Remain Calm! RDA, FRBR, and Music Libraries
By Alastair Boyd
Robarts Library, University of Toronto

"Par ma foi! il y a plus de quarante ans que je dis de la prose sans que j'en susse rien"— Molière, *Le bourgeois gentilhomme*.

Music librarians are starting to wonder about "RDA", the new cataloguing code which they hear is supposed to replace the familiar Anglo-American Cataloguing Rules (AACR) some time in 2009. What we initially expected to be a simple updating of AACR2 to AACR3 has turned into a protracted and wholesale reorganization with a fancy new name: *Resource Description and Access*. It's a bit like embarking on some long-overdue home improvements, where you start by repainting the guest-room and wind up demolishing half the house and replacing the roof. Many who have seen the RDA drafts published by the Joint Steering Committee over the past year find themselves disoriented and consequently alarmed at the prospect of implementing something that looks so complicated. However, if I may quote those "In the Event of Fire" notices in public buildings: "Remain Calm." As things stand with RDA at the moment there is really no reason for music librarians to panic.

Whose Idea Was This?

Fuelling most of the changes to the cataloguing code are two reports from the International Federation of Library Associations and Institutions (IFLA): first, *Functional Requirements for Bibliographic Records* (FRBR) published in 1998, and second, *Functional Requirements for Authority Data* (FRAD), published as a draft in 2007. IFLA has set out to analyze what it calls the bibliographic universe, and in these documents seeks to define a consistent entity-relationship model for bibliographic information. The professed goal is to help everyone who uses, creates, or exchanges such information, from rule-makers to cataloguers to system designers, by establishing more precise vocabulary and definitions to describe the structure of bibliographic and authority records and the relationships between them. Both these reports are available online at the IFLA website[1]; in addition, numerous commentaries on FRBR have been published in the last 10 years, including an excellent brochure by Barbara Tillett from the Library of Congress that amplifies and illustrates the following very brief overview.[2]

[1] FRBR is at http://www.ifla.org/VII/s13/frbr/ and FRAD is at http://www.ifla.org/VII/d4/wg-franar.htm.

[2] *What is FRBR? A Conceptual Model for the Bibliographic Universe*, Washington: Library of Congress Cataloging Distribution Service, 2004. Available at http://www.loc.gov/cds/FRBR.html (viewed July 3 2008)

FRBR in Three Paragraphs

FRBR defines and describes ten "entities" covering all aspects of bibliographic information. These are divided into three groups, which might be summarized as *what*, *who*, and *about what*. Group 1 describes *what* is being "named or described in bibliographic records", in a hierarchy of four levels, moving from the abstract to the concrete.[3] At the top is *Work*, "a distinct intellectual or artistic creation", for example Bach's *Die Kunst der Fuge*, considered at a purely abstract level—that is, the imaginative object that we understand lies behind, but is independent of, all published editions, performances, and recordings. The second Group 1 entity is *Expression*: the "realization of a work in the form of alpha-numeric, musical, or choreographic notation, sound, image, object, movement, etc., or any combination of such forms." Bach's unfinished open score of *Die Kunst der Fuge* is one expression; a published arrangement for brass ensemble is another; a recording of a performance on the organ is another; and so on. Thus a single work can have several expressions. This entity seems to cause the most confusion, because it still refers to an abstraction, and because it is not always clear where to draw the line between a work, a related work, or an expression.. It is the next level of entity, the *Manifestation*, which refers to "the physical embodiment of an expression of

Group 1 Entities and Primary Relationships
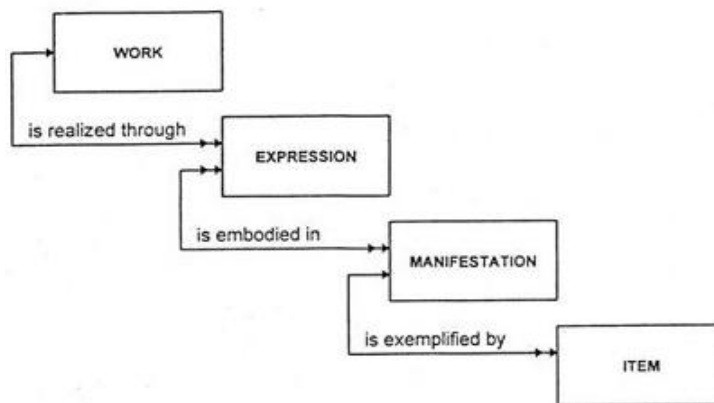
a work". Lionel Rogg's recorded performance of the work is an expression, of which the 1970 LP release is the first manifestation; a subsequent reissue on CD would be another manifestation. At this point we are on firmer and more familiar ground, since *manifestation* is really just a fancy word for what we used to call *edition*. And a physical copy of an edition of a work, or in FRBRese "a single exemplar of a manifestation", is an *Item*, the last and most concrete Group 1 entity.

The two entities in Group 2 describe *who* is "involved in the creation or realization of a work" or the subject of a work—either a *Person* ("an individual") or a *Corporate Body* ("an organization or group of individuals and/or organizations acting as a unit"; this includes conferences, exhibitions, and festivals). Then with the Group 3 entities we turn our attention to what works are *about*. In addition to any of the Group 1 and 2 entities, works can be about *Concepts*, *Objects*, *Events*, and *Places*.

FRBR devotes a chapter to defining these three groups of entities, and another to listing in exhaustive detail their attributes. Attributes are their identifying characteristics, of any kind, whether inherent

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[3] All quotations in these three paragraphs, and the diagram, are taken directly from FRBR.

and ascertainable from the entity itself (like title, physical form, medium, notation), or externally applied (like Köchel catalogue numbers). Then in another chapter we find a codification of the many kinds of relationships to be found between the 10 entities, both among and between the three groups (e.g. equivalent, derivative, or whole / part relationships between works and other works or expressions; role relationships such as those that exist between creators / performers and works / expressions; and so on.)

FRAD in Two Paragraphs

Moving hastily on to FRAD: in the *Functional Requirements for Authority Data* IFLA seeks to establish a conceptual model for authority data just as FRBR does for bibliographic data. FRAD is similarly careful to describe "data" rather than records, but for all current purposes we may as well admit we are talking about authority records. What are they? Well: all the entities so minutely described in FRBR are labelled with "identifiers" of some sort: in plain English, names or concepts. In order for a catalogue to be useful, it helps if the same identifier is always be used for the same thing, even when different identifiers have been applied in the messy external world of publishing. For example, a music catalogue cannot link all expressions and manifestations of Bach's *Die Kunst der Fuge*, and comprehensively establish relationships between these and all derivative or related works, until we have first established an "authorized" (i.e. standardized) heading for the work, which might be variously known as *The Art of Fugue*, or *L'arte della fuga*, in addition to the German title. At the same time we need a way to guide catalogue users to our standardized heading from whatever form they searched under, by way of cross-references. That is what authority records are for.

A database of records documenting and describing identifiers—relating alternative forms to standardized ones, documenting sources, establishing links to other identifiers—provides an efficient mechanism for controlling access points when used in tandem with a catalogue. If bibliographic records are metadata, then you might say that authority records are meta-metadata. And FRAD is an attempt to establish principles for creating authority records using the same terminology of entities, attributes and relationships as FRBR.

What Will Change for Music Cataloguers?

The end result of IFLA's rigorous entity analysis is purportedly a stronger conceptual model. It is on this basis that FRBR and FRAD are to inform the rules, terminology and organization of the updated cataloguing code, RDA. In certain respects music librarians should be in a better position than anyone to grasp the new concepts. Like Molière's M. Jourdain who had been speaking "prose" all his life without knowing it, music librarians have to a great extent been dealing all along with "works" and "expressions" and the complex relationships between and among them, that have now been so minutely codified in FRBR.

So first, what will change for music cataloguers? The most obvious change between AACR2 and RDA is the organization of the rules (now called "guidelines"). AACR2 is based on the pragmatic assumption that cataloguers begin with a physical object in front of them which needs to be converted into a descriptive surrogate, and which also needs to have consistent access points added. So the code starts with some general rules and principles for describing documents of all kinds, in a sequence that pretty much reflects the elements of the finished catalogue record, or at least what used to be a record in the days when it was printed on a card. In other words, a transcription of the title page or equivalent, presenting the title, author(s) and/or editor(s), edition

statement (if any), place of publication, publisher, date of publication, and series (if any); followed by any cataloguers' notes that may be required to flesh out the description. (In cataloguing jargon this is known as the ISBD).[4] After AACR2's general rules come a succession of chapters with specific rules for describing the particular format of the document the cataloguer has in hand: whether a book, or map, music score, sound recording, or electronic resource, and so on. These specific rules follow the same order—indeed, share the numbering scheme—of the preliminary general rules. This accounts for Part I of AACR2.

Part II covers the rules for making headings: which ones to add to any given record (e.g. personal or corporate names, series, etc.), and the standardized form that they should take, along with cross-references to point from variant forms to the authorized or so-called "controlled" headings. The current mechanism for this is the authority records I mentioned earlier in connection with FRAD. It is these controlled headings which, through indexes, establish the relationships between bibliographic records, by gathering all items by a particular author, say, or in a particular series, under a single access point.

Both parts of AACR2 are agnostic about the encoding scheme used to input and index the data: there is nothing in the rules or examples about MARC coding. But because it was a product of the card catalogue era, AACR2 does prescribe and illustrate punctuation as specified by the ISBD. RDA takes agnosticism a step further, with no reference to any particular coding scheme, nor any reference to a particular "record syntax" and concomitant punctuation in the illustrative examples. But as I hinted above, a bigger difference is the organization of the rules into chapters and sections. RDA started out with a similar basic layout to AACR2, but has now been radically reorganized, so as to be conceptually arranged by the underlying FRBR/FRAD attributes, entities and relationships of the catalogue and authority file, rather than based on the order of elements in a catalogue display. Conceptually the two broad aspects—making descriptive bibliographic records and making headings—remain as before. In its latest draft, RDA is planned in more than 30 chapters grouped into 10 sections, divided into two overall groups. Sections 1-4 are focused on recording the attributes of FRBR entities: respectively for *manifestation and item*, *work and expression*, *person / family / corporate body*, and *concept /object / event / place*. Sections 5-10 are devoted to recording the relationships between all these entities. The reasoning is that "closer alignment with the FRBR and FRAD models and direct reference to the FRBR entities and user tasks will make it easier for cataloguers to learn and understand RDA concepts and for system designers to create powerful applications to support resource discovery."[5]

Because the arrangement is by FRBR concept rather than ISBD display, navigating the text in search of rules for specific formats such as music can at first be rather daunting for experienced cataloguers. However, we should remember that RDA is conceived primarily as a web resource, not a printed manual. Searching the text, establishing links, making bookmarks, customizing the display—these things can be done quite easily through a web browser, or so the theory goes. This promised flexibility is reassuring from a pragmatic point of view. One of the drawbacks to AACR2 in the eyes of most trainee cataloguers has been the absence of MARC coding in the

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[4] *International Standard Bibliographic Description*, published, like FRBR, by IFLA. Available online (July 3 2008) at http://www.ifla.org/VII/s13/pubs/cat-isbd.htm

[5] "A New Organization for RDA", Joint Steering Committee for Development of RDA, webpage viewed July 3, 2008 http://www.collectionscanada.gc.ca/jsc/rda-new-org.html

examples, which inevitably leads to locally produced training guides and "third party" texts cooked up to remedy this practical deficiency. RDA is designed to float above the coding fray, free of any specific coding or display syntax, perhaps in anticipation of some future smart system that does all the tagging and subfield coding by itself. But that future is not yet here, so it is a relief to be promised several appendices that will map RDA to various coding schemas including MARC 21, and record display formats, including the ISBD format underlying AACR2.

What Will Change for Catalogue Users?

This reorganization will affect music cataloguers most directly. But cataloguers and reference librarians alike will notice some changes in certain headings and terminology. For instance, the collective "preferred title" (previously known as. "uniform title") for some but not all of a composer's works appears to be coming full circle: Where AACR1 prescribed *[Works. Selections]*, and AACR2 prescribed simply *[Selections],* RDA seems to be leaning towards *[Selected works]*. RDA also has provisions for increasing the number of additional access points in order to represent *all* the works in anthologies, which will improve controlled access to the contents of many sound recordings—that is, if cataloguers can afford to take the time to establish all the additional headings. Equally conspicuous will be refinements to the "General Material Designation" or GMD inserted within square brackets into the title, e.g. *[sound recording]* and the "Specific Material Designation" found in the physical description, e.g. *1 score*. The idea is to make a clear distinction between *content* and *carrier* terms, removing AACR2's occasional blurriness (both carrier terms like *[microform]* and content terms like *[map]* are listed as GMDs, for example).

Flexibility or Contortionism?

The JSC, collective authors of RDA, intend to produce something more flexible than AACR2, in order to encourage its adoption by publishers and vendors, and to ensure its compatibility with future relational, object-oriented database structures. But at the same time, they are aiming at a standard that is backward-compatible with the millions of AACR records already in MARC catalogues. This imposes considerable constraints, and has led to complaints that RDA is not nearly radical enough, retaining far too much complex emphasis on outdated details of descriptive terminology. Hostile critics like Karen Coyle and Diane Hillmann eloquently denounce what they see as a fatal lack of forward thinking in a standard "built on the crumbling walls of AACR2"[6] — but offer little advice to libraries wishing neither to discard nor entirely reconstruct their existing catalogues. It is possible to map out a fully FRBRized relational database structure with separate records for works, expressions, manifestations, items, and persons,[7] but such a structure obviously cannot depend on data lacking in AACR-based records if it is to integrate old and new records successfully into a single catalogue.

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[6] Karen Coyle and Diane Hillmann, "Resource Description and Access (RDA): Cataloging Rules for the 20th Century," *D-Lib Magazine* v. 13 no. 1/2 (Jan./Feb. 2007). Available online (July 3 2008) at http://www.dlib.org/dlib/january07/coyle/01coyle.html

[7] There are some interesting diagrams in the JSC document *RDA Implementation Scenarios* from January 2007, available online (July 3 2008) at http://www.collectionscanada.gc.ca/jsc/docs/5editor2.pdf

As it happens, the work required to FRBRize existing web-based music catalogues, which currently work so badly, can largely be done by improving search and discovery tools through better indexing and manipulation of current data. An increasing number of libraries, tired of waiting for library system vendors to do the job, have built new web interfaces on top of their existing systems with open standard systems like Aquabrowser, or have even turned to the world of online commerce and licensed products like Endeca. If faceted searching and a more flexible display of results can work so well with the comparatively meagre data behind online bookstores, what prodigies might we not achieve with the highly structured data in our catalogues? Or so the thinking goes.

Even under AACR2 and MARC 21, our existing records contain sufficient data to identify works and expressions, and to establish many of the relationships between the FRBR Group 1 and Group 2 entities. This is chiefly because they contain uniform titles which are (or could be) linked to name-title authority records. While it may ultimately be desirable to maintain separate records for works, expressions, and manifestations, it is not for the time being essential, thanks to MARC 21 subfield coding. Consider the following headings, as they might appear in MARC bibliographic or authority records:

1. Strauss, Richard,$d1864-1949.$tAriadne auf Naxos

2. Strauss, Richard,$d1864-1949.$tAriadne auf Naxos.$pEs gibt ein Reich.

3. Strauss, Richard,$d1864-1949.$tAriadne auf Naxos.*$sVocal score.$lEnglish & German*

The first identifies a work, namely the opera that was Strauss's third collaboration with Hugo von Hofmannsthal. The second identifies a whole-part relationship between the work and an aria from it, explicitly indicated by the subfield code "p" before the title of the aria. The third identifies a particular expression of the work—a vocal score with English translation—by means of the elements shown in italics in subfields "s" and "l".

It would certainly be possible to automate the construction of separate, hierarchical records based on elements like these, but initially at least, a simpler approach is to leave the underlying data alone, and let newly-adopted index and search engines such as those I mentioned a moment ago take care of the rest. For example, the Endeca-based Resource Discovery interface currently being developed at the University of Toronto "ingests" the MARC data and creates "properties" for works and expressions according to locally determined (and thus, easily modified) rules; this makes it easy to experiment with ways of displaying and linking works and expressions, based on existing records. The provisions in RDA for making controlled access points and their inter-relationships more consistent will certainly enhance this sort of access, but the old AACR-based records will remain useful. Global updates to flip old headings ("Selections") to possible RDA equivalents ("Selected works") can easily be automated, even as we already do whenever uniform titles or subject headings are updated by the Library of Congress.

Implementation: When, Where, Who?

And speaking of the Library of Congress: the question now on everyone's mind is, will LC lead the way in implementing RDA? Without such backing, it seems improbable that RDA can make the leap from proposal to reality. There is some genuine suspense here, since although LC's cataloguing directorate is represented on the Joint Steering Committee and actively contributing to RDA, LC's Associate Librarian for Library Services, Deanna Marcum, simultaneously

convened a "Working Group on the Future of Bibliographic Control" in November 2006. To some observers this suggested a certain lack of confidence in the way that RDA was heading, all the more because the Group's membership included not only various library organizations but representatives from Google and Microsoft as well. These suspicions seemed at first to be justified, since the Working Group's final report in January 2008 included the blunt recommendation to suspend work on RDA until its "presumed benefits" and indeed those of FRBR as well, have been "convincingly demonstrated."[8] This was not the end of the matter, however, since on May 1 2008 the leaders of LC (including Deanna Marcum), the National Library of Medicine, and the National Agricultural Library issued a joint statement supporting the completion of RDA, on the grounds that until the full draft standard and its online interface were available, reviewers would not be able to assess its impact. This finished draft was to have been released on August 4 2008; was then postponed until October in order that the new distribution software could be better tested; and was finally issued in November, but only as a PDF document because the online interface software was still not ready. Allowing for a planned three-month constituency review to follow this draft, it now looks as RDA's final release will not take place until the middle of 2009, if then.

So, it seems unlikely that any major changes in our day-to-day operations will be required for at least another year, probably longer. The next significant step will be the release of the online version of the full RDA draft, which will provide a clearer picture of its overall shape and functionality than has previously been possible from the piecemeal section drafts. And in the meantime, we can keep pressing for the improvement of online catalogue design, so as to make the music records we've been creating for 25 years under AARC2 work better for us all.

This article is based on a presentation by Stacy Allison-Cassin and Alastair Boyd at the 2008 CAML Conference in Vancouver.

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[8] *On the Record: Report of The Library of Congress Working Group on the Future of Bibliographic Control*, p. 29. Available online (July 3 2008) at http://www.loc.gov/bibliographic-future/news/lcwg-ontherecord-jan08-final.pdf