks to Patrick LeBœuf for the book analogy.
- <sup>3</sup> Tillett, Barbara B., "Bibliographic Relationships." In: *Relationships in the Organization of Knowledge*, edited by Carol A. Bean and Rebecca Green. – Dordrecht : Kluwer Academic Publishers, 2001, p. 19-35.
- <sup>4</sup> Cutter, Charles A. *Rules for a Printed Dictionary Catalogue*. – Washington, D.C. : Government Printing Office, 1876, p. 10.
- <sup>5</sup> Hickey, Thomas. *FRBR algorithms & tools* [online]. [Dublin, Ohio]: [OCLC], June 20, 2002. Available from [http://staff.oclc.org/~hickey/presentations/frbrAlgorithms20020620\\_files/frame.htm](http://staff.oclc.org/~hickey/presentations/frbrAlgorithms20020620_files/frame.htm)
- <sup>6</sup> Younger, Jennifer. "Resources description in the digital age," *Library Trends*, v. 45 (Winter 1997), p. 462-487.
- <sup>7</sup> Examples of recent applications include AustLit, Denmark's VisualCat, OCLC's Fiction Finder, the future design for OCLC's WorldCat, RLG's Web union catalog plans, the prototype for VTLS's Virtua system, and the underlying concepts of <indecs>, the ABC model in Project harmony (US, IK, and Australia), and Indiana University's Variations2 digital music project.

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O'Neill, Edward. FRBR (Functional Requirements for Bibliographic Records): application of the entity-relationship model to Humphry Clinker. In: *Library Resources and Technical Services* (2002) v. 46, no. 4, p.150-159. (ISSN 0024-2527)

OCLC. *OCLC research activities and IFLA's Functional requirements for bibliographic records* [online]. Dublin, Ohio: OCLC, cop. 2002 [cited 16 July 2002]. Available from <http://www.oclc.org/research/projects/frbr/index.shtml> With links to OCLC's four projects: *Case study: the FRBRization of Humphry Clinker* <http://www.oclc.org/research/projects/frbr/clinker/index.shtml>, *Extending the case of Clinker* [http://www.oclc.org/research/projects/frbr/2\\_works.shtml](http://www.oclc.org/research/projects/frbr/2_works.shtml), *Algorithm development and testing* [http://www.oclc.org/research/projects/frbr/3\\_algorithm.shtml](http://www.oclc.org/research/projects/frbr/3_algorithm.shtml), *Fiction Finder* [http://www.oclc.org/research/projects/frbr/4\\_fictfinder.shtml](http://www.oclc.org/research/projects/frbr/4_fictfinder.shtml) [cited 31 December 2002].