To: Joint Steering Committee for Revision of AACR

From: Ann Huthwaite, Chair, JSC

Subject: JSC Format Variation Working Group

Attached is an interim report prepared by Jennifer Bowen, Chair of the JSC Format Variation Working Group, for discussion at the JSC meeting in Ottawa on 15-17 October 2001.

JSC Format Variation Working Group

Interim Report, October 8, 2001

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1. Executive Summary

During the past six months, the JSC Format Variation Working Group has studied the models for expression-based cataloging outlined by the CC:DA 0.24 Working Group in its final report (4JSC/ALA/30) and conducted an initial cataloging exercise to test the feasibility of these models. Using the entity model outlined in the IFLA document, *Functional Requirements of Bibliographic Records,* we attempted to separate data attributes that would traditionally all go into a bibliographic record into those that would apply at the expression and at the manifestation level. The results of this exercise were mixed. Our attempts to also mock up multilevel record displays from this data, as described in 0.24 Models 1, 2, and 3, also met with limited success.

To examine the feasibility of 0.24 Model 5, the Working Group developed a model for a mechanism through which bibliographic records that represent the same expression could be linked in an online environment. This model simulates the effect of cataloging "at the expression level" by facilitating the collocation of expressions in a catalog display, but still allows catalogers to catalog at the familiar manifestation and item level and allows legacy cataloging records to be used with minor or no alterations. OCLC has expressed an interest in this approach, and the Working Group has supplied OCLC with our needs for a sample database that we could use to experiment with this approach.

Discussion among Working Group members indicates considerable skepticism of the practicality of actually creating bibliographic records for expressions, based partially upon initial experiments by the Group to catalog at the expression level. While some Working Group members have successfully worked with specific databases that are expression-based, we are not convinced that such a model could be implemented successfully on a wide level in the Anglo-American cataloging community. However, Working Group members on the whole show much enthusiasm for a linking mechanism (such as our model) that could potentially combine automated techniques for linking records. Such a model would be based upon expression-level identifiers but would also allow input from catalogers that would identify manifestations representing the same expression even when no clear expression-level identifier is available for linking.

The Working Group has also begun an investigation of AACR and how the concepts of work, expression, manifestation and item could be worked into the code. Pat Riva has prepared a detailed discussion document (attached as Appendix B) that we are using to begin discussion in this area. In particular we

see a need to provide guidance for catalogers in deciding when a bibliographic entity represents the same or a different expression.

The Task Force has outlined the following potential next steps for our work:

- Continue to pursue the creation of a trial database, administered by OCLC, to test table-based linking at the expression level. Because we are dependent upon the availability of OCLC staff to carry out this project as they prepare to migrate to an Oracle-based system, this will likely necessitate an extension in the length of our charge. Working Group members could be polled to see who might be willing to stay on the group (perhaps for a second year?) to work on this project. At least some members have indicated an interest in doing this. We feel that continuing with this project will truly enable us to fulfill the second part of our charge: to demonstrate whether or not cataloging activity at the expression level can generate a display of bibliographic data that is intelligible to users of the catalog.

- Discuss and refine the preliminary work proposed by Pat Riva in her discussion paper and make specific recommendations to JSC for rule changes to clarify concepts from FRBR into the cataloging code. We anticipate that most proposed changes to the code would be in Part 2. However, before we move forward in this area, we would like JSC to affirm our basic premise of continuing to catalog at the manifestation level. We would also appreciate guidance from JSC on whether we should also consider when the concept of "work" should be clarified in Part 2. While this would expand our task at hand, it might be easier to consider all of the FRBR terminology at once given the number of interrelationships between them.

- Develop guidance for catalogers in determining when an item in hand represents a new expression. We would strive for succinct, theoretical guidelines that would be applicable to all types of materials and that would also explain why distinguishing between expressions is potentially important to the cataloging process. To clarify the decision-making process for catalogers, these guidelines could also discuss relationships between manifestations that represent the same expression. However, expanding this to also include relationships between works and between expressions would require an expansion of our Charge.

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2. Introduction

The JSC Format Variation Working Group was formed in the Spring of 2001 with representatives from all of the JSC's four national constituents. Members of the group are:

Matthew Beacom, Yale University
Antony Gordon, National Sound Archive, British Library
Peter Haddad, National Library of Australia
Stuart Hunt, OCLC Europe
Sue Lambert, British Library
Christine Oliver, McGill University
Pat Riva, McGill University
Joan Schuitema, Loyola University
Jennifer Bowen, University of Rochester (Chair)

The Working Group's Terms of Reference are as follows:

> "The JSC Working Group on Format Variation is charged to develop an experiment to test the practicalities associated with the creation of bibliographic records for expressions. Using as the basis for its work the JSC papers 4JSC/ALA/30 and 4JSC/ALA/30/Chair follow-up, and the various responses to these papers, the Working Group should employ a "proof of concept" approach to identifying the practical issues associated with creating bibliographic records based on expressions. Specifically, the Working Group should determine whether:
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> - Expression-based cataloguing is viable;
> - The bibliographic records that result from such cataloguing are intelligible to catalogue users;
> - There is a cooperative will to implement such an approach to cataloguing in the not-too-distant future."

The Joint Steering Committee requested an interim report from the group (this document) by September 2001; our Final Report is due by April 2002.

3. Models for Expression-Level Cataloging

In order to develop and conduct an experiment such as that described in our Charge, JSC requested that we develop an actual database of some kind, and OCLC was enlisted to supply the technical support for this part of our work. Stuart Hunt, from OCLC Europe, now acts as our liaison to OCLC. Before we

could begin to set up such a database, however, we needed to select a model for how such a database might be structured. We therefore began our work on a more abstract level by testing the various models for expression-level cataloging described in the CC:DA Rule 0.24 Discussion Paper (4JSC/ALA/30).[1]

The Working Group examined the five record structures for expression-based records described in 4JSC/ALA/30 and reproduced here as Appendix A. Guided by discussions with JSC at its Spring 2000 meeting, the Working Group further categorized these five models into two distinct approaches to expression-based cataloging:

- **Expression-level *cataloging***, in which actual bibliographic records would be created for expressions to complement records representing manifestations, in a multilevel structure. Models 1, 2 and 3 in the 0.24 report describe variations on this approach.

- Model 5 in the 0.24 report, in which the underlying bibliographic information is stored in separate records for each manifestation, and which really suggests a type of **expression-level *collocation*** rather than expression-level cataloging*.*

While our charge to create "bibliographic records for expressions" fit most cleanly with the multilevel approach of Models 1, 2, and 3, both Working Group and JSC members expressed much interest in Model 5 early on in our work because Model 5 would facilitate the use of existing cataloging data. At the April JSC meeting, JSC members requested that the Working Group consider both approaches.

(JSC suggested that Model 4 as described in the 0.24 report be eliminated from our consideration because of the potential loss of bibliographic specificity that would result from its use).

4. Options 1, 2 and 3: Expression-Level Cataloging

The Working Group began to evaluate the models for expression-based records by conducting an experiment to select existing bibliographic records of expressions that exist in more than one manifestation (which we dubbed an "expression set") and to do the following:

- identify which bibliographic fields were attributes of the expression, and which of the manifestation, using the IFLA document, "Functional Requirements for

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[1]ALCTS CCS Committee on Cataloging: Description and Access. "Overview and Recommendations Concerning Revision of Rule 0.24." (4JSC/ALA/30) August 16, 1999.
< http://www.ala.org/alcts/organization/ccs/ccda/tf-024a.html#report >

Bibliographic Records" (hereafter abbreviated as "FRBR") as our guide for applying this terminology.[2]
- attempt to mock up a "multi-tiered" display as described in the report of the CC:DA 0.24 Working Group.

Results of this experiment were mixed. The exercise seemed to flow easily for some types of materials and for some group members who have experience with this type of cataloging. For example, sound recordings in various physical manifestations where the actual performance "event" could be identified as the expression could be handled fairly cleanly, as could an original document and reproductions or reprints in various formats, as long as the title did not vary. However, most participants expressed some surprise at the difficulty of the exercise, especially given that most examples were known expression sets (i.e. there was no question that all of the manifestations represented the same expression). Some common concerns expressed by participants:

"The main issue that arose for me was where the 245 field belongs."

"Notes: Interesting that these are so variable and may relate to either expression or manifestation (or both). General notes (500) can't be automatically mapped to expression or manifestation."

"245: Name and titles are attributes of an expression, but the statement of responsibility might normally be associated with the manifestation. But because in this case we are cataloguing a facsimile reproduction, can we say that it would belong with the expression?"

"Looking at various data elements, one cannot always say that it belongs to expression or manifestation. For example, with variant titles, if the variant title is a spine title, or the title from an HTML header, then one can assign it to the manifestation pile, but if the document as "Also know as", the variant title can be assigned to the expression pile; if the source of the variant title is not indicated in the record, then it is not necessarily clear that the variant titles belongs to the manifestation or to the expression."

"It was reassuring to see that others also find that there is a blurring between expression and manifestation in many elements of current cataloguing records. Not reassuring in terms of future transitions, but reassuring in terms that we are having similar experiences."

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[2] IFLA Study Group on the Functional Requirements for Bibliographic Records, "Functional Requirements for Bibliographic Records" Munich: K.G. Saur, 1998 (UBCIM Publications - New Series Vol. 19) < http://www.ifla.org/VII/s13/frbr/frbr.htm >.

> "A lot of the information needed in deciding whether parts of the description apply to the expression is only apparent when comparing multiple manifestations. How to create procedures that will allow accurate analysis of the first manifestation created, so that records will not require constant revision?"

> "Can we even create a bibliographic record for the expression?"

As a result of this exercise, the Group affirmed what has been observed by many who have discussed the "multiple versions" dilemma over the past ten years: while in many cases it is possible for a cataloger to identify easily when several manifestations represent the same intellectual content (i.e. the same expression), the bibliographic data does not always "behave" in a way that is conducive to constructing a bibliographic record for an expression that would include predictable data elements.

The possibility of basing the structure of an online catalog at the expression rather than the manifestation level is appealing for a variety of reasons, and some institutions have successfully implemented such catalogs.[3] The expression-based model seems very clean when applying it to particular subsets of the bibliographic universe (e.g. reproductions, archival sound recordings). However, many difficulties presented themselves as the Working Group began to think in terms of cataloging *all* materials at the expression level.

4.1 Expression vs. Manifestation-Based Cataloging

In discussing the results of this cataloging experiment, Working Group members expressed significant concern about the cataloging implications of Models 1, 2, and 3. These concerns covered both practical and theoretical levels.

On a practical level, a working cataloger will typically have one item in hand (in the physical or virtual sense) that needs to be cataloged. At the time that something is initially cataloged, one cannot know how many related manifestations will appear in the future, nor which data will be variable. The cataloger can only record from the manifestations that exist and are known. The cataloging exercise described above to catalog at the expression level did not replicate a situation that is typical of that faced by working catalogers. It was in a sense looking at the situation backwards.

On the theoretical level, the descriptive elements that AACR now direct us to record in a bibliographic record are those that correspond to **manifestation** attributes as defined in FRBR. These are transcribed directly from the item being

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[3] The CADENSA catalog of the British Library's National Sound Archive is one such example. <http://cadensa.bl.uk>

cataloged. Attributes of the **expression***,* on the other hand, may be either unavailable to the cataloger at the time of cataloging a particular manifestation (e.g., date of expression) or represent abstractions that may need to be constructed by the cataloger (e.g. title of expression).

FRBR is organized in such a way that the entities of work, expression, manifestation and item each derive logically from the entity that precedes it, in a progression from the abstract to the concrete. This is the reverse of the way that cataloging is actually carried out. Where actual day-to-day cataloging is concerned, manifestation and item-level information are essential to the use of the material, and work and expression level information should derive logically from it, rather than the other way around.

5. Option 5: Expression-Based *Collocation*

After this somewhat frustrating attempt to manipulate bibliographic data into expression-level records, we turned our attention to Option 5, which would allow us to concentrate upon the conceptual question of how and when manifestation-level records might be linked for display. While we did not want to get sidetracked by attempting to work out the technical details for how the linking might be achieved in an online system, we discussed in general terms the pros and cons of linking devices appearing within existing bibliographic records or in external tables.

The Working Group is most intrigued with the possibilities of an external "table of reference" model presented to us by Matthew Beacom, and described below. We have some indication from OCLC that they are interested in this sort of a model as well, although we are still awaiting direct feedback from OCLC on Beacom's description of the model. We hope that OCLC's initial expressions of interest will yield the possibility of creating a test database into which we can actually contribute and manipulate data.

5.1 The "Table of Reference" Model

Beacom prefaced his description of a table concept for linking expression-level data by explaining that it was inspired by two or three other projects or sources. These include the jake database, our existing practices for use of authority records (e.g. for names & subjects), and some ideas of Regina Reynolds with respect to the ISSN database. He explained that it is very similar to the kinds of tables being made in reference linking products/services like SFX (from the Ex Libris company.).

The table is a mechanism for explicitly linking (lumping) two or more records that describe distinct manifestations--the items in hand and their respective classes of like items that make up the manifestations. The table is separate from the bibliographic records themselves, but is a tool used by a LMS or other software to pull together the linked records in a display, as described in Option 5.

The table could work as a relational structure or as a MARC-like flat file. An online catalog may refer to such a table outside of the catalog proper as displays are generated for a Web front end or such a table could be within the catalog as our bibliographic and authority records are now.

The basic table might look something like this, in abstract:

_____

| Reference ID #
| standard #
| title proper
| URL
| imprint
| etc.

_____

Thus, a semi-completed exemplar (for a serial) might be like this.

[Reference ID#]   abcdef123456
[Standard #]   ISSN
[Title proper]   Fruit notes of New England
[URI]   none (could use local holdings data)
[Imprint]   Amherst
[etc.]

[Reference ID#]   abcdef123456
[Standard #| e-issn
[Title proper]   Fruit notes of New England
[URI]   URL
[Imprint]   Boston
[etc.]

[Reference ID#]   abcdef123456
[Standard #]   (no issn)
[Title proper]   Fruit notes of New England [microform]
[URI]   none (could use local holdings data)
[Imprint]   Ann Arbor

[etc]

ad infinitum

The reference ID# could provide a useful hook to all of the data in the particular table for that work or expression. The other elements could be any set of elements that were deemed useful for identifying the expression, but those suggested here seem to be likely candidates. The etc. element could be anything: notes, links, extent, formats, etc. Licensing information would be the kind of local information useful here. An alternative table structure would not include all of these elements in the reference table: one could use simply the reference ID plus unique numbers for the manifestations that are being concatenated (for example, the OCLC number). This would make the reference table itself very simple. Other functionality would require software to pull together elements from the records themselves.

The reference ID may be thought of as either a work ID number or as an expression ID number. With many serials it may be that the work has only one expression though that expression has many manifestations. In that simple case one can conflate Work ID and Expression ID number. But in other cases, it will not be so simple. So we need to have two tables (one for Works and one for Expressions) or perhaps just two reference IDs (one for Works and one for Expressions). When there is only one expression of the work, one may simply use a single number (perhaps for the expression ID) and leave the other blank. This would allow the expression ID to rise up to serve as the work ID for applications that might require a work ID to concatenate elements at the level of the Work.

Another sketch of the reference table using the Work ID concept is as follows:

Work ID
Expression ID
1st manifestation ID | 2nd manifestation ID | 3rd manifestation ID [etc.]
2nd Expression ID
1st manifestation ID [etc.]
3rd Expression ID
1st manifestation ID | 2nd manifestation ID [etc.]
[etc.]

5.2 Creation and Maintenance of Reference Tables

While what has been described above is a single table that would lump together manifestations that represent the same expression, in reality such a table would

need to be created for every expression or work for which we want to lump together the manifestations. All the tables together would be a database of tables. While this is potentially a huge number of tables to cover all aspects of the bibliographic universe, all the tables for all expressions or works wouldn't need to be built before any one could be used. Even a limited number of reference tables would be valuable to some group(s) of users. For example, reference tables for journals with print- and e-versions would be helpful to users of these materials. This is part of what the jake too does.

And, one would only need to create tables of reference when they were needed. If a manifestation had no other apparent siblings, then going beyond the usual bibliographic record to explicitly control work and expression relationships would be unnecessary. Even in cases when we do want to make the table or reference, it need not be complete at the time that it is created. For example, at the time that a cataloger creates a table of reference, he or she may know only of two or three manifestations of a single expression yet there may actually be more manifestations, perhaps many more. As with an authority record, others could build on it if it was useful to do so.

Reference tables for works and expressions could be created using either manual or automated techniques. Catalogers could manually create the tables as they discover that the item in hand (on screen) that they are cataloging has other manifestations that could be /should be explicitly linked (lumped together) in an expression- or work- level reference table. This is like our method for making authority records. (Speaking of which, author-title authority records or some uniform titles may be excellent starting blocks for quick manual/semi-automated creation of tables of reference for expressions or works).

Manual techniques will allow us to maximize judgement. And here we have a strong parallel with our authority work. Cooperative ventures such as the NAF, OCLC/RLIN, NACO and SACO all make it possible for authority work to be done in a shared environment. Given that our profession already has a culture that supports collaboration at this level, another cooperative venture to provide explicit control over displays of work and expression relationships could be viewed as a logical extension of our existing activities.

Any cooperative project of this kind will require guidance for catalogers in creating reference tables: documentation of practices, training, etc. However, this could be kept to a minimum with a clear understanding of the purpose of the tables: facilitating the collocation of the display of records in an online system, and, thus, facilitating navigation among search results for catalog users. Unlike actual expression-based *cataloging,* which would potentially "set into stone" the relationships between manifestations, the table structure would mean that linking could be done only when it was deemed to be of value to catalog users, with no resulting impact upon the underlying structure of the bibliographic records. For

example, if it was discovered later that a cataloger had linked two manifestations incorrectly, the link could be broken easily.

If the reference tables reside in local systems, libraries would have considerable flexibility in linking records in a manner that would assist their user communities, just as libraries now adjust cross references in their local authority files to reflect local needs. This would mean that a library could potentially lump manifestations that are "close enough" in addition to those that are exactly the same expression. The key thing would be that they be close enough to be grouped to serve some user need, e.g. improved navigation of the bibliographic universe. While we would still need to develop experience, tools, and techniques for identifying materials by work, expression, manifestation, and item categories, we can and do make many similar decisions now in our daily work. Moving us step by step in that direction will be a lot of work, but not a radical break with our experience, knowledge, and culture.

Manual processes are only one way that Tables of Reference can be created. However vital and important manual processes are, there are also ways that we can automatically generate useful tables of reference. And we can mix manual and automatic processes in ways that maximize their respective strengths of quality and quantity. OCLC has considerable experience with using "sophisticated algorithms" to match duplicates or otherwise match records. If we can identify the manifestations that are duplicates, we can also identify those manifestations that are part of the same expression or work. Such automated tools would be very useful in creating a set of reference tables. With journals, for example, the same title, etc. in print, microform and various online forms could be grouped with some confidence. Other materials with more and more complex relationships may not be well suited to automatic matching but could be processed by a combination of automatic and manual techniques. We hope that it may still be possible for our work with OCLC on a test database for our project to explore a combination of automatic and manual techniques.

5.3 Identification of the Expression

In the Working Group's attempt to "catalog at the expression level", we found the current lack of clear or explicit identifiers for expressions to be a real problem. In frequent cases we **knew** that two or more manifestations represented the same expression, but the bibliographic data did not fit nicely into clear categories that allowed us easily to create a record for the expression. This current lack of clear or explicit expression identifiers will not be a fatal problem using Tables of Reference. We can make explicit some few elements that may identify an expression: author, title, imprints, etc. that will work well much of the time--even when it is not completely precise and rigorous. In many cases catalogers **know**

one when they see one.   Thus the vital importance of a manual approach that uses judgement in addition to a completely automated approach.

The Working Group has also noted the variety of projects now in place in various communities (in particular those communities related to online licensing) to create identifiers that could potentially function in the role of "expression-level identifiers".[4] Their related goals seem to be to identify and link electronic manifestations that have identical intellectual content. We predict that work will continue in this area and that more identifiers of this type will be available in the near future to identify electronic resources at the expression level.

We are starting the effort to create a mechanism for clear and explicit identification of expression and work in the bibliographic environment. Once we begin to succeed, there will be explicit expression and work identifiers. Furthermore, this approach does not depend on an a priori identification of an expression or work that unites a set of derivative manifestations. Instead this approach builds up an identifiable expression or work by concatenating manifestations that appear to share the same intellectual content or other aspects of that content's expression in a particular form

5.4 Advantages of the Table of Reference Model

With the reference table tool, we avoid the problems that arise from adding data to the bibliographic records for each manifestation. Among these problems would be the need to define a new ISBD area and new MARC fields. More importantly, the grouping function would have to be hardcoded within the pertinent records and would thus be unwieldy and rigid. Additionally, we avoid the problems that arise by merging the separate records into one. Those problems are legion as was discovered a decade ago and are being rediscovered now as we catalog e-versions and print versions of the same title on one record. Having a separate mechanism (the table) allows us to explicitly declare and record the expression or work level relationships between manifestations **when we want or need to**.

The reference table mechanism would be an optional addition to our basic structure of bibliographic data, as an authority record is now optional in most online systems. In part because of this, the implementation of reference tables on top of existing legacy cataloging data could show an immediate improvement in a system's ability to collocate search results. Groups of expressions that are collocated would coexist with individual manifestations that are not linked to any others (whether or not the ones that are not linked actually should be). Even a

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[4]Examples of such projects include the International Standard Recording Code (ISRC) < http://www.ifpi.org/online/isrc_intro.html > and potentially the International Standard Textual Work Code (ISTC) < http://www.nlc-bnc.ca/iso/tc46sc9/istc.htm >

partial implementation would be an improvement over lists of search results that are now arranged alphabetically by title. In an authority-controlled index that makes use of uniform titles to collocate at the work level, this collocation at the expression level could produce a more coherent secondary sort by expression in cases where a Table of Reference is present.

Option 5 as described in 4JSC/ALA/30 has the advantage of great flexibility in the display of data. It does not require particular data to be designated as belonging at the expression vs. the manifestation level, and therefore minimizes some of the difficulties that we found in our cataloging exercise. Using a separate reference table structure, issues related to the display of data in a collocated display could be addressed at the system level, rather than having catalogers make this determination record by record. For example, rather than identifying a "title" for the expression itself, the title and other bibliographic data for the first manifestation could be displayed followed by a link that says, for example, "See other versions of this". Thus, catalogers could potentially sidestep the issue of how to display expression-level information for every item and continue to focus primarily upon the content of manifestation-level bibliographic records.

Perhaps most importantly, we avoid the problems that would come from redefining the basis of our work as catalogers: from the item and manifestation levels to the more abstract expression and work levels. With the reference table we can continue to catalog the item/manifestation (item in hand), use existing bibliographic records, and display the manifestations in the context of their expression and work relationships when we decide it is necessary.

In a recent email to the Working Group, Chris Oliver described our shift from discussing expression-level **cataloging** (within the context of AACR2 and the extent to which it is predicated on describing manifestations) to expression-level **collocation** as being very liberating. She explained, "… After the first exercise, the thought of doing bibliographic description at the expression level felt like plunging into a swamp."   With the table structure, we avoid having to take this plunge, and perhaps have found a nice dry path around the edge of it.

6   Adapting AACR to Facilitate Expression-Level Collocation

In addition to developing a model for Expression-Level Collocation that we hope will become the basis for a test database, the Working Group has also begun to examine the possible impact of expression-based collocation upon the cataloging code.   To facilitate this effort, Pat Riva has prepared a detailed discussion document that highlights places in both Part 1 and Part 2 of AACR where the FRBR concepts of work, expression, and manifestation could be brought into the rules to provide guidance for catalogers in these areas.   This discussion

document is attached as Appendix B. The Working Group has not as yet had an opportunity to discuss Riva's paper, and so we are not prepared to endorse any of the suggested revisions contained within it. However, we felt that it would be helpful for JSC members to have access to Riva's work at this time so that we can receive some guidance from JSC on the next phase of our work.

In particular we would like to receive JSC feedback on our proposal to focus our attention upon the potential for facilitation of expression-level **collocation**, rather than expression-level **cataloging** in the rules. The concept of collocation bring to mind issues for display of cataloging data that may or may not be seen to be appropriate for consideration within AACR. Before we precede any further into this area, we would like to make sure that JSC believes that this is a direction that we should be pursuing.

6.1 Clarifications in Part 1

If we were to pursue the creation of actual bibliographic records for expressions, considerable changes might be necessary in Part 1 of the rules to accommodate this process. This could perhaps include the necessity to cover additional expression-level data that is currently not always recorded in bibliographic records for manifestations. However, given our recommendation that we not pursue the creation of catalog records at the expression level, we would anticipate that the impact upon the descriptive chapters in Part 1 would not be extensive. Riva's preliminary analysis of Chapter 1 suggests that some of these possible changes would be related to the clarification of terminology in these chapters and an examination of expression-level elements that are currently included in the bibliographic description for manifestations.

6.2 Adding FRBR Concepts to Part 2

While the original focus of our Charge was on attempting to describe an expression (and hence perhaps more of an emphasis upon Part 1 of the Rules), our recent discussions indicate that our efforts might be better spent working on areas related to access than on description, and hence more of a focus upon Part 2 of the Rules.

The concept of "expression" is not currently articulated as such in the cataloging code. This is not altogether surprising, given that we currently do not have a good way to deal with this level of distinction in our automated catalogs anyway, especially when bibliographic details of manifestations representing the same expression vary. As a result, many catalogers are likely to be at least initially uncomfortable with the concept of expression if it is added to the code. Other than choosing main entry and assigning access points, many catalogers do not

now consciously think about how the entity (manifestation) that they are cataloging relates to other entities (manifestations) in the catalog. If our own experience is any indication, catalogers may have trouble understanding the concept of expression on a theoretical level and how it fits between work and manifestation.

The bulk of Appendix B concerns possible revisions to Part 2 of the rules to clarify existing terminology and bring it into agreement with that used in FRBR. Riva's suggestions go a few steps further than this, however, and begin to examine not only clarifying work, expression, and manifestation levels, but also the need to discuss **relationships** between those entities at the same level: in particular manifestations of the same expression. Again, we would like JSC's reaction to this before we pursue this direction in more depth.

6.3 Differentiating between Expressions: "Murky Manifestations"

The Working Group has begun another exercise to attempt to identify potential difficulties for catalogers in dealing with expressions. We are beginning with the premise that there are three situations that a cataloger is likely to encounter:

- An expression may only exists in one manifestation at the time of cataloging, so that a cataloger does not need to be concerned with linking it in any way to another manifestation for the same expression.   Guidelines for this can be written easily.

- A cataloger may encounter multiple manifestations that he or she is fairly sure represent the same expression, and therefore are candidates for linking of some kind. The examples that most Working Group members chose for our first cataloging exercise fit in this category.

- A cataloger may encounter multiple manifestations and be uncertain whether they represent the same expression or not. We have dubbed these "murky manifestations" (although perhaps "murky expressions" would be a more accurate, if less catchy, term). This is an area that could cause much confusion for catalogers.

If the concept of expression is to be included in the rules, we will need to develop clear guidelines for catalogers in applying it. Ideally, such guidelines should be general, principled and as succinct as possible so that this process is not perceived as adding another layer of complexity to the cataloging process. Guidelines for deciding when a manifestation represents a new expression should be applicable to all formats of materials and should avoid a listing of special cases that will need constant updating. We suggest that they should not only describe how to differentiate between expressions, but also explain why this

differentiation is important. It should be noted, however, that focusing upon the likely value of adding this layer of distinction would necessitate discussing the possibilities for collocation in online systems based upon expression. As mentioned above in Section 6, there are implications for adding such discussions of collocation (display?) to AACR that JSC may want to consider before we get too far along in this process.

In her discussion document, Pat Riva says of the determination of main entry in her remarks concerning Choice of Access Points,

> "This process is just an operationalization of the determination of whether something is a new, although maybe related **work** (in the FRBR sense) as opposed to when it is a new expression or manifestation of a previously catalogued work."

If one thinks about this part of the rules in this sense and also considers recent efforts to distinguishing when an item in hand represents a new **manifestation** (CC:DA proposal for a new Appendix of Major Changes) then a parallel opportunity exists for our Working Group to create similar guidance for when a manifestation represents a new expression.

If we do develop guidelines for differentiating between expressions, the process of our doing so may also bring up the need for clarifications in terminology in Chapter 21 related to differentiating between works. Because neither of these tasks is mentioned in our Terms of Reference, we would like JSC's guidance to see if either or both of these are areas that we should pursue.

7   Recommended Next Actions

The Task Force has outlined the following potential next steps for our work:

- Continue to pursue the creation of a trial database, administered by OCLC, to test table-based linking at the expression level. Because we are dependent upon the availability of OCLC staff to carry out this project as they prepare to migrate to an Oracle-based system, this will likely necessitate an extension in the length of our charge. Working Group members could be polled to see who might be willing to stay on the group (perhaps for a second year?) to work on this project. At least some members have indicated an interest in doing this. We feel that continuing with this project will truly enable us to fulfill the second part of our charge: to demonstrate whether or not cataloging activity at the expression level can generate a display of bibliographic data that is intelligible to users of the catalog.

- Discuss and refine the preliminary work proposed by Pat Riva in her discussion paper and make specific recommendations to JSC for rule changes to clarify concepts from FRBR into the cataloging code. We anticipate that most proposed changes to the code would be in Part 2. However, before we move forward in this area, we would like JSC to affirm our basic premise of continuing to catalog at the manifestation level. We would also appreciate guidance from JSC on whether we should also consider when the concept of "work" should be clarified in Part 2. While this would expand our task at hand, it might be easier to consider all of the FRBR terminology at once given the number of interrelationships between them.

- Develop guidance for catalogers in determining when an item in hand represents a new expression. We would strive for succinct, theoretical guidelines that would be applicable to all types of materials and that would also explain why distinguishing between expressions is potentially important to the cataloging process. To clarify the decision-making process for catalogers, these guidelines could also discuss relationships between manifestations that represent the same expression. However, expanding this to also include relationships between works and between expressions would require an expansion of our Charge.

While the Working Group's focus has taken a distinct turn from that in our original Charge, we believe we are on to something very promising and hope that JSC will authorize us to continue to work in these slightly-different directions.

Appendix A

0.24 Task Force Models for Expression-Based Cataloging

"Cataloguing Examples Demonstrating Expression-based Records Following Option C"[5]

There are several possible record structures that might underlie the 'single-record approach' to format variations that is recommended in Option C. These include

1. The single record could be a multilevel description (rule 13.6 in AACR2) in which what is common to all manifestations represented by the record is described at the top level of the record, and the variations between manifestations are described in a subordinate level.

2. The single record could summarize the variations in manifestations represented by the record in the notes or in repeatable physical description elements or both; ideally, multiple elements applying to one manifestation could be linked in some fashion.

3. The single record could describe only what is common to all manifestations represented by the record, with variations between manifestations described in subrecords, either bibliographic or holdings records.

4. The single record could describe what is common to all manifestations represented by that record, and not include any reference to the variations.

5. The underlying bibliographic information could be stored in separate records for each manifestation. The virtual single record called for in the rules would be assembled by the system for display. The rules in this case would constitute a conceptual approach for the cataloger and a specification for display of information, but not a description of the data structures in which the data are stored and communicated

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[5]ALCTS CCS Committee on Cataloging: Description and Access. "Overview and Recommendations Concerning Revision of Rule 0.24." (4JSC/ALA/30) August 16, 1999: 44. < http://www.ala.org/alcts/organization/ccs/ccda/tf-024a.html#report >

Appendix B

AACR2 Areas Potentially Affected Relating to Expression-Level Cataloguing: Discussion Document for Format Variation Working Group

prepared for discussion by Pat Riva, September 2001.

Introduction

What follows is longer than I expected when I started this investigation. My first expectation was that 21.28 (Related Works) would take the bulk of the adjustment, with some impact in ch.25, and of course, glossary entries would be needed for work/expression/manifestation. As it turns out, the first part of ch.21 is also heavily affected.

The process I followed was to read through each chapter of part II from its beginning, and then also part I chapter 1, and look at the glossary, with the intention of seeing how our emerging ideas fit with the text as it stands. The ideas I was consciously considering were FRBR terminology and the distinctions between the 4 entities of work/expression/manifestation/item, the relationships outlined and categorized in section 5 of FRBR, and also the recording of the attributes of expressions and manifestations (attributes of work might properly belong in an authority record, those of item in holdings records).

I did not omit sections relating to music, but I have absolutely no expertise in this area, so I am counting on the rest of you to correct/enhance those sections. I just limited myself to matching AACR terms with FRBR terms.

I have not listed every occurrence of the terms work and item in the text. They are frequent, and generally do not conform to FRBR usage. After changes of substance are identified, an editorial pass will be needed to adjust phrases using these terms.

The order I have followed is part II, glossary, and part I chapter 1. Each section that struck me as problematic is listed, with an indication of the nature of the problem, but only in a few cases have I suggested new text. I think we need to focus first on the nature and substance of changes we would like to recommend, before getting caught up in actual wording. Comments on why certain chapters/sections don't seem to be affected are set off in brackets.

Part II

Title: currently a rather lame "Headings, Uniform Titles and References", with an odd distinction between uniform titles and headings, when the former are just a heading for a title.
Suggestion: "Headings and Relationships"
(Comment: the idea of having a new AACR chapter on authority records, if this remains in part II and doesn't become part III, would then have to be reflected in the title.)

Introduction:
20.1 parag. 3: "The rules in part II apply to works and not to physical manifestations of those works." Part II applies to at least works and expressions.

Chapter 21: Choice of Access Points

Remark: Sections 21.1-21.27 will need a great deal of attention to be expressed in terms of FRBR terminology, although the actual results in cataloguing records will be minimal. This whole section deals with the determination of main entry, and particularly when the main entry for the entity being catalogued is the same and when it must differ from that used elsewhere. This process is just an operationalization of the determination of whether something is a new, although maybe related, WORK (in the FRBR sense) as opposed to when it is a new expression or manifestation of a previously catalogued work. The selection of the appropriate main entry can be viewed as the determination of the "work-heading" or "work access point". This ties in with Martha Yee's contribution to the Toronto Conference (What is a work?). As it turns out, there is extremely close agreement between the AACR decisions relating to main entry and FRBR's definition of work in section 3.2.1. To arrange these sections to group changes that reflect variation at the manifestation level vs the expression level vs at the work level (if this is something we want to recommend) will require rearranging the subrules as well as rewriting some of the instructions. In what follows, I haven't proposed any rearrangement.

21.1A1 In this definition of author, "work" really is work in FRBR terms.

21.2B2 Changes in title proper for monographs in one physical part. "make a separate main entry for each edition" Here "main entry" gets used in the sense of a name-title combination.

21.3A1 Monographs modified by someone other than the original author. The determination to be made reduces to a decision about whether the new edition is a new work or a new expression.

21.4A1 & 21.4B1 The requirement that reprints, reissues, etc. retain the same main entry is an indication that they are treated as the same work.

21.D1 Official communications of heads of states, etc. 2nd last parag. Communications that merely accompany a document, treated as dependant works.

21.6C1 Shared responsibility between two or three persons or bodies. Middle paragraph relating to names printed in different orders between editions. The instruction to change the name used as the main entry is a (maybe the only?) example where a change in main entry definitely does not signal a change to a new work.

21.7A1 Collections. The term "independent works" means "manifestations of separate works"?

21.8A Works of Mixed Responsibility. The activities listed here can be categorized in terms of whether they are likely to result in a new work or a new expression:
    - writing, adapting: new work
    - illustrating: new expression??
    - editing, arranging, translating: new expression

21.9A Works that are modifications of other works. The general rule gives the substance of the FRBR distinction between a new work and a new expression, and could be expressed in those terms. Note that the phrase used here "medium of expression" is the only occurrence of the word "expression" currently in AACR2, and it is used in another sense.

21.10-21.15 Headed "Modifications of Texts" do these concepts really apply only to texts?

21.10A Adaptations. Agrees with FRBR 3.2.1 parag. 5 in what is a new (but related) work.   In FRBR table 5.1 on Work-to-Work relationships, the Adaptation and Transformation relationships are listed as autonomous relationships between works.

21.11A1 Illustrated texts. Treating illustration of an existing text as a sort of update or revision, and thus a difference in expression only.

21.11B1 Illustrations published separately (after having first appeared with a text is implied). This looks like a component work (table 5.2) or component expression (table 5.5).

21.12 Revisions of texts.
21.12A1 & 21.12B1 The criteria given here operationalize the decision of when the revision is so extensive as to constitute a new work, and could be phrased in these terms. (21.12A1 new expression; 21.12B1 new work) The relationship

"succeeding work", an autonomous successor relationship from table 5.1, will apply.

21.13 Text and Commentary.
FRBR gives no explicit discussion of this relationship. Seems like a case of a referential supplementary relationship that could either be at the work level (table 5.1) or the expression level (table 5.4).

21.14A Translations. Keeping the main entry of the original means that AACR agrees with FRBR that these are expression level changes. In table 5.3 (expression-to-expression relationships) we find "literal translation". That "free translation" is an adaptation appears in table 5.4.

21.15 Text with Biographical/Critical Material. A case that is just an extension of 21.13? The phrase "work or works included" the "work or works of which a manifestation is included".

21.16 Adaptations of Art Works. Only the medium involved distinguishes 21.16A from 21.10A, in both cases the adaptation results in a new work.

21.16B The reproduction of an art work results in a new manifestation. Reproduction is a manifestation-to-manifestation relationship as in table 5.7.

21.18-21.22 Musical Works.

21.18A1 Scope. Some categories in the subsections of this rule can be found in the FRBR tables of relationships, others cannot:
    a) arrangements (table 5.3), transcriptions (5.3), versions ?, settings?
    b) simplified versions ?
    c) free transcriptions, based on   probably adaptations under 5.1?
    d) where the harmony or musical style has been changed -- probably also adaptations under 5.1?

21.19 Musical Works that include Words.
Some of these cases seem to appear in table 5.1:
    - musical setting for a text is a type of autonomous complement relationship
    - a libretto is a referential complement relationship

21.20A - a choreography is a type of referential complement relationship

21.21A Added Accompaniments. I would expect these to be new expressions.

21.23 Sound Recordings. In FRBR section 3.2.2 parag. 4 explicitly gives a sound recording of a musical work as a type of expression of that work. Recordings of readings of literary works would be similar.
21.23A1-21.23B1 Agrees with FRBR by using the same main entry.
21.23C1-21.23D1 Collections are longer works with component works.

21.24-21.25, 21.27 Mixed Responsibility in New Works. Only the media involved distinguish these from 21.6.

21.28 Related Works. This is the only section explicitly covering relationships in AACR2. It has very little text, consisting mainly of examples. Suggested title: "Bibliographic Relationships"

21.28A1 Scope. Currently relationships are just exemplified by a list of specific types of materials. I see this as the appropriate place to add a categorization of relationships based on the level (work-level vs expression level vs manifestation level) and type (autonomous vs referential) and relate each relationship with a level of importance to users so that cataloguers and cataloguing agencies can exercise judgement and define policies. I expect that any new text will need to include an element of local policy and case-by-case judgement because the same level of depth will not be needed in all sizes of catalogues.

Relationships between manifestations of the same expression (our specific mandate) would get new explicit discussion. Referential relationships at expression or work levels cover most of the existing list, since the list stressed precisely those items that are best used in conjunction with the main work; referential relationships clearly have more impact on the user than autonomous relationships.

Component relationships can also be divided into dependent (extracted pieces, e.g. illustrations of a text, a sound track) and independent components (eg. sets, series). This could end up relating to ch.13 on analysis?

21.28B1 The text in the general rule is not bad when considered in terms of expression and work relationships. However, the exclusion in footnote 8 might need to be more than just sequels. I would then suggest that the examples be grouped by the relationship illustrated, using italicized headings as in other sections (e.g. in ch.26) where there are many examples.

21.29F Justification of added entries. Is justification in a note within the description always explicitly needed in the case of related-work added entries? Or would some of the justification appear just in system tables, or in special "work-heading" authority records? A lot of open questions here.

21.30G Related works. Needs to be rephrased. Suggestion for first sentence: "Make a relationship name-title or title added entry for a significant relationship if the relationship is not otherwise brought out by the collocating function of the main entry and title proper or uniform title." Last sentence of parag.2: "When necessary, add the edition statement, date, etc., ..." This applies when the relationship is at the expression or manifestation level rather than the work level, e.g. for concordances to specific editions.

21.30M Analytical entries. Do they need to be described in terms of component relationships? Again, the last sentence of parag.2: "When necessary, add the edition statement, date, etc., ..." This applies when the relationship is at the expression or manifestation level rather than the work level.

21.37A Sacred Scriptures. 3rd sentence: "persons associated with the work and/or item being catalogued", the names would most likely be associated to an expression or manifestation of the work than to the work itself?

21.37B A harmony is treated as an edition, and thus as a new expression of the work.

(Chapters 22, 23, and 24 are unaffected, and they even have very few uses of the word "work". This is because they are dealing with the FRBR category 2 entities of person and corporate body, and are carefully written in terms of "heading". Ch.23 might seem to be dealing with the category 3 entity place, but it is working primarily with jurisdictions which act as corporate headings. Events are also a category 3 entity, but the instances that turn up in ch.24 -- fairs, exhibitions, conferences -- are those that also can be treated as corporate bodies.)

Chapter 25: Uniform Titles

Remark: Uniform titles in AACR are assigned pretty much at the work level. The uniform title proper is for a work, as are parenthetical qualifiers from 25.5B (there is some LCRI practice under 25.5B1 that is below that level, esp. for electronic serials, but it is not in AACR itself). However, some additions, particularly language as in 25.5C, are at the expression level. Thus, there isn't much impact on rules that just explain how to select the uniform title itself.

25.1A Use of Uniform Titles.
First point: "for bringing together ... various manifestations" intention is "various expressions and manifestations" In the numbered list, #2: "how many manifestations of the work are involved", intention "how many expressions and manifestations ..."

25.2B "Do not use a uniform title for a manifestation of a work in the same language that is a revision or updating of the original work." This would be "an expression of a work". "Relate editions ...", could either remain as is, or "relate expressions ...".

25.3A "through use in manifestations of the work" Here manifestation does seem to be used in the FRBR sense.

25.3C Simultaneous publication under different titles. This refers to multiple manifestations of one expression. Should it be described in those terms?

25.6 Parts of a Work. This section deals with component relationships.

25.6B1 "If the item being catalogued ..." This phrase, which appears elsewhere too, would be "the manifestation being catalogued" in FRBR terms.

25.20B1 "manifestation" is used. I'm not sure whether manifestation or expression, or both, are meant.

25.25A 2nd last sentence: "make additions to a uniform title to designate a particular manifestation". Refers to 25.35, Additions   this is in the music section, and again I'm not sure which levels all these additions represent. Language is one of the additions, and usually translation is a change in expression. (Remark: this is the last occurrence of "manifestation" in the current text of AACR2.)

Chapter 26: References

26.1B1 Phrase "title of a work" does not always mean just an FRBR work.

26.2B Name-title references. Use of "work" in this section to mean work/expression/manifestation.

26.4B3 & 26.4B4 "are catalogued under" An odd turn of phrase, doesn't the context call for "are entered under"?

26.4C1 See also references. "When related works", in this case seems to in fact be "work" in the FRBR sense.

Glossary

Terms not present at all:

Work
Expression
Manifestation

Reproduction
Revision (in the sense of a change that results in a new expression)
Alternate format
Simultaneously released edition (to consider this in relation to the "rule of thumb" used with 7.7B7 and 8.7B7, the 2-year rule)

Terms that need to have revised definitions:

Item (Present definition is closer to that of "the manifestation represented by this item". Compare usage in part I such as 1.0D "all items catalogued", or "item being catalogued".)

Edition (which appears separately for some types of materials: the definition for editions of computer files is given in terms of content and so is closer to the definition of expression, the definition for books, etc. is given instead in terms of printing technology and could refer either to new expressions or new manifestations. Any work to reorganize part I by area of description will need to deal with this term.)

Facsimile
Impression
Issue
Reprint
    (These all need to clarify whether they relate to expression or manifestation level.)

Name-title added entry (definition uses "item" for work/expression/manifestation)

Part I:

Remark: The general instructions in part I and its introduction as they stand, lack any general statement about when exactly a new record is needed. It is inferred that if the description would be different than any already in the catalogue, that a new record is needed. It is a practice that new records are created for new manifestations (in almost all cases), but this doesn't have a statement in so many words in AACR itself. There is an LCRI to 1.0 which essentially states this by

referring to the glossary definition of edition. The 0.24 Task Force also remarked on this point, and made some suggestions of options for further changes to 0.24. On the other hand, the project to prepare a new introductory chapter of principles would have to include this point.

The new chapter on principles would also be an appropriate place to include a directive that records should include sufficient information to determine their relationships. Including something like: "include sufficient information to differentiate the manifestation being catalogued from related manifestations of the same work, and to differentiate the expression represented by this manifestation from other expressions of the same work". However, this needs to allow for different levels of description and different sizes of catalogues, so we will need some scaling clause.

0.24 The phase 1 revision already approved has added (in the list of aspects to bring out for each record) "its relationships to other expressions of the same work". This relates well to my remarks about 21.28 above.

Chapter 1:

(Area 2: Edition statements. I was expecting this area to be greatly affected, but as it turns out I cannot see any obvious need for changes. An edition statement is a manifestation level attribute in FRBR. The 0.24 Task Force at one point in their report equates "edition" with "expression", but this is not so. Some new editions include the significant changes to content that signal a new expression (Rev. ed.); others signal minor variations in format that indicate a new manifestation (Paperback ed.; 1st American ed.; PC version; MAC version), but all these are edition statements that must be recorded.)

1.5A3 This explicitly relates to format variations, or manifestations related by being issued in alternative formats. For recording other formats available we are referred to 1.7B16   should this really be optional?

1.7A4 Notes citing other editions and works.
The terminology in this section will need adjusting. In particular, "Other works and other manifestations of the same work", is referring to expressions or manifestations

1.7B7 (and .7B7 in other chapters) Edition and History. This is the bibliographic relationship note that would justify any added entries under 21.29F. Maybe the terminology used should match to draw that point out.

1.7B16 (and .7B16) Other formats. This is referring to manifestations in alternate formats, and could be described in those terms.

1.7B20 (and .7B20) Copy being described. In FRBR terms, "copy" here would be "item".

1.7B22 Combined notes relating to the original. Again relates to different manifestations.

1.11 "Reproductions" This whole section relates to some types of related manifestations, and could be described in those terms.