Functional Requirements for Authority Records

A Conceptual Model

**IFLA UBCIM Working Group on
Functional Requirements and Numbering of Authority Records (FRANAR)**

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Contents

Introduction

The Working Group on Functional Requirements and Numbering of Authority Records (FRANAR) was established in April 1999 by the IFLA Division of Bibliographic Control and the IFLA Universal Bibliographic Control and International MARC Programme (UBCIM).

The Working Group has three terms of reference:

1) To define functional requirements of authority records, continuing the work that the "Functional requirements of bibliographic records" for bibliographic systems initiated;

2) To study the feasibility of an International Standard Authority Data Number (ISADN), to define possible use and users, to determine for what types of authority records such an ISADN is necessary, to examine the possible structure of the number and the type of management that would be necessary;

3) To serve as the official IFLA liaison to and work with other interested groups concerning authority files: INDECS (Interoperability of Data in E-Commerce Systems), ICA/CDS (International Council on Archive Committee on Descriptive Standards), ISO/TC46 for international numbering and descriptive standards, CERL (Consortium of European Research Libraries), etc.

This document fulfills the first of these terms of reference and represents one portion of the extension and expansion of the *Functional Requirements for Bibliographic Records* model that was envisioned by the IFLA Study Group on the Functional Requirements of Bibliographic Records. The second term of reference, dealing with numbering, will be dealt with by the Working Group in a separate document. The third of the terms of reference represents an ongoing task that has produced many valuable contacts, which have enriched this document and other aspects of this group's work and have provided the opportunity for the group to review a number of other documents about authority data that have been produced during the time of the group's work.

Since the *Functional Requirements for Authority Records* is indeed an extension and expansion of the FRBR model, the Working Group has identified potential improvements to the FRBR model itself as well as to definitions, etc. These will be proposed to the IFLA FRBR Review Group for their consideration. In addition, the group has identified other IFLA publications relating to authority data that may require revisions. Those potential revisions will also be submitted to the relevant groups for consideration.

The IFLA FRBR Study Group noted the need for further analysis of the "entities that are the centre of focus for subject authorities, thesauri, and classification schemes, and of the relationships between those entities." While the Working Group has included some aspects of subject authorities in the authorities model, it has not undertaken the full analysis that the FRBR Study Group envisioned. A new working group has been charged with that task.

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Functional Requirements for Authority Records

A Conceptual Model

1. Purpose

The primary purpose of this conceptual model is to provide an analytical framework for the analysis of functional requirements for authority records and for the international sharing of authority data.

More specifically, the conceptual model has been designed to:
- provide a clearly defined, structured frame of reference for relating the data that are recorded in authority records to the needs of the users of those records;
- assist in an assessment of the potential for international sharing and use of authority data both within the library sector and beyond.

2. Scope

For the purposes of this study, an authority record is defined as the aggregate of information about an entity whose name is used as a controlled access point for bibliographic citations or records in a library catalogue or bibliographic file. The authority record normally contains the authorized or preferred form for the access point as established by the library, as well as variant forms and related access points used as references. In addition, the authority record may contain information pertaining to the entity associated with the access point (i.e., the person, corporate body, work, concept, etc. represented by the access point) as well as to relationships between that entity and other entities represented by related access points. The authority record will also normally include information identifying the rules under which the access point was established, the sources consulted, the cataloguing agency responsible for establishing the access point, etc.

Conventionally, libraries structure authority data in accordance with guidelines and specifications such as those set out in IFLA's *Guidelines for Authority Records and References*.[1] For the purposes of this study, however, there are no *a priori* assumptions made about the structure of authority data, nor are there any assumptions made as to whether that data is stored in an authority file that is separate from the catalogue or bibliographic file *per se*, or fully integrated with it.

At a high level, the conceptual model encompasses authority records of all types. The entity relationship diagram (section 4.2) and the entity definitions (section 4.3) are intended to reflect authority records for names (personal, family, corporate, geographic, and trademark names), title authority records (uniform titles and collective uniform titles), name-title authority records, subject authority records (subject headings, thesauri terms, and classification indicia), and authority records for various types of identifiers (standard numbers, codes, etc.). However, the detailed analysis of entity attributes (section 5) and relationships (section 6) focuses only on library authority records for name headings associated with persons, families, and corporate bodies, and for name-title and title headings associated with works, expressions, manifestations, and items.

In those sections, attributes and relationships associated exclusively with other types of authority records (such as subject authority records) are not included.

For the purposes of the model, the users of authority records include both the librarians who use authority files directly and end users who use authority information either through direct access to authority files or indirectly through the controlled access points in library catalogues, national bibliographies, etc.

3. Authority Files in a Library Context

3.1 The Cataloguing Process

Figure 1 provides a high-level overview of the cataloguing process and the relationship of authority files to bibliographic files in a library context.

The three ovals in the upper half of the diagram represent three broad, interrelated stages in the cataloguing process. The oval on the left represents the stage in which the cataloguer creates a bibliographic description for a resource in the library's collection (e.g., a book, a sound recording, an electronic journal). The rules applied in creating the description of the resource normally set out the sources from which the data recorded are to be derived as well as the order and form in which individual data elements in the description are to be recorded. The oval in the centre represents the stage in which the cataloguer formulates access points—both those that are to be displayed with the description as authorized forms of name representing the author, title, subject, etc. of the resource and those that are to serve as references from variant forms of those authorized forms. The rules applied in formulating access points normally provide direction to the cataloguer in determining what forms are to be used with a particular description, and set out the form in which the heading is to be constructed. The rules also provide direction in determining the references that may be needed to direct the user of the catalogue to the established form of name and to related forms. The oval on the right represents the stage in which the cataloguer registers access points in an authority file. The guidelines applied in registering access points normally set out the order and form in which authorized forms and their associated reference structures are to be presented in an authority record. The guidelines for the construction of authority records also provide direction on the recording of additional information pertaining to the identification of the person, body, work, etc. associated with the authority record and to the establishment of the authorized form and its reference structure (e.g., notes on the sources searched in establishing the appropriate form, the date the record was created). Registering a new access point may also entail the revision and reconciliation of access points (authorized forms, etc.) already registered in the authority file and other adjustments necessary to ensure coherency of the overall logical structure of the file.

The block arrows in the middle of the diagram represent data emanating from each of the three stages in the cataloguing process, and the figures at the bottom of the diagram represent the files typical of current systems in which that data is stored. The data emanating from the creation of the bibliographic description of the resource and from the formulation of the access points to be displayed with the description as well as those that serve as references are normally incorporated into one or more bibliographic files (e.g., a catalogue of the library's holdings, a national bibliography). The data emanating from the registration of access points (authorized forms, references, etc., as well as supplementary data pertaining to sources searched, the date the authority record was created or revised, etc.) are normally incorporated into one or more authority files (e.g., an authority file for name and title access points, a subject authority file or thesaurus).
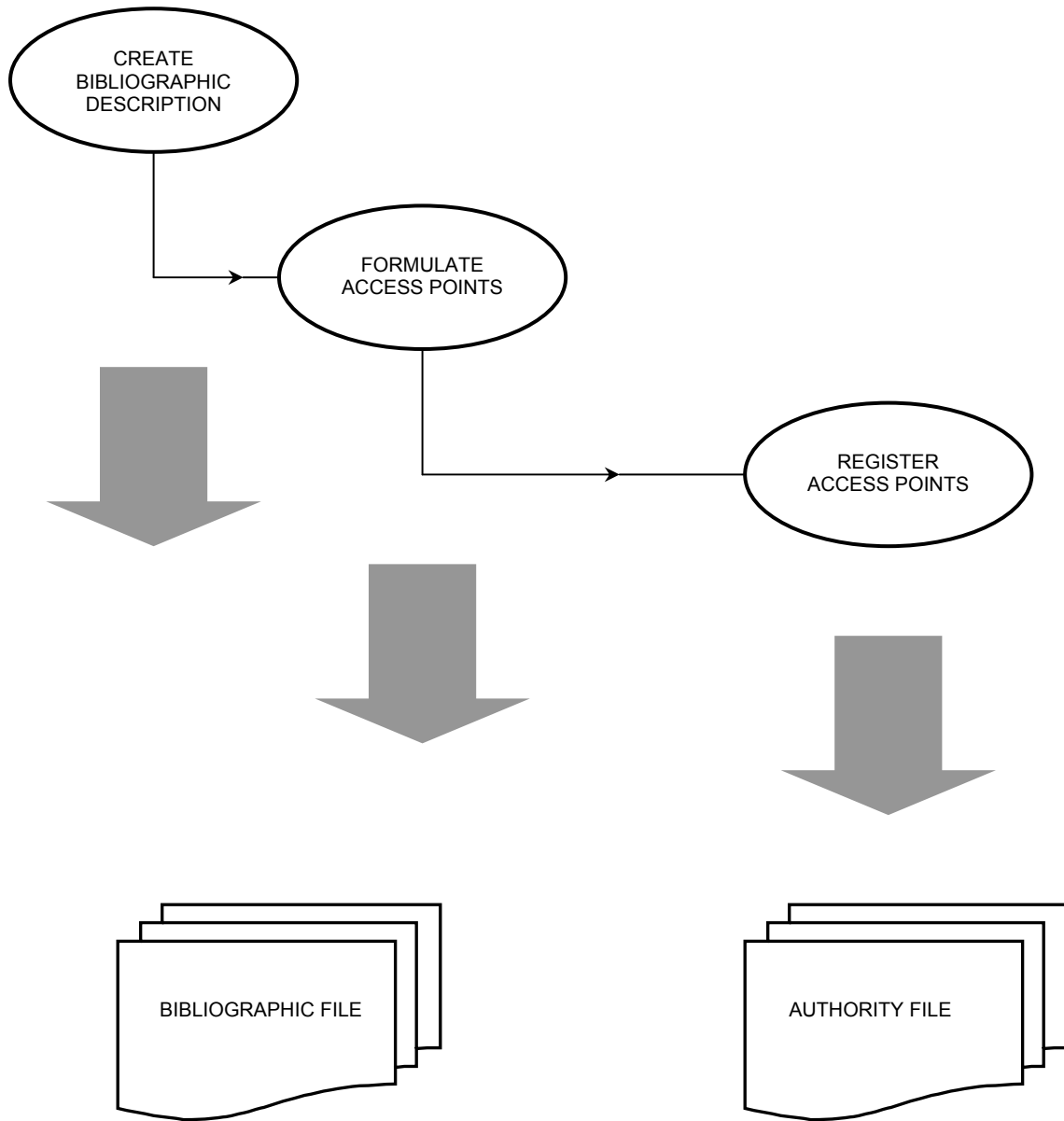
CREATE
BIBLIOGRAPHIC
DESCRIPTION

FORMULATE
ACCESS POINTS

REGISTER
ACCESS POINTS

BIBLIOGRAPHIC FILE

AUTHORITY FILE

Figure 1: The Cataloguing Process as Performed Today

It should be noted that the diagram is intended to reflect only the broad outline of the cataloguing process as performed today. It is not intended to depict the details of the process, nor is it intended to represent a workflow *per se*. Although the positioning of the three ovals in the diagram implies a sequence, it is intended to be illustrative only. The actual sequence in which the creation of the bibliographic description, the formulation of access points (authorized forms, references, etc.), and the registering of access points is carried out may vary from one cataloguing agency to another, and the process may in fact be iterative rather than strictly linear. It should also be noted that the bibliographic file and authority file depicted in the diagram are intended to represent a logical division between two categories of data. In an actual implementation, that logical division may or may not be directly paralleled by a physical division of files.

3.2 The Functions of the Authority File

Document Decisions: From the perspective of the cataloguer, the authority file serves first as a vehicle for documenting decisions taken by the cataloguer in formulating the access points to be used in the catalogue and the associated reference structure (i.e., the network of references from variant forms of access points as well as references to and from access points for related persons, bodies, works, etc.). In addition to recording the authorized and variant forms of access points *per se*, the authority record normally includes information about the source from which the form of name or title on which the authorized form is based was derived, and may contain information about other sources searched in the course of formulating the authorized form and references. The record may also contain other information identifying the person, body, work, etc. associated with the record and justifying the authorized form of the access point (e.g., the country of residence of the person represented by the authorized form, the language most commonly used by that person, or a reference to the specific rule(s) applied in formulating the authorized form).

Serve as Reference Tool: Secondly, the authority file serves as a reference tool for the cataloguer when choosing the appropriate access point(s) to be used with a new bibliographic description being added to the catalogue or when formulating a new access point (authorized form, reference, etc.). In that context, the cataloguer may make use of data recorded in the authority record (e.g., dates, field of activity, place of origin a work, or a citation for the work for which the access point was originally established) in order to differentiate one person, body, or work from another. Having differentiated the persons, bodies, and works represented by particular access points, the cataloguer can then determine which is the appropriate access point to use with the bibliographic record in question. The cataloguer may also make use of such data to determine that none of the access points in the authority file is appropriate for the bibliographic record being added to the catalogue and that a new access point is required.

Control Form of Access Points: A third function of the authority file is to control the form of access points used in a bibliographic file. Control of the access points may be achieved in a number of ways. In its conventional form, the authority file serves, as noted above, as a reference tool that is consulted by the cataloguer each time an access point (authorized form, reference, etc.) is added to a bibliographic file. By consulting the authority file, the cataloguer is able to determine whether the required access point has already been formulated, and if so, is able to ensure that it is recorded consistently each time it is used with a new bibliographic record. If a new access point is required, consulting the authority file enables the cataloguer to determine whether any additions to the access point are required in order to differentiate it from a similar access point already in the file. Consulting the authority file also enables the cataloguer to determine if any notes or references are needed in order to clarify the relationship between the new access point and any previously established access point.

In an automated environment, an authority file may be used as a mechanism to control the form of access points in a bibliographic file by more direct means. A bibliographic file and an authority

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file may be logically linked, for example, by means of authority record control numbers embedded in access point fields in bibliographic records, or by means of access point tables in a relational database. In systems implementations of that kind, the display of access points in a bibliographic file may be directly controlled by automated referencing of an authority file via the authority record control number or through an access point table, thus ensuring consistency across the bibliographic file. The control number or access point table link between the access point field in a bibliographic record and the appropriate authority record may also be used to facilitate updates to authorized forms and references in a bibliographic file. A single change to an access point in an authority file or an access point table can be used to trigger an update of all occurrences of that access point in a bibliographic file. Other mechanisms designed to control the form of access points used in bibliographic files are also possible in an automated environment.

Support Access to Bibliographic File: A fourth function of the authority file—and ultimately the most important to the users of the catalogue—is to support access to a bibliographic file by providing the information notes and references that the user requires when searching under variant access points or under access points for related entities. In a manual file, the reference entries that form part of the authority file (and in some cases the authority entries as well) may be integrated with the descriptive entries in a bibliographic file. Those reference and authority entries provide the user with information on the authorized form under which descriptive entries will be found and the authorized form(s) under which descriptive entries associated with related persons, bodies, works, etc. will be found. In an automated environment, authority records and reference records may also be physically integrated with bibliographic records in a single file. More commonly, however, they are stored in a separate authority file, but are linked in such a way as to appear to the user as though they were integrated with a bibliographic file, thus functioning in the same way as authority and reference entries that are physically integrated with a bibliographic file.

Link Bibliographic and Authority Records: In an automated environment, it is also possible to support user-specific customization of the link between the bibliographic file and the authority file. Automated "translation" mechanisms may be activated to convert certain data elements within access points to the language form or script most appropriate to the user of the catalogue. Similarly, the authorized forms and references within the authority record can function as a "cluster" of related access points, permitting flexibility in determining which of the access points is treated as the preferred form for display. By extension, automated systems can use the "cluster" approach to effectively neutralize the conventional reference structure and support direct access to linked bibliographic records regardless of whether the user searches on the established form or on a variant form that has been recorded as a reference.

3.3 Authority Files in a Networked Environment

Originally, libraries created authority files specifically for use with their own catalogue or bibliographic file. More recently, libraries have begun to make use of networking technologies to support the cooperative development and shared use of authority files. Authority files created by national bibliographic agencies are being made available for wider use, and national and supranational authority files are being created and maintained cooperatively with input from a number of participating institutions. The dissemination and sharing of authority data in a networked environment has added a significant new dimension to the function of authority files.

A number of differing scenarios are emerging. First, both national bibliographic agencies and individual libraries are using networks to derive authority records from external sources for use within their own files. Second, libraries are using networks to contribute to the development of cooperative files on a national or international scale. Third, records in authority files from disparate sources are being linked to reflect equivalencies (i.e., to form pairs or groups of records that pertain to the same person, body, work, etc., but are constructed under different cataloguing rules, or for catalogues in different languages, scripts, etc.). The updating of the files can be

done through protocol-based communications, and the files can be made accessible through the Internet. In some implementations, those linked files are also designed for use as multilingual, multinational interfaces supporting access to bibliographic data across linguistic and national boundaries, functioning as a consolidated index of related access points (authorized forms, references, etc.) as originally created by various national agencies.

In all of these scenarios, there is a common pattern of transactions or activities conducted between and among separate authority files:

- Searching;
- Evaluation of search results to eliminate false hits;
- Merging of data with the existing file;
- Editing and review of the derived record;
- Reconciliation of references.

Typically, the interaction between files begins with a search transaction. An individual library attempting to derive authority data from an external source for use within its own file will search one or more external files to find any records that may serve its needs. Similarly, a library contributing to a national or supranational file will begin by searching the cooperative file to determine whether there are any records already in the file that duplicate or are related to the record the library is about to upload to the file. By the same token, an agency responsible for processing files for merging into a composite multilingual, multinational file will begin by searching the composite file to determine whether there is a record or cluster of records already in the file to which the record being processed should be linked.

The second stage of interaction typically involves evaluation of the search results in order to eliminate false hits. Again, the library deriving records from an external source will need to confirm that the records retrieved pertain to the person, body, work, etc. for which a record was being sought, and to discard any that do not. The library contributing to a cooperative file will have to determine which if any of the records retrieved in response to its initial search does in fact duplicate or is related to the record being uploaded. Similarly, in merging an incoming record into a composite, multilingual, multinational file it will be necessary to determine whether there were any false hits in response to the initial search before linking the incoming record to an existing record or cluster.

After searching and then eliminating false hits, the third stage of interaction is typically one involving data integration. The library downloading a record from an external source may need to edit the derived record to conform with the library's own cataloguing practices with respect to the rules used by the library, the language of the users of the catalogue, etc. Similarly, when a record from a contributing library is uploaded to a cooperative file, there will normally be an editing or review process to ensure that the record conforms to agreed standards and practices for the cooperative file. In the case of a merged, multilingual, multinational file, the data integration process may require the reconciliation of conflicting reference structures.

4. Entity-Relationship Diagram and Definitions

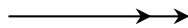### 4.1. Diagramming Conventions

A rectangle represents an entity (i.e., an object of interest to users of authority records).

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A dotted-line rectangle surrounding a group of two or more entities indicates that a relationship represented by an arrow contiguous with the dotted line may apply to any and/or all of the entities represented within the rectangle.

A single-headed arrow on a line represents a relationship in which any given instance of the entity at the opposite end of the line may be associated with only one instance of the entity to which the arrow is pointing.

A double-headed arrow on a line represents a relationship in which any given instance of the entity at the opposite end of the line may be associated with one or more instances of the entity to which the arrow is pointing.

4.2 Entity-Relationship Diagram

The conceptual model for authority records is presented graphically in **Figure 2**. The entities depicted in the diagram are defined in section 4.3.

The entities depicted in the diagram represent the key objects of interest to the users of authority data. The entities on which authority records are focused (i.e., the ten entities defined in *Functional Requirements for Bibliographic Records*[2] (FRBR)—*person, corporate body, work, expression, manifestation, item, concept, object, event*, and *place*—plus one additional entity—*family*) are depicted in the upper half of the diagram. The lower half of the diagram depicts the *names* by which those entities are known, the *identifiers* assigned to the entities, and the *access points* based on those names and identifiers that are registered in authority files. The diagram also highlights two entities that are instrumental in determining the content and form of access points—*rules* and *agency.*

In designing any conceptual model, a key decision involves whether to make something an attribute or a separate entity. The outcome of this decision depends on the future use that is to be made of the attribute or entity. The developers of the FRBR model saw significant advantages in declaring persons and corporate bodies to be separate entities that could then be related to the Group 1 and Group 3 entities. Cataloguers have traditionally thought of controlling the names for persons and corporate bodies through authority records. Declaring persons and corporate bodies as entities enables much more flexibility in the controlled naming and eliminates redundancies that would occur if they were modeled as attributes. These names for these entities can then be controlled in an authority record and linked to other authority records or to bibliographic records or holdings records as needed. The FRBR decision to treat these as entities rather than as attributes has been carried over into this conceptual model of authority data. In addition, in this model, declaring names and identifiers as entities allows more clarity in showing the relationships between the entities on which authority records are focused and the names and/or identifiers by which those entities are known and on which the access points for those entities will be based.

It is essential to note that the entities depicted in the upper half of the diagram (*person*, *family*, *corporate body*, *work*, *expression*, *manifestation*, *item, concept, object, event,* and *place*) are bibliographic entities. As such, they reflect intellectual constructs or concepts that are integral to the rules used to create library catalogues, and what is perceived as a specific instance of a particular entity type may vary from one set of rules to another.

Under some cataloguing rules, for example, authors are uniformly viewed as real individuals, and consequently specific instances of the bibliographic entity *person* always correspond to individuals. Under other cataloguing rules, however, authors may be viewed in certain circumstances as establishing more than one bibliographic identity, and in that case a specific instance of the bibliographic entity *person* may correspond to a persona adopted by an individual rather than to the individual *per se*.

Similarly, most cataloguing rules require the establishment of a new authorized form for a corporate body each time the body changes its name. In those cases, each specific instance of the bibliographic entity *corporate body* corresponds to the associated body only in relation to the period of time during which the body used that particular name. Consequently, the body as such (e.g., a legally incorporated enterprise, a government agency, a musical group, etc.) may be viewed as two or more instances of the bibliographic entity *corporate body*.

Rules for the construction of subject headings, on the other hand, may require the creation of a single authorized form to represent the body throughout the course of its existence. In that case, the specific instance of the bibliographic entity *corporate body* corresponds to the body *per se*.

Likewise, cataloguing rules may vary with respect to the treatment of *works*, *expressions*, *manifestations*, and *items*. The boundaries of a specific instance of the bibliographic entity *work* as defined by one set of cataloguing rules may differ from those defined by another set of rules. Hence, the two resulting instances of the bibliographic entity *work* may not be directly equivalent. Similarly, the application of one set of cataloguing rules may result in the recognition of a specific instance of the bibliographic entity *expression* that is not precisely the same as that recognized by the application of a different set of rules, etc.

Cataloguing rules and coding conventions may also differ in their treatment of fictional characters, supernatural or legendary beings, imaginary places, etc. In some cases, those entities will be viewed as *persons*, *families*, *places*, etc., but in other cases, they will be viewed as *concepts*. Similarly, certain events (ad hoc meetings, sporting events, etc.) may be viewed as *corporate bodies* under one set of cataloguing rules but simply as *events* under another set of rules.

The relationships depicted in the diagram reflect the inherent associations between the various entity types. The lines and arrows connecting the entities in the upper half of the diagram with those in the lower half represent the relationships between *name* and *identifier* and the bibliographic entities with which they are associated (*person*, *family*, *corporate body*, *work*, *expression*, *manifestation*, *item*, *concept*, *object*, *event*, and *place*). A specific instance of any of those bibliographic entities may be "known by" one or more *names*, and conversely any *name* may be associated with one or more specific instance of any of the bibliographic entities. Similarly, a specific instance of any one of the bibliographic entities may be "assigned" one or more *identifiers*, but an *identifier* may be assigned to only one specific instance of a bibliographic entity.

It should be noted that the diagram also depicts a relationship ("associated with") that may apply between a *person*, a *family*, or a *corporate body*, on the one hand, and a *work*, *expression*, *manifestation*, or *item* on the other hand. The entity-relationship diagram in FRBR reflects the high-level relationships between entities *work*, *expression*, *manifestation*, and *item* (a *work* is "realized through" *expression*, etc.). It also depicts a number of specific relationships between *person* and *corporate body*, on the one hand, and *work*, *expression*, *manifestation*, and *item* on the other hand (a *work* may be "created by" a *person*, etc.). Those same relationships are conceptually valid for the FRBR entities that are represented in the conceptual model for authorities. They have not, however, been shown explicitly in **Figure 2**, largely because they have no direct functional relevance in the context of authority files *per se*. **Figure 2** does, nevertheless, depict the generic relationship ("associated with") to reflect the fact that in name/title authority records the combination of a name and a title is indicative of an association

between a *person*, *family*, or *corporate body* and a *work*, *expression*, *manifestation*, or *item*, but the specific nature of the association is not integral to the structure of the record.

The relationships depicted in the lower half of the diagram represent the associations between the entities *name* and *identifier* and the formal or structural entity *access point*, and the association between that entity and the entities *rules* and *agency*. A specific *name* or *identifier* may be the "basis for" an *access point*, and conversely an *access point* may be based on a *name* or *identifier*. An *access point* may also be based on a combination of two *names* and/or *identifiers*, as in the case of a name/title access point representing a *work* that combines the name of the author with the name (i.e., the title) of the work. *Access points* may be "governed by" *rules*, and those *rules* in turn may be "applied by" one or more *agencies*. Likewise, *access points* may be "created by", or "modified by" one or more *agencies*.

Other types of relationships that may operate between a specific instance of one bibliographic entity type and a specific instance of either the same or a different bibliographic entity type (e.g., a collaborative relationship between two specific persons or a membership relationship between a person and a corporate body) are not shown in the entity-relationship diagram. Relationships of that kind are discussed in section 6.3 below.

Other types of relationships that may operate between specific instances of the entities depicted in the upper half of the diagram *(person, family, corporate body, work, expression, manifestation, item, concept, object, event,* and *place*) and specific instances of the entity *name* are discussed in section 6.4 below.

Other types of relationships that may operate between specific instances of the entity *access point* (e.g., a parallel language or alternate script relationship between two specific access points) are not shown in the entity-relationship diagram. Relationships of that kind are discussed in section 6.5 below.

For the purposes of this study, certain types of association between a specific instance of one entity type and a specific instance of another entity type are treated simply as an attribute of the first entity. For example, in the case of an association between a *corporate body* and a *place* associated with the body that is implicit in the construction of an access point for that body, it was deemed sufficient to treat the place associated with the body simply as an attribute of *corporate body*. That does not preclude the possibility of developing the model further in order to reflect that type of association more formally as a relationship between the two entities.
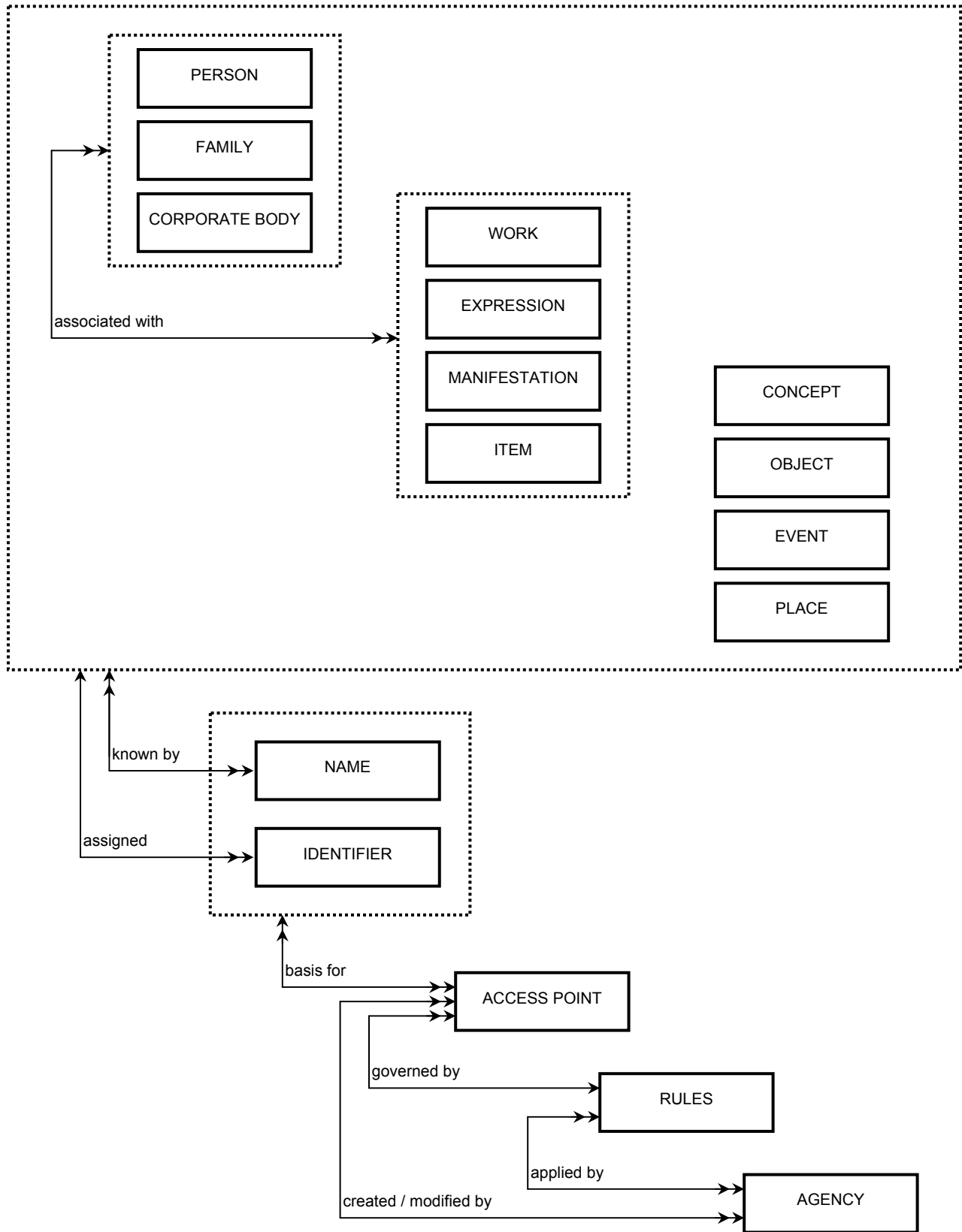
Figure 2: Entity Names and Identifiers

4.3 Entity Definitions

The entity definitions have been derived largely from two sources: *Functional Requirements for Bibliographic Records* (FRBR); and *Guidelines for Authority Records and References* (GARR).

Person

An individual or a persona established or adopted by an individual or group. [FRBR, modified]

Includes real individuals.

Includes personas established or adopted by an individual through the use of more than one name (e.g., the individual's real name and/or one or more pseudonyms).

Includes personas established or adopted jointly by two or more individuals (e.g., Ellery Queen — joint pseudonym of Frederic Dannay and Manfred B. Lee).

Includes personas established or adopted by a group (e.g., Betty Crocker).

Note: Cataloguing rules may vary with respect to the treatment of multiple personas (i.e., bibliographic identities) established or adopted by the same individual. In some instances, pseudonyms used by an individual may be recognized as separate personas and an authorized form will be established for each, with see also references connecting the authorized forms. In other instances, only one persona may be recognized for the individual and pseudonyms used by that individual will be reflected in the form of references from variant forms.

Family

Two or more persons related by birth, marriage, adoption, or similar legal status.

Includes royal families, dynasties, houses of nobility, etc.

Includes patriarchies and matriarchies.

Includes groups of individuals sharing a common ancestral lineage.

Includes family units (parents, children, grand children, etc.).

Includes the successive holders of a title in a house of nobility, viewed collectively (e.g., Dukes of Norfolk).

Corporate Body

An organization or group of persons and/or organizations acting as a unit. [FRBR]

Includes organizations and groups of individuals and/or organizations identified by a particular name.

Includes occasional groups and groups that are constituted as meetings, conferences, congresses, expeditions, exhibitions, festivals,

fairs, etc.

Includes organizations that act as territorial authorities, exercising or claiming to exercise government functions over a certain territory, such as a federation, a state, a region, a local municipality, etc.

Includes organizations and groups that are defunct as well as those that continue to operate.

Note: Cataloguing rules may differ with respect to the treatment of meetings, etc., depending on whether or not they are formally convened at a pre-determined date, whether or not they result in the issuance of a publication, etc. In some instances they may be treated as corporate bodies, but in other instances they may be treated simply as events (see also the entity definition for event).

Note: Cataloguing rules generally treat distinctive identities of corporate bodies established through usage of different names over time as though they represented different but related corporate bodies.

Work

A distinct intellectual or artistic creation (i.e., the intellectual or artistic content). [FRBR, as modified in the IME ICC Glossary[3]]

Includes literary works (i.e., texts, written or spoken), musical works, graphic works, photographic works, cinematic works, cartographic works, three-dimensional works, data, computer programs, etc.

Includes legal works (laws, regulations, constitutions, treaties, court rules, court decisions, etc.), religious works (sacred scriptures, creeds, liturgical works, papal communications, etc.).

Includes collections and compilations of works as well as individual works.

Includes component works (e.g., articles published in an issue of a periodical).

Note: The concept of what constitutes a work and where the line of demarcation lies between one work and another may differ from one culture to another. Consequently, bibliographic conventions established by various cultures or national groups may differ with respect to the criteria they use for determining the boundaries between one work and another. The specifics of cataloguing rules may also have a bearing on what is recognized as a work.

Expression

The intellectual or artistic 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. [FRBR]

Includes the specific words, sentences, paragraphs, etc. that result from the realization of a work in the form of a text (e.g., through translation), or the particular notes, phrasing, etc. resulting from the realization of a musical work (e.g., through performance).

Excludes aspects of physical form, such as typeface and page layout, that are not integral to the intellectual or artistic realization of the work as such.

Note: The degree to which bibliographic distinctions are made between variant expressions of a work will depend to some extent on the nature of the work itself, and on the anticipated needs of users. Variations that would be evident only from a detailed analysis and comparison of expressions would normally be reflected in authority data only if the nature or stature of the work warranted such analysis, and only if it was anticipated that the distinction would be important to users.

Note: Uniform title headings incorporating additions that reflect attributes of an expression (e.g., language of expression, form of expression) normally serve to group related expressions of the work as distinct from differentiating between individual expressions of the work.

Manifestation   The physical embodiment of an expression of a work. [FRBR]

Includes manifestations in the form of books, periodicals, maps, posters, sound recordings, films, video recordings, DVDs, CD-ROMs, multimedia kits, etc.

Note: If the physical embodiment of an expression of a work involves the production of only a single artifact (e.g., an author's manuscript or an original oil painting), the manifestation comprises only that single artifact. However, if the embodiment involves the production of multiple copies (e.g., in the publication of a book or the commercial production of a sound recording) the manifestation encompasses the entire set of physical copies produced. In the latter case, the entity described for cataloguing purposes is, in effect, an abstraction derived from characteristics of a single copy that are presumed to be shared by all copies in the set that comprises the manifestation.

Item   A single exemplar of a manifestation. [FRBR]

Includes items comprising a single physical object (one volume, cassette, etc.).

Includes items comprising more than one physical object (two or more volumes, compact discs, etc.).

Concept   An abstract notion or idea. [FRBR]

Includes fields of knowledge, disciplines, schools of thought, etc.

Includes philosophies, religions, political ideologies, etc.

Includes theories, processes, techniques, practices, etc.

Note: For the purposes of this study, entities categorized as concepts are relevant only in the context of subject authority files.

Object   A material thing. [FRBR]

Includes inanimate objects occurring in nature.

Includes animate objects occurring in nature, other than human beings (e.g., animals, birds, insects).

Includes fixed, movable, and moving objects that are the product of human creation.

Includes objects that no longer exist.

Note: For the purposes of this study, entities categorized as objects are relevant only in the context of subject authority files.

Event   An action or occurrence. [FRBR]

Includes historical and pre-historical as well as current events.

Includes meetings, sporting events, expeditions, etc.

Includes broad periods in time such as epochs, eras, etc.

Includes periods in time defined in relation to historical events, cultural, artistic, philosophical movements, etc.

Note: Cataloguing rules may differ with respect to the treatment of meetings, etc. In some instances they may be treated simply as events, but in other instances they may be treated as corporate bodies (see also the entity definition for corporate body).

Note: For the purposes of this study, entities categorized as events are relevant only in the context of subject authority files.

Place   A location. [FRBR]

Includes terrestrial and extra-terrestrial locations.

Includes historical and pre-historical as well as contemporary locations.

Includes geographic features.

Includes geo-political jurisdictions (i.e., geographic territories governed by political authorities).

Name   A character or group of words and/or characters by which an entity is known. [FRBR, modified]

Includes names by which persons, families, and corporate bodies are known.

Includes titles by which works, expressions, manifestations, and items

are known.

Includes names and terms by which concepts, objects, events, and places are known.

Includes real names, pseudonyms, religious names, initials, and separate letters or numerals.

Includes forenames (or given names), matronymics, patronymics, family names (or surnames), dynastic names, etc.

Includes roman numerals associated with the given names of sovereigns, popes, etc.

Includes names of families, clans, dynasties, houses of nobility, etc.

Includes names representing the successive holders of a title in houses of nobility, etc., viewed collectively (e.g., Dukes of Norfolk).

Includes names used by a corporate body at various periods in its history.

Includes names of associations, institutions, business firms, not-for-profit enterprises, etc.

Includes names of governments, government agencies, projects, and programmes, government officials, delegations, legislative bodies, armed forces, etc.

Includes names of religious bodies, local churches, etc., religious councils, religious officials, provinces, dioceses, synods, etc., papal diplomatic missions, etc.

Includes names of conferences, congresses, meetings, etc.

Includes names of exhibitions, athletic contests, expeditions, fairs, festivals, etc.

Includes names of subordinate and related bodies.

Includes numbers that form an integral part of the name of a corporate body or event.

Includes trade names.

Includes titles of content, parts of content, compilations of content, etc.

Includes titles by which a work has become known.

Includes the title proper of the original edition of a work.

Includes titles by which a work is identified in reference sources.

Includes titles under which a work has been published.

Includes titles by which an expression has become known.

Includes the title proper of the original edition of an expression.

Includes titles by which an expression is identified in reference sources.

Includes titles under which an expression has been published.

Includes the title proper of the original edition of a manifestation.

Includes titles by which a manifestation is identified in reference sources.

Includes variant titles appearing on or in a manifestation.

Includes names and terms for events, objects, concepts, and places.

Note: Cataloguing rules may mandate the use of a place name to represent both the geographic territory per se and the government that has jurisdiction over that territory (e.g., the use of the name Massachusetts to represent both the territory covered by the state and the government of the state, the official name of which is The Commonwealth of Massachusetts.)

Note: Cataloguing rules may differ with respect to the elements they consider as integral parts of the name as distinct from elements they consider as additions to the name for the purposes of constructing access points.

Identifier
A number, code, word, phrase, logo, device, etc. that is uniquely associated with an entity, and serves to differentiate that entity from other entities within the domain in which the identifier is assigned.

Includes identifiers such as social insurance numbers assigned by a government authority.

Includes personal identifiers assigned by other registration authorities.

Includes business registration numbers, registration numbers for charitable organizations, etc. assigned by a government authority.

Includes corporate body identifiers assigned by other registration authorities (e.g., ISBN publisher's prefix).

Includes standard numbers assigned by registration authorities identifying content (e.g., ISRC, ISWC, ISAN).

Includes standard numbers assigned by registration authorities identifying manifestations (e.g., ISBN, ISSN).

Includes identifiers for items assigned by repositories (e.g., shelf number).

Includes classification numbers referencing specific entities.

Includes registered trademarks.

Access Point A name, term, code, etc. under which a bibliographic or authority record or reference will be found. [GARR, modified]

Includes access points based on personal, family, and corporate names.

Includes access points based on titles for works, expressions, manifestations, and items.

Includes access points based on terms for events, objects, concepts, and places.

Includes access points based on identifiers such as standard numbers, classification indicia, etc.

Includes elements added to the name *per se* (e.g., dates) for the purposes of distinguishing between entities with identical or similar names.

Includes access points designated as authorized or preferred forms as well as those designated as variant forms.

Note: For the purposes of this model, names and terms that are not controlled through an authority file are excluded from the definition of access point.

Rules A set of instructions relating to the formulation or recording of access points (authorized forms, references, etc.).

Agency An organization responsible for creating or modifying an access point.

Includes libraries, national bibliographic agencies, bibliographic utilities, consortia, etc.

5. Attributes

Attributes for each of the entities defined above are listed and defined in sections 5.1 through 5.16 below.

The attributes listed and defined below were derived from an examination of data identified and/or defined in FRBR, GARR, *UNIMARC/Authorities*[4], *Mandatory Data Elements for Internationally Shared Resource Authority Records*[5] (MLAR), as well as in the *International Standard Archival Authority Record for Corporate Bodies, Persons and Families*[6] (ISAAR(CPF)). Other models, such as the *Encoded Archival Context*[7], have emerged more recently and have not been fully evaluated. This may be a topic for future investigation.

For the purposes of this model, attributes are defined at a "logical" level (i.e., as characteristics of the entities to which they pertain, not as specifically defined data elements). In certain cases, the

characteristics of a given entity may change over time (e.g., the field of activity in which a person is engaged). The model does not make an explicit distinction between such attributes and those that are not subject to change. If attributes were defined at the data element level, they would be noted as being either repeatable or non-repeatable data elements, respectively.

In certain instances, the model treats an association between one entity and another simply as an attribute of the first entity. For example, the association between a *person* and the *place* in which the person was born could be expressed logically by defining a relationship ("born in") between *person* and *place.* However, for the purposes of this study, it was deemed sufficient to treat place of birth simply as an attribute of *person.* That does not preclude the possibility of developing the model further in order to reflect that association more formally as a relationship between the two entities. If the model were extended to treat such associations as relationships between defined entities, it would be possible, in turn, to define attributes applying to the relationships themselves. For example, if the association between a *person* and a *place* in which the person resides were defined as a relationship ("resides in"), it would be possible then to define an attribute of the relationship to reflect the dates during which the relationship applied (i.e., the period during which the *person* resided in that *place*). Again, however, for the purposes of this study, it was deemed unnecessary to define that level of detail.

Note that because *name* and *identifier* have been defined in this model as entities in their own right, and have been linked through the "known by" and "assigned" relationship, respectively, to the entities *person*, *family*, *corporate body*, *work*, *expression*, *manifestation*, *item*, *concept*, *object*, *event*, and *place*, the corresponding attributes (e.g., name of person, identifier for person) are not listed under the associated entity. For example, the FRBR attribute "Title of work" is, in this model as an attribute of the Name by which that work is known. Through the relationship, however, the attributes of *name* and *identifier* function in the same way as if they were defined as attributes of the associated entity.

5.1 Attributes of a Person

Dates of person	A date or dates associated with the person. [FRBR]
	Includes year or year/month/day of birth, death, etc.
	Includes year, period, or century of activity.
Title of person	A word or phrase indicative of rank, office, nobility, honour, etc., or a term of address associated with the person. [FRBR]
	Includes titles of rank or office (e.g., Major, Premier, Governor General).
	Includes titles of royalty and nobility, ecclesiastical titles, courtesy titles and titles of honour (e.g., Queen, Duke, Pope, Sir, Dame).
	Includes terms of secular or religious address (e.g. Mrs., Swami, Professor).
Other designation associated with the person	A designation other than a name or title by which a person is known or identified.
	Includes designations such as "Saint", "Spirit", etc.

Includes designations such as "Jr.", "III", etc. when associated with a person whose name includes a surname. (See also "number" under section 5.12 - Attributes of a name.)

Includes phrases associating the person with a particular work (e.g., "Author of Early Impressions").

Gender*

A gender by which the person is identified (e.g., male, female).

Place of birth*

The town, city, province, state, and/or country in which the person was born.

Place of death*

The town, city, province, state, and/or country in which the person died.

Country*

A country with which the person is identified.

Place of residence*

A country, state/province, city, etc. in which the person resides.

Affiliation*

A group with which the person is affiliated through employment, membership, etc.

Address*

The address of the person's place of residence, business, or employer.

Includes street address, postal address, e-mail address, etc.

Includes the http address of a world wide web site operated by the person.

Language of person*

A language the person uses when writing for publication, broadcasting, etc.

Field of activity*

A field of endeavour, area of expertise, etc. in which the person is engaged.

Profession/occupation*

A profession or occupation in which the person works.

Biography/history*

Information pertaining to the life or history of the person.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records.*

5.2 Attributes of a Family

Type of family   A categorization or generic descriptor for the type of family.

                               Includes terms such as clan, dynasty, etc.

Dates of family   Dates associated with the family.

**Places associated with   Information pertaining to places where the family resided or
family**   had some connection.

History of family   Information pertaining to the history of the family.

5.3 Attributes of a Corporate Body

**Place associated with the   A city, town, or other designation of location in which a
corporate body**   meeting, conference, exhibition, fair, etc. is held, or the
                               location with which the corporate body is otherwise
                               associated. [FRBR]

                               Includes countries, states, provinces, counties, etc.

                               Includes cities, towns, regional municipalities, etc.

**Date associated with the   A date or range of dates on which a meeting, conference,
corporate body**   exhibition, fair, etc. is held, or a date with which the corporate
                               body is otherwise associated.

                               Includes dates of meetings, conferences, exhibitions, fairs,
                               etc.

                               Includes dates of establishment of organizations, business
                               firms, etc.

                               Includes dates of existence of an organization, government,
                               etc.

**Other designation   A word, phrase, or abbreviation indicating incorporation or
associated with the   legal status of the body, or any term serving to differentiate
corporate body**   the body from other corporate bodies, persons, etc. [FRBR]

                               Includes terms indicating incorporation, etc. (e.g., VEB).

                               Includes terms designating the type of body or type of
                               jurisdiction (e.g., Fraternal Order, County).

Includes other terms and phrases used to differentiate between bodies with the same name (e.g., the name of the denomination of a local church).

Type of corporate body* A categorization or generic descriptor for the corporate body.

Includes terms such as government body, conference, etc.

Location of headquarters* A country or other territorial jurisdiction in which the corporate body's headquarters are located

Language of the corporate body* A language that the corporate body uses in its communications.

Address* The address of the corporate body's office(s).

Includes addresses for the corporate body's headquarters and/or other offices.

Includes street address, postal address, e-mail address, etc.

Includes the http address of a world wide web site operated by the corporate body.

Field of activity* A field of business in which the corporate body is engaged, its area of competence, responsibility, jurisdiction, etc.

History* Information pertaining to the history of the corporate body.

Includes historical information pertaining to an organization, institution, etc.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records*.

5.4 Attributes of a Work

Form of work A class to which the work belongs. [FRBR]

Includes forms, genres, etc. (e.g., novel, play, poem, essay, biography, symphony, concerto, sonata, map, drawing, painting, photograph, etc.)

Date of the work The date (normally the year) the work was originally created. [FRBR]

	Includes single dates and ranges of dates.
	Includes date of creation.
	Includes date of first publication or release.
Other distinguishing characteristic	Any characteristic that serves to differentiate the work from another work with the same title. [FRBR]
	Includes area of origin, etc.
Medium of performance	The instrumental, vocal, and/or other medium of performance for which a musical work was originally conceived. [FRBR]
	Includes individual instruments, instrumental ensembles, orchestras, etc.
	Includes individual voices, vocal ensembles, choirs, etc.
	Includes other objects to be used in the performance of the work (e.g., spoons, washboard).
Numeric designation	A number assigned to a musical work by the composer, publisher, or a musicologist. [FRBR]
	Includes serial numbers, opus numbers, thematic index numbers.
Key	The set of pitch relationships that establishes a single pitch class as a tonal centre for a musical work. [FRBR]
	Includes the key in which the work was originally composed.
Place of origin of the work*	The country or other territorial jurisdiction or cultural area from which the work originated.
Original language of the work*	The language in which the work was first expressed.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records.*

Note: The attributes of a work listed above include only those that are normally reflected in access points or in other data elements recorded in authority records. They do not include other attributes of a work that may be reflected in bibliographic records, as identified in Functional Requirements for Bibliographic Records.

5.5 Attributes of an Expression

Form of expression   The means by which the work is realized. [FRBR]

Includes mode or medium of expression (e.g., alpha-numeric notation, musical notation, sound, image, or any combination thereof).

Date of expression   The date the expression was created. [FRBR]

Includes single dates and ranges of dates.

Includes date of writing, typing, inscribing a text, translation, etc.

Includes date of performing a dramatic work, a musical work, etc.

Language of expression   A language in which the work is expressed. [FRBR]

Includes language(s) of the expression as a whole.

Includes languages of individual components of the expression.

Other distinguishing characteristic   Any characteristic of the expression that serves to differentiate the expression from another expression of the same work. [FRBR]

Includes names associated with variant versions of a work (e.g., King James version).

Includes "edition" and version designations relating to the intellectual content of the expression (e.g. Version 2.1).

Note: The attributes of an expression listed above include only those that are normally reflected in access points or in other data elements recorded in authority records. They do not include other attributes of an expression that may be reflected in bibliographic records, as identified in Functional Requirements for Bibliographic Records.

5.6 Attributes of a Manifestation

Edition/issue designation   A word or phrase appearing in the manifestation that normally indicates a difference either in content or in form between the manifestation and a related manifestation previously issued by the same publisher/distributor (e.g., second edition), or simultaneously issued by either the same publisher/distributor or another publisher/distributor (e.g., large print edition, British edition). [FRBR]

Place of publication/ distribution	A city, town, or other locality associated in the manifestation with the name of the publisher/distributor. [FRBR]
Publisher/distributor	An individual, group, or organization named in the manifestation as being responsible for the publication, distribution, issuing, or release of the manifestation. [FRBR]
Date of publication/distribution	The date (normally a year) of public release of the manifestation. In the absence of a date designated as the date of publication or release, a copyright date or a date of printing or manufacture may serve as a substitute. [FRBR]
Form of carrier	The specific class of material to which the physical carrier of the manifestation belongs (e.g., sound cassette, videodisc, microfilm cartridge). [FRBR]
Numbering	The designation of volume/issue, etc. and/or date appearing in a serial. [FRBR]

Note: The attributes of a manifestation listed above include only those that are normally reflected in access points or in other data elements recorded in authority records. They do not include other attributes of a manifestation that may be reflected in bibliographic records, as identified in Functional Requirements for Bibliographic Records.

5.7 Attributes of an Item

Location of item*	The collection and/or institution in which the item is held.

*Attributes marked with an asterisk represent additions to those identified in Functional Requirements for Bibliographic Records.

Note: The attributes of an item listed above include only those that are normally reflected in access points or in other data elements recorded in authority records. They do not include other attributes of an item that may be reflected in bibliographic records, as identified in Functional Requirements for Bibliographic Records, or in holdings records.

5.8 Attributes of a Concept

Type of concept*	A categorization or generic descriptor for the concept.
	Includes categorizations of concepts such as those reflected in the facets and hierarchies defined in thesauri and classification systems (e.g., agents, activities, materials).

*Attributes marked with an asterisk represent additions to those identified in Functional Requirements for Bibliographic Records.

5.9 Attributes of an Object

Type of object*   A categorization or generic descriptor for the object.

Includes categorizations of objects such as those reflected in the facets and hierarchies defined in thesauri and classification systems (e.g., furnishings and equipment).

Date of production*   The date (normally a year) of production or reproduction of the object.

Place of production*   A city, town, or other locality associated with the production of the object.

Producer/fabricator*   An individual or group responsible for the production or fabrication of the object.

Physical medium*   The type of material from which the object is produced. The medium may include both a base material and any material that is applied to the base.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records.*

Note: The attributes of an object listed above include only those that are normally reflected in access points or in other data elements recorded in authority records. They do not include other attributes of an object that may be reflected in bibliographic records.

5.10 Attributes of an Event

Date associated with the event*   A date or range of dates on or during which the event takes place.

Includes dates of meetings, conferences, exhibitions, fairs, etc.

Place associated with the event*   A city, town, or other designation of location in which a meeting, conference, exhibition, fair, etc. is held, or the location with which the event is otherwise associated.

Includes countries, states, provinces, counties, etc.

Includes cities, towns, regional municipalities, etc.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records.*

5.11 Attributes of a Place

Coordinates*   **The degrees, minutes, and seconds of longitude and latitude, or the angles of declination and ascension that form the outer boundaries or the centre point for the place.

Other geographical information*   Other information of a geographical nature pertaining to the place.

*Attributes marked with an asterisk represent additions to those identified in *Functional Requirements for Bibliographic Records.*

5.12 Attributes of a Name

Forename   A name or part of a name which designates a person as an individual and not as a member of a family or other group.

Includes given names, "Christian names", etc. used as forenames in conjunction with a surname or family name.

Includes given names borne by individuals not associated with surnames.

Includes initials and separate letters used in conjunction with a surname.

Surname   The part of a name which a person bears in common with other members of a group related to him or her as members of a family or in some other way.

Includes family names, patronymics, etc.

Includes names of clans, dynasties, houses of nobility, etc.

Includes names that function as surnames.

Includes compound and hyphenated surnames, and surnames with separately written prefixes.

Number   A roman numeral associated with the given name of a sovereign, pope, bishop, etc. (See also "other designations associated with the person" under section 5.1 – Attributes of a person.)

Title/term of address   A word or phrase indicative of rank of nobility, etc., or a term of address associated with the person.

Includes titles of royalty and nobility, ecclesiastical titles, courtesy titles and titles of honour (e.g., Queen, Duke, Pope, Sir, Dame).

Includes the proper name in a title of nobility (e.g., Countess of <u>Winchilsea</u>).

Includes terms of honour or address commonly associated with persons known only by a surname (e.g., <u>Miss</u> Read).

Note: Cataloguing rules may differ with respect to the treatment of titles and terms of address associated with a person. In some cases, they may treat the title or term of address as an integral part of the name; in other cases, they may treat the title or term of address as an addition to the name.

Other parts of a personal name	A character or group of words or characters forming an integral part of the name by which a person is known, other than a forename, surname, number, title, or term of address. Includes words denoting place of origin, domicile, occupation, or other characteristics (e.g., Leonardo <u>da Vinci</u>).
Corporate name	A name (i.e., a character or group of words and/or characters) by which a corporate body is known. Includes names of associations, institutions, business firms, not-for-profit enterprises, etc. Includes names of governments, government agencies, projects, and programmes, government officials, delegations, legislative bodies, armed forces, etc. Includes names of religious bodies, local churches, etc., religious councils, religious officials, provinces, dioceses, synods, etc., papal diplomatic missions, etc. Includes names of conferences, congresses, meetings, etc. Includes names of exhibitions, athletic contests, expeditions, fairs, festivals, etc. Includes names of subordinate and related bodies. Includes numbers that form an integral part of the name of a corporate body.
Trade name	A word, phrase, or other device used to identify a company, a product or a service. Includes unregistered trade names.

Note: Registered trademarks are treated as identifiers (see section 4.3).

Title A title (i.e., a character or group of words and/or characters) by which a work, expression, or manifestation is known.

Includes titles of content, parts of content, compilations of content, etc.

Includes titles by which a work has become known.

Includes the title proper of the original edition of a work.

Includes titles by which a work is identified in reference sources.

Includes titles under which a work has been published.

Includes titles by which an expression has become known.

Includes the title proper of the original edition of an expression.

Includes titles by which an expression is identified in reference sources.

Includes titles under which an expression has been published.

Includes the title proper of the original manifestation.

Includes titles by which a manifestation is identified in reference sources.

Includes variant titles appearing on or in a manifestation.

Scope of usage The type of work associated with a particular name for a persona.

Includes forms, genres, etc. (e.g., literary works, critical works, works on mathematics, detective novels) associated with a name used by an author.

Dates of usage Dates associated with the use of a particular name established by a corporate body.

Language of name The language in which the name is expressed.

Script of name The script in which the name is rendered.

| Transliteration scheme of name | The scheme used to produce the transliterated form of the name. |

5.13 Attributes of an Identifier

Type of identifier	A code or other designation indicating the type of identifier (i.e., the domain in which the identifier is assigned).
	Includes alphabetic prefixes identifying the numbering system (e.g., "ISBN", "ISSN", "ISRC", etc.)
	Includes symbols designating the type of identifier (e.g., ®)
Identifier string	A sequence of numeric and/or alphabetic characters assigned to an entity to serve as a unique identifier within the domain in which the identifier is assigned.
	Includes numeric and alphanumeric identifiers.
	Includes registered trademarks.
	Includes segments of a composite string such as group identifiers, assigning agency identifiers, etc. as well as the item identifier *per se.*
Suffix	A supplementary character or set of characters (numeric and/or alphabetic) appended to an identifier string.
	Includes check characters, etc.

5.14 Attributes of an Access Point

Type of access point	A categorization or generic descriptor for the access point.
	Includes terms and/or codes designating the type of access point (e.g., personal name access point, family name access point, corporate name access point, meeting name access point, territorial name access point, uniform title access point, collective uniform title access point).
Status of access point	An indication of the level of establishment of the access point (e.g., provisional).
Designated usage of access point	An indication of whether the rules under which the access point was constructed designate it as an authorized (or preferred) form or as a variant (or non-preferred) form.
Undifferentiated access	An indication that the access point is insufficiently precise to

point	differentiate between two or more entities identified by the same name.
Language of base access point	The language in which the base access point is recorded.
Language of cataloguing	The language in which additions to the base access point are recorded.
Script of base access point	The form of graphic characters in which the data in the base access point are recorded.
Script of cataloguing	The form of graphic characters in which any additions to the base access point are recorded.
Transliteration scheme of base access point	An indication of the scheme used in transliterating the base access point.
Transliteration scheme of cataloguing	An indication of the scheme used in transliterating any additions to the base access point.
Source of access point	The publication or reference source used in establishing the form of name or title on which the access point is based. Includes the title, publisher, date, etc. of the item for which the access point was originally created. Includes the title, edition, etc. of the reference source(s) used to establish the conventional form of a name or title.
Base access point	All elements in an access point that are integral to the name or identifier that forms the basis for the access point. Includes the name element in an access point beginning with the name of a person, family, or corporate body. Includes the title of the person element in an access point beginning with the title of nobility or ecclesiastical title of a person. Includes the phrase element in an access point beginning with a phrase associated with a person that is used in lieu of a name as such when the name of the person is unknown (e.g., A Physician, Author of Early Impressions). Includes the name element for a subordinate or related body in an access point beginning with the name of a superior body.

Includes the name element for a government agency, official, legislative body, court, etc. in an access point beginning with the name for the territorial authority.

Includes the name element for a religious council, official, province, synod, etc. in an access point beginning with the name for the religious body.

Includes the title element in an access point for a work or expression.

Includes a term designating form at the beginning of an access point for a musical work or expression (e.g., Symphony, Concerto).

Includes conventional and collective titles at the beginning of an access point for a work or expression (e.g., Treaties, Laws, Works, Selections, Piano music).

Includes the subtitle element in a collective uniform title access point.

Addition

A name, title, date, place, number, or other designation added to the base access point.

Sometimes referred to as a "qualifier."

Includes the fuller form of name added to the base access point.

Includes the title of nobility, title of royalty, or ecclesiastical title added to the base access point.

Includes dates added to the base access point.

Includes the place name associated with a corporate body added to the base access point.

Includes a number associated with a corporate body or a musical work added to the base access point.

Includes a title of an adaptation or version of a work added to the base access point.

Includes the name and/or number of a section or part of a work added to the base access point.

Includes a term designating the form of a work added to the base access point.

Includes a term designating language of expression added to the base access point.

Includes a term designating the key in which a musical work

was originally composed added to the base access point.

Includes a term designating the medium of performance for which a musical work was originally conceived added to the base access point.

Includes other designations associated with persons and corporate bodies added to the base access point.

Note: For the purposes of this study, terms indicating the role of the entity represented by the access point in relation to a work, expression, manifestation or item described in a bibliographic record to which the access point is appended (e.g., editor, translator, illustrator, etc.) are excluded from the scope of additions to access points.

5.15 Attributes of Rules

Citation for rules

A citation for the cataloguing code, set of rules, instructions, etc.

Includes the title of the rules, etc. and, as necessary, the name of the body responsible for the rules, the edition designation, date, etc.

Note: The citation may also include a reference to a specific rule or rules within the cataloguing code, etc.

Rules identifier

An acronym or alphanumeric code identifying the rules.

5.16 Attributes of an Agency

Name of agency

The name by which the agency is commonly known.

Includes the name of an agency responsible for creating the record (i.e., the originating source), an agency responsible for transcribing the record into machine-readable form, an agency responsible for modifying the record, or an agency responsible for issuing the record.

Includes acronyms used in place of the agency's full name.

Agency identifier

An alphanumeric code identifying the agency.

Includes standard codes used as agency identifiers (e.g., ISO 15511, International Standard Identifier for Libraries and Related Organizations (ISIL) and MARC 21 Organization Codes).

Location of agency   The country, state/province, city, etc. in which the agency is located or headquartered, or the agency's address.

6. Relationships

6.1 Authority Relationships in the Context of the Model

The sections that follow describe four broad categories of relationships reflected in authority records. The first category (described in section 6.2) comprises the relationships that operate at a generic level between the entity types depicted in the entity-relationship diagram in section 4.2 (**Figure 2**). The second and third categories (described in sections 6.3 and 6.4) comprise relationships commonly reflected in the reference structure of the authority record (i.e., in the references themselves, in information notes, instruction phrases, or cataloguer's notes). In some implementations, these relationships may be made by using coded data to generate display constants.

The first of those categories comprises relationships between specific instances of the entities *person*, *family*, *corporate body*, and *work.* The second comprises relationships between a specific instance of the entity *person*, *family*, *corporate body*, or *work*, on the one hand, and a specific *name* by which the entity is known. The fourth category (described in section 6.5) comprises the relationships between specific instances of the entity *access point* reflected in the linking structures embedded in authority records (e.g., the links between fields carrying the same data recorded in different scripts, etc.).

6.2 Relationships Depicted in the High-Level Diagrams

The entity-relationship diagram in section 4.2 (**Figure 2**) show the relationships that operate between the entities defined in the model at the highest level of generalization.

The relationships depicted in **Figure 2** represent the associations between bibliographic entities and the names by which those entities are known and the identifiers assigned to those entities. Persons, families, corporate bodies, works, expressions, manifestations, items, concepts, objects, events, and places are "known by" the names that are associated with them. Similarly, those entities may be "assigned" identifiers.

Figure 2 also depicts a generic relationship between persons, families, and corporate bodies, on the one hand, and works, expressions, manifestations, and items, on the other. A person, for example, may be associated with a work (as the author of the work, as the addressee of correspondence contained in the work, as the defendant in a trial reported in the work, etc.). Similarly, a person or corporate body may be associated with the expression of a work (e.g., as the performer of the work), with a manifestation (e.g., as the producer of the manifestation) or with an item (e.g., as the owner of the item). The generic relationship ("associated with") is reflected in name/title authority records through the combination of a name access point representing the person, family, or corporate body and a title access point representing an associated work, expression, manifestation, or item.

The relationships depicted in the lower half of **Figure 2** represent the associations between names and identifiers, on the one hand, and the access points based on those names and identifiers, the rules that govern the form and structure of access points, and the agencies that apply the rules in creating and modifying access points.

6.3 Relationships between Persons, Families, Corporate Bodies, and Works

Within authority files there are a number of other relationship types that operate between specific instances of the entities depicted in the upper half of **Figure 2** *(person, family, corporate body, work, expression, manifestation, item, concept, object, event,* and *place*).

Relationships in this category include those that operate between specific instances of entities of the same type (e.g., the relationship between one person and another, the relationship between one work and another, etc.) as well as those that operate between a specific instance of one entity type and a specific instance of a different entity type (e.g., the relationship between a person and a corporate body). Those relationships may be made explicit by means of information notes, instruction phrases, cataloguer's notes, or coded data used to generate display constants, or they may simply be implied through the "see also" reference relationship between one authorized form and another.

Table 1 highlights relationship types that operate between specific instances of the entity *person*, *family*, *corporate body*, or *work,* or between an instance of one of those entity types and an instance of a different entity type, as commonly reflected in name, title, and name-title authority files.

The relationship types identified in the table are intended to be representative only, and do not aim to provide an exhaustive taxonomy of relationships in this category that may be reflected in name, title, and name-title authority records. (Note that relationships in this category specific to subject authority records are not included in the table.)

Definitions and examples for each of the relationship types identified in **Table 1** are given below in sections 6.3.1 – 6.3.6. Terminology used in the examples (authorized heading, see also reference tracing, etc.) is that used in *GARR*.

Table 1: Relationships between Persons, Families, Corporate Bodies, and Works

Entity Type	Relationship Type
Person ⇨ Person	- pseudonymous relationship - attributive relationship - collaborative relationship
Person ⇨ Family	membership relationship
Person ⇨ Corporate Body	membership relationship
Family ⇨ Family	genealogical relationship
Corporate Body ⇨ Corporate Body	- predecessor/successor relationship - separation relationship - amalgamation relationship - subordinate relationship - sequential relationship - other types of relationship
Work ⇨ Work	- successor relationship - supplement relationship - complement relationship - summarization relationship - adaptation relationship - transformation relationship - imitation relationship - whole/part relationship - other types of relationship

Note: In addition to the types of relationships listed in Table 1, terms added to access points (e.g., editor, illustrator, translator, defendant, typographer, previous owner, etc.) may reflect the specific nature of the relationship between a person, family, or corporate body and a work, expression, manifestation, or item described or referred to in a bibliographic record. For the purposes of this study, those relationships are considered out of scope.

6.3.1 Relationships between Persons

Pseudonymous relationship
The relationship between a "real" person (i.e., an individual) and a <mark>persona</mark> adopted by that individual through the use of one or more pseudonyms.

Example

Authorized heading:
    Mertz, Barbara
Information note/see also references:
    Barbara Mertz also writes under the pseudonyms Barbara Michaels and Elizabeth Peters. For works written under those pseudonyms, search also under:
    >> Michaels, Barbara, 1927-
    >> Peters, Elizabeth
See also reference tracings:
    << Michaels, Barbara, 1927-
    << Peters, Elizabeth

Attributive relationship
The relationship between one person and another person (either a "real" individual or a <mark>persona</mark>) to whom one or more works by the former have been attributed, either erroneously or falsely.

Example

Authorized heading:
    Brutus, Marcus Junius
Information note/see also reference:
    For the Greek letters erroneously attributed to Marcus Junius Brutus, search also under:
    >> Pseudo-Brutus
See also reference tracing:
    << Pseudo-Brutus

Collaborative relationship
The relationship between two or more persons who collaborate in intellectual or artistic endeavours.

Example

Authorized heading:
    Erckmann, Émile (1822-1899)
Information note/see also reference:
    Romancier. - Plus connu pour les ouvrages écrits en collaboration avec Alexandre Chatrian de 1847 à 1887 sous le pseudonyme collectif d'Erckmann-Chatrian.
    [Translation: Novelist. – Better known for works written in collaboration with Alexandre Chatrian between 1847 and 1887 under the shared pseudonym of Erckmann-Chatrian.]
    >> Erckmann-Chatrian
See also reference tracing:
    << Erckmann-Chatrian

6.3.2 Relationships between Persons and Families

Membership relationship
The relationship between a person and a family of which the person is a member.

Example

Authorized heading:
Wulz, Wanda (1903-1984)
Information note:
Photographe italienne née et morte à Trieste
See also references/reference tracings:
>><< Wulz (famille)

6.3.3 Relationships between Persons and Corporate Bodies

Membership relationship
The relationship between a person and a corporate body in which the person is a member or with which the person is affiliated.

Example

Authorized heading:
Digitalis vulgaris
Information note:
Autorska grupa sastavljena od Tomislava Alajbega, Trpimira Alajbega i Borisa Budiše.
[Translation: Group of authors: Tomislav Alajbeg, Trpimir Alajbeg and Boris Budiša]
See also references/reference tracings:
>><< Alajbeg, Tomislav
>><< Alajbeg, Trpimir
>><< Budiša, Boris
Cataloguer's notes:
Murter – http://www.Jadran4you.com/murter/index/html
[Title and URL of the web publication for which the authorized form was established]
http://www.jadran4you.com/onama.htm
[Web address for "About Us" page used as a source for the authority record]

6.3.4 Relationships between Families

Genealogical relationship
The relationship between one family and another that is genealogically related to the first.

Example

Authorized heading:
Conti, House of
See also references:
>> Bourbon, House of
>> Condé, House of
See also reference tracings:
<< Bourbon, House of
<< Condé, House of
Cataloguer's note:
The House of Conti is a junior branch of the House of Bourbon-Condé.—Grande encyclopédie (Conti (maison de)).
The House of Conti is a junior branch of the House of Condé.—Grande Larousse (Conti, Conty (maison de)).

6.3.5 Relationships between Corporate Bodies

Predecessor/successor relationship
The relationship between two corporate bodies, one of which results from a change of name made by the other.

Example

Authorized heading:
  Lapin yliopisto
Information note/see also reference:
  Lapin korkeakoulun nimi muutettiin 1.1.1991 Lapin yliopistoksi. Katso myös -viittaus aiemmasta nimimuodosta:
  [Translation: On January 1, 1991 Lapin korkeakoulu changed its name to Lapin yliopisto. For works issued under the earlier name, search also under:]
  >> Lapin korkeakoulu
See also reference tracing:
  << Lapin korkeakoulu

Separation relationship
The relationship between one corporate body and another corporate body from which it has separated.

Example

Authorized heading:
  Second Presbyterian Church (Cranbury, N.J.)
Information note/see also reference:
  The Second Presbyterian Church separated from the First Presbyterian Church in 1838 and rejoined it nearly a hundred years later. For works issued under the earlier and subsequent name, search also under:
  >> First Presbyterian Church (Cranbury, N.J.)
See also reference tracing:
  << First Presbyterian Church (Cranbury, N.J.)

Amalgamation relationship
The relationship between two or more corporate bodies that amalgamate (through merger, etc.).

Example

Authorized heading:
  Eppupopedanormaali (yhtye)
Information note/see also references:
  Eppupopedanormaali on Eppu Normaalin, Popedan ja Räp Popedan yhteiskokoonpanon nimi:
  [Translation: Eppupopedanormaali was formed by the amalgamation of three musical groups: Eppu Normaali, Popeda, and Räp Popeda. For works entered under those groups, search also under:]
  >> Eppu Normaali (yhtye)
  >> Popeda (yhtye)
  >> Räp Popeda (yhtye)
See also reference tracings:
  << Eppu Normaali (yhtye)
  << Popeda (yhtye)
  << Räp Popeda (yhtye)

Subordinate relationship
The relationship between two corporate bodies, one of which is subordinate to the other (within a corporate hierarchy, etc.).

Example

Authorized heading:
Journée de la kinésithérapie (1994 ; Nancy)
Information note:
Organisée dans le cadre du 11e Congrès de pneumologie de langue française par la Société de pneumologie de langue française et l'Association française de kinésithérapie respiratoire et cardio-vasculaire.
[Translation: Organized as part of the 11th Congrès de pneumologie de langue française by the Société de pneumologie de langue française and the Association française de kinésithérapie respiratoire et cardio-vasculaire.]
See reference tracing:
< Congrès de pneumologie de langue française (11 ; 1994 ; Nancy). Journée de la kinésithérapie

Sequential relationship
The relationship between two or more corporate bodies (i.e., meetings, conferences, etc.) that are related sequentially.

Example

Authorized heading:
Technical Thick Film Symposium (1st : 1967 : Palo Alto, Calif., and Los Angeles Calif.)
Information note/see also references:
Publications of later meetings in this series are found under the following headings:
>> Symposium on Hybrid Microelectronics (2nd : 1967 : Boston, Mass.)
>> Hybrid Microelectronics Symposium (3rd : 1968 : Rosemont, Ill.)
>> International Hybrid Microelectronics Symposium (5th : 1970 : Beverly Hills, Calif.)
See also reference tracings:
<< Symposium on Hybrid Microelectronics (2nd : 1967 : Boston, Mass.)
<< Hybrid Microelectronics Symposium (3rd : 1968 : Rosemont, Ill.)
<< International Hybrid Microelectronics Symposium (5th : 1970 : Beverly Hills, Calif.)

Other types of relationship
A relationship between two corporate bodies that have an association or affiliation other than a predecessor/successor, separation, amalgamation, subordinate, or sequential relationship.

Example

Authorized heading:
Uettwiller Grelon Gout Canat
Cataloguer's note:
Cabinet d'avocat portant le nom des quatre avocats fondateurs: Maîtres Uettwiller, Grelon etc. Il est associé avec les cabinets "Uettwiller Grelon Lippens Dekeyser" (UGLD) et "Paisner & co".— Bulletin européen (Paris), 3, 1995.
[Translation: Law firm bearing the name of the four founding attorneys: Maîtres Uettwiller, Grelon, etc. Associated with the offices "Uettwiller Grelon Lippens Dekeyser" (UGLD) et "Paisner & co".— Bulletin européen (Paris), 3, 1995.]

6.3.6 Relationships between Works

Successor relationship
The relationship between one work and another that is a successor or predecessor of that work (e.g., a sequel).

Example

Authorized heading:
Treaty of Amiens (1802)
See also reference:
>> France. Treaties, etc. Great Britain, 1801 Oct. 1
See also reference tracing:
<< France. Treaties, etc. Great Britain, 1801 Oct. 1
Cataloguer's note:
Encyc. Brit., 15ᵗʰ ed. (Amiens, Treaty of, March 27, 1802; signed by Britain, France, Spain, and the Batavian Republic on basis of preliminaries of Oct. 1801)

Supplement relationship
The relationship between one work and another that is a supplement to that work (i.e. a work that is intended to be used in conjunction with the related work, such as teacher's guide).

Example

Authorized heading:
Cumulative book index
Information note/see also reference:
The Cumulative book index is a supplement to the United States catalog.
>> United States catalog

Complement relationship
The relationship between one work and another that is a complement to that work (i.e., a work that is intended to be combined with or inserted into the related work, such as incidental music for a play).

Example

Authorized heading:
Harbison, John. Incidental music for Shakespeare's The merchant of Venice
See also reference tracing:
<< Shakespeare, William, 1564-1616. Merchant of Venice

Summarization relationship
The relationship between one work and another that is a summarization of that work (e.g., a digest or abstract).

Example

Authorized heading:
Niva, Mari
Environmental information in consumer decision making
Information note/see also reference:
Englanninkielinen tiivistelmä julkaisusta Ympäristöinformaatio kuluttajan päätöksenteossa.
>> Ympäristöinformaatio kuluttajan päätöksenteossa
[Translation: Summary in English of the Finnish work Ympäristöinformaatio kuluttajan päätöksenteossa.]

Adaptation relationship
The relationship between one work and another that is an adaptation of that work.

Example

Authorized heading:
　　Shakespeare, William
　　[Coriolanus]
Information note/see also reference:
　　Eine Bearbeitung von Shakespeares Coriolanus siehe:
　　[Translation: For an adaptation of Shakespeare's Coriolanus see under:]
　　>> Brecht, Bertolt. [Coriolan von Shakespeare]
See also reference tracing:
　　<< Brecht, Bertolt. [Coriolan von Shakespeare]

Transformation relationship
The relationship between one work and another that is a transformation of that work (e.g., a dramatization of a novel).

Example

Authorized heading:
　　Poe, Edgar Allan, 1862-1849.
　　[Fall of the house of Usher]
See also reference:
　　For a musical composition based on this work search under:
　　>> Debussy, Claude, 1862-1918. Chute de la maison Usher

Imitation relationship
The relationship between one work and another that is an imitation of that work (e.g., a parody).

Example

Authorized heading:
　　Tolkien, John Ronald Reuel (1892-1973)
　　The lord of the rings
Information note/see also reference:
　　For a parody of this work search under:
　　>> Beard, Henry N. Bored of the rings
See also reference tracing:
　　<< Beard, Henry N. Bored of the rings

Whole/part relationship
The relationship between a work and one or more works that form part of that larger work.

Example

Authorized heading:
　　Anthologie grecque
Information note/see also references:
　　Pour les parties de cette collection, voir:
　　[Translation: For parts of this collection, see:]
　　>> Anthologie palatine
　　>> Anthologie de Planude
　　>> Couronne

See also reference tracings:
    << Anthologie palatine
    << Anthologie de Planude
    << Couronne

Other types of relationship
A relationship between two works that have an association other than a successor, supplement, complement, summarization, adaptation, transformation, imitation, or whole/part relationship.

Example

Authorized heading:
    Thomas de Kent (11..-11.. ; poète anglo-normand)
    Roman de toute chevalerie
Information note/see also reference:
    Version postérieure du *Roman d'Alexandre.*
    [Translation: Later version of the Roman d'Alexandre.]
    >> Roman d'Alexandre
See also reference tracing:
    << Roman d'Alexandre

6.4 Relationships between Names and Persons, Families, Corporate Bodies, and Works

Within authority files there are also a number of other relationship types that operate between specific instances of the entities depicted in the upper half of **Figure 2** *(person, family, corporate body, work, expression, manifestation, item, concept, object, event,* and *place*) and specific instances of the entity *name*.

Relationships in this category are normally reflected implicitly by means of a "see" reference from a variant form to the authorized form. In those cases, the inclusion of a "see" reference from a form designated as a variant form to the form that is designated as the authorized form reflects the fact that the name used as the basis for the access point designated as a variant form is associated with the same person, corporate body, etc. as the name used as the basis for the access point designated as the authorized form in that same record. In some instances, the relationship of the name used as the basis for either the authorized form or the variant form to the person, corporate body, work, etc. is made explicit through an instruction phrase or coded data used to generate an instruction phrase (e.g., "secular name" / "name in religion"), or in a cataloguer's note.

Table 2 highlights relationship types that operate between a specific instance of *person*, *family*, *corporate body*, or *work* and a specific instance of *name*, as commonly reflected in name, title, and name-title authority files.

The relationship types identified in the table are intended to be representative only, and do not aim to provide an exhaustive taxonomy of relationships in this category that may be reflected in name, title, and name-title authority records. (Note that relationships in this category specific to subject authority records are not included in the table.)

Definitions and examples for each of the relationship types identified in Table 2 are given below in sections 6.4.1 – 6.4.4.

Table 2: Relationships between Names and Persons, Families, Corporate Bodies, and Works

Entity Type	Relationship Type
Person ⇨ Name	▪ real name relationship ▪ pseudonym relationship ▪ name before marriage relationship ▪ married name relationship ▪ secular name relationship ▪ name in religion relationship ▪ earlier name relationship ▪ later name relationship ▪ alternative linguistic form relationship
Family ⇨ Name	▪ alternative linguistic form relationship
Corporate Body ⇨ Name	▪ expanded name relationship ▪ acronym / initials relationship ▪ alternative linguistic form relationship
Work ⇨ Name	▪ alternative linguistic form relationship

6.4.1 Relationships between Persons and Names

Real name relationship
The relationship between a person and a name that person uses as his or her real name.

Example

Authorized heading:
　　Orwell, George
See reference tracing:
　　< Blair, Eric Arthur [real name]

Pseudonym relationship
The relationship between a person and a name that person uses as a pseudonym.

Example

Authorized heading:
　　Balzac, Honoré de
See reference tracing:
　　< Saint-Aubin, Horace de [pseudonym]

Name before marriage relationship
The relationship between a person and a name that person used before marriage.

Example

Variant heading:
　　Nicholls, Charlotte

See reference:
> See under the author's name before marriage:
> > Brontë, Charlotte

Married name relationship
The relationship between a person and a name that person used after marriage.

Example

Variant heading:
> Barrett, Elizabeth
See reference:
> See under the author's married name:
> > Browning, Elizabeth Barrett

Secular name relationship
The relationship between a person and a name that person uses as a secular name.

Example

Authorized heading:
> John XXIII, *Pope*
See reference tracing:
> < Roncalli, Angelo Giuseppe [secular name]

Name in religion relationship
The relationship between a person and a name that person uses in religion.

Example

Authorized heading:
> Merton, Thomas
See reference tracing:
> < Louis, *Father*, 1915-1969 [name in religion]

Earlier name relationship
The relationship between a person and a name that person used at an earlier stage in life.

Example

Variant heading:
> Beaconsfield, Benjamin Disraeli, Earl of
See reference:
> See under the author's earlier name:
> > Disraeli, Benjamin

Later name relationship
The relationship between a person and a name that person used at a later stage in life.

Example

Variant heading:
> Thibeault, Jacques-Anatole
See reference:
> See under the author's later name:
> > France, Anatole

Alternative linguistic form relationship
The relationship between a person and an alternative linguistic form of name by which that person is known.

Example

Authorized heading:
    Marc Aurèle
See reference tracing:
    < Marcus Aurelius Antoninus [Latin]

6.4.2 Relationships between Families and Names

Alternative linguistic form relationship
The relationship between a family and an alternative linguistic form of name by which that family is known.

Example

Variant heading:
    Familie Trapp [German]
See reference:
    ⟩ Trappin perhe [Finnish]

6.4.3 Relationships between Corporate Bodies and Names

Expanded name relationship
The relationship between a corporate body and the expanded form of name by which that body is known.

Example

Variant heading:
    Abdib
See reference:
    See under the expanded form:
    > Associação Brasileira para o Desenvolvimento das Industrias de Base

Acronym / initials relationship
The relationship between a corporate body and an acronym or initials by which that body is known.

Example

Variant heading:
    International Business Machines Corporation
See reference:
    See under the initials:
    > IBM

Alternative linguistic form relationship
The relationship between a corporate body and an alternative linguistic form of name by which that body is known.

Example

Authorized heading:
    United Nations
See reference tracing:
    < Nations Unies [French]
    < Организация Объединённых Наций (Russian)

6.4.4 Relationships between Works and Names

Alternative linguistic form relationship
The relationship between a work and an alternative linguistic form of name by which that work is known.

Example

Authorized heading:
    Pentekostárion
See reference tracing:
    < Pentecostaire [French]

6.5 Relationships between Access Points

Within authority files there are also a number of other relationship types that operate between specific instances of the entity *access point.* (i.e., between one access point and another, as distinct from relationships involving only the name or identifier that forms the basis for the access point).

Relationships in this category may be made explicit by means of linking devices such as linking fields and control subfields (e.g., a link between alternate script representations of the same access point).

The relationships between access points most commonly reflected in linking structure mechanisms are parallel language relationships, alternate script relationships, and different rules relationships.

Definitions and examples for each of those relationship types are given below in section 6.5.1.

6.5.1 Relationships between Access Points

Parallel language relationship
The relationship between two or more access points that are established as parallel language forms of access point for the same entity.

Example

Access point:
    National Library of Canada
Parallel access point:
    = Bibliothèque nationale du Canada

Alternate script relationship
The relationship between two or more access points that are established as alternate script forms of the access point for the same entity.

Example

Access point:
    Gogol, Nikolaï Vasilievitch
Access point in an alternate script:
    Гоголь, Николай Васильевич

Different rules relationship
The relationship between two or more access points for the same entity that have been
established according to different sets of rules.

Example

Access point:
    Russia (Federation)
Access point established under different rules:
    Российская Федерация

7. User Tasks

For the purposes of this analysis, the users of authority data are broadly defined to include:
- authority record creators and reference librarians who create, maintain and use authority
  files directly
- library patrons who use authority information either through direct access to authority files
  or indirectly through the access points (authorized forms, references, etc.) in library
  catalogues, national bibliographies, etc.

Four tasks representing all users are defined as follows:

Find   Find an entity or set of entities corresponding to stated criteria (i.e., to
find either a single entity or a set of entities using an attribute or
relationship of the entity as the search criteria).

Identify   Identify an entity (i.e., to confirm that the entity represented corresponds
to the entity sought, or to distinguish between two or more entities with
similar characteristics).

Contextualize   Place a person, corporate body, work, etc. in context; clarify the
relationship between two or more persons, corporate bodies, works, etc.;
or clarify the relationship between a person, corporate body, etc. and a
name by which that person, corporate body, etc. is known (e.g., name
used in religion versus secular name).

Justify   Document the authority record creator's reason for choosing the name or
form of name on which an access point is based.

Table 3 maps the attributes and relationships defined in sections 5 and 6 to the defined set of
user tasks. The mapping is intended to serve as a means of clarifying the specific user task(s)
that data associated with each attribute or relationship defined in the model are designed to
support. For the purposes of this conceptual model, all potential uses of data associated with a
particular attribute or relationship are identified. There has been no attempt to assess or indicate

the relative importance of each attribute or relationship to a given user task as was done in the FRBR model.

Note: For the purposes of this study only attributes normally reflected in controlled access points are mapped against the FIND task. The capability of conducting keyword searching on other data in the record is not taken into account. If it were, virtually any attribute could be mapped to FIND.

Table 3: Mapping of Attributes and Relationships to User Tasks

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
Person	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Dates of person	■	■		■
	Title of person	■	■		
	Other designation associated with the person	■	■		
	Gender*		■		
	Place of birth*		■		
	Place of death*		■		
	Country*		■		■
	Place of residence*		■		■
	Affiliation*		■		
	Address*		■		
	Language of person*		■		■
	Field of activity*		■		
	Profession/occupation*		■		
	Biography/history*		■	■	
	Pseudonymous relationship ⇨ person*			■	
	Attributive relationship ⇨ person*			■	
	Collaborative relationship ⇨ person*			■	
	Membership relationship ⇨ family*			■	
	Membership relationship ⇨ corporate body*			■	
	Real name relationship ⇨ name*	■		■	
	Pseudonym relationship ⇨ name*	■		■	
	Name before marriage relationship ⇨ name*	■		■	
	Married name relationship ⇨ name*	■		■	
	Secular name relationship ⇨ name*	■		■	
	Name in religion relationship ⇨ name*	■		■	
	Earlier name relationship ⇨ name*	■		■	

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
	Later name relationship ⇨ name*	■		■	
	Alternative linguistic form relationship ⇨ name*	■		■	
Family	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Type of family	■	■		
	Dates of family	■	■		
	Places associated with family		■	■	
	History of family		■	■	
	Genealogical relationship ⇨ family			■	
	Alternative linguistic form relationship ⇨ name*	■		■	
Corporate Body	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Place associated with the corporate body	■	■		
	Date associated with the corporate body	■	■		
	Other designation associated with body	■	■		
	Type of corporate body*		■		
	Location of headquarters*		■		
	Language of the corporate body*		■		■
	Address*		■		
	Field of activity*		■		
	History*		■	■	
	Predecessor/successor relationship ⇨ corporate body*			■	
	Separation relationship ⇨ corporate body*			■	
	Amalgamation relationship ⇨ corporate body*			■	
	Subordinate relationship ⇨ corporate body*			■	
	Sequential relationship ⇨ corporate body*			■	
	Other relationship ⇨ corporate body*			■	
	Expanded name relationship ⇨ name*	■		■	
	Acronym / initials relationship ⇨ name*	■		■	
	Alternative linguistic form relationship ⇨ name*	■		■	
Work	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Form of work	■	■		

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
	Date of the work	■	■		■
	Other distinguishing characteristic	■	■		
	Medium of performance	■	■		
	Numeric designation	■	■		
	Key	■	■		
	Place of origin of the work*		■		
	Original language of the work*		■		■
	Successor relationship ⇨ work			■	
	Supplement relationship ⇨ work			■	
	Complement relationship ⇨ work			■	
	Summarization relationship ⇨ work			■	
	Adaptation relationship ⇨ work			■	
	Transformation relationship ⇨ work			■	
	Imitation relationship ⇨ work			■	
	Whole/part relationship ⇨ work			■	
	Other relationship ⇨ work			■	
	Alternative linguistic form relationship ⇨ name*	■		■	
Expression	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Form of expression	■	■		
	Date of expression	■	■		
	Language of expression	■	■		
	Other distinguishing characteristic	■	■		
Manifestation	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Edition/issue designation		■		
	Place of publication/ distribution		■		
	Publisher/distributor		■		
	Date of publication/distribution		■		
	Form of carrier		■		
	Numbering		■		
Item	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
	Location of item*		■		
Concept	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Type of concept		■		
Object	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Type of object		■		
	Date of production*		■		
	Place of production*		■		
	Producer/fabricator*		■		
	Physical medium*		■		
Event	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Date associated with the event*	■	■		
	Place associated with the event*	■	■		
Place	"Known by" relationship ⇨ name	■			
	"Assigned" relationship ⇨ identifier	■			
	Coordinates*		■	■	
	Other geographical information*		■	■	
Name	Forename	■	■		
	Surname	■	■		
	Number	■	■		
	Title/term of address	■	■		
	Other parts of a personal name	■	■		
	Corporate name	■	■		
	Trade name	■	■		
	Title	■	■		
	Scope of usage			■	
	Dates of usage			■	
	Language of name		■		
	Script of name		■		

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
	Transliteration scheme of name		■		
	"Basis for" relationship ⇨ access point	■			
Identifier	Type of identifier		■		
	Identifier string	■	■		
	Suffix		■		
	"Basis for" relationship ⇨ access point	■			
Access Point	Type of access point		■		
	Status of access point		■		
	Designated usage of access point		■		
	Undifferentiated access point		■		
	Language of base access point		■		
	Language of cataloguing		■		
	Script of base access point		■		
	Script of cataloguing		■		
	Transliteration scheme of base access point		■		
	Transliteration scheme of cataloguing		■		
	Source of access point		■		■
	Base access point	■	■		
	Addition	■	■		
	"Governed by" relationship ⇨ rules		■		■
	"Created/modified by" relationship ⇨ agency		■		■
	Parallel language relationship ⇨ access point			■	
	Alternate script relationship ⇨ access point			■	
	Different rules relationship ⇨ access point			■	
Rules	Citation for rules		■		■
	Rules identifier		■		
	"Applied by" relationship ⇨ agency				■
Agency	Name of agency		■		
	Agency identifier		■		
	Location of agency		■		

8. Authority Data Transfer

8.1 Sharing Authority Data within the Library Sector

Normally, the entities and the relationships between entities depicted in the lower half of **Figure 2** are assumed to operate within the context of a single logical authority file governed by a coherent set of rules, consistently applied. The file may be created and maintained by a single library, or it may be cooperatively developed and maintained by a consortium of libraries, provided the libraries contributing to the file follow the same set of rules and practices and ensure that the file remains logically coherent.

Authority data created for use in one library's or consortium's authority file may be transferable to another file, but the data itself will not necessarily be consistent with the second file. Within the international library community, there is a relatively high level of uniformity with respect to cataloguing principles and rules, record structures, and exchange formats for authority data. Nevertheless, there will often be differences from one file to another. The rules governing the creation of authority data for one file may differ from those governing data created for another file. The linguistic form of certain elements in an access point and/or the language of notes may differ from one file to another due to differences in the language and/or script used by the primary target audience for the file. An authorized form that is unique within one file may require the addition of a qualifier in order to differentiate it from a similar authorized form when it is transferred to another file. When authority data is transferred from one file to another, reference structures may also need to be adjusted to mesh with related authorized forms and references in the second file that differ from those in the first file.

To some extent, the logical integration of data transferred from one file to another can be supported through automated processing. For example, it may be possible in some cases to use conversion routines and table look-ups to transliterate from one script to another or to replace an element in a authorized form by its equivalent in another language. Truncated string matches and other types of search algorithms can be used to flag potential duplicates or conflicts among authorized and variant forms. However, in most cases, human review of the incoming data will be required to ensure that it is consistent with the rules and practices governing the file to which the data is being transferred and that it is fully integrated into the reference structure of that file.

It should also be noted that because the forms in library authority files represent bibliographic entities, and because those entities in turn reflect intellectual constructs or concepts that may be interpreted differently from one set of cataloguing rules to another, a specific instance of *person*, *family*, *corporate body*, *work*, or *expression* represented in an authority file compiled by one library may not directly parallel an instance of a similar bibliographic entity represented in a file compiled by another library. The differences between the two files may stem not simply from differences with respect to the structure of access points or the form of name or title used as the basis for the access point, but from differences with respect to the entities that are represented by those access points. Those differences may be reflected not only in the access point itself but also more extensively through the reference structure established for the file (i.e., information notes, references and tracings). The nature of those differences must be taken into account when transferring data from one authority file to another.

8.2 Cross-Sector Sharing of Authority Data

The library sector is not the only sector that creates and uses authority data. Archives, museums, rights management organizations, and others create files to serve their own purposes that in many ways parallel the authority files created by libraries. It may be assumed, therefore, that there is potential for cross-sector sharing of authority data. However, as with the sharing of authority data within the library sector, the potential for cross-sector data transfer will be affected

by the degree to which uniform rules and practices are applied within each of those other sectors and the extent to which the data structures created in one sector are compatible with those in other sectors.

The model developed for this study was designed specifically to reflect the creation and use of authority data within the library sector. There are clearly some areas of commonality of function and practice between libraries, on the one hand, and archives, museums and rights management organizations, on the other hand. To some extent, therefore, the model may be applicable to those other sectors. However, there are functions and practices unique to each sector that would likely require a reworking of the model if it were to be applied to authority files in those other sectors. Nonetheless, the library model in itself does serve to highlight certain structural elements that may complicate cross-sector data transfer.

The foremost of those complicating factors is the nature of the entities that are associated with the names and identifiers around which library authority files are centred. As already noted, those entities (*person*, *family*, *corporate body*, *work*, etc.) are bibliographic in nature (i.e., they reflect concepts and constructs that are integral to library cataloguing practice). Although the authority files created by archives, for example, centre on entities referred to as persons, families, and corporate bodies, it is unlikely that those entity types as defined in an archival context would parallel directly the similarly named entities in the library model. Concepts reflecting the cataloguing practices of libraries, such as "bibliographic identity", are unlikely to have a direct parallel in archival practices. Hence, in an archival context, it is unlikely that one individual would be recognized as two or more persons, as may be the case in a library context. Similarly, in rights management organizations, the entity referred to as a work may be defined quite differently than in a library context, given that the function of the rights management organization relates directly to the work as a legally defined entity associated with copyright law, whereas in a library context the work is seen from a different perspective.

The complexities of designing "crosswalks" from the model for library authority files to models reflecting practices in other sectors is highlighted in **Figure 3**. On the right of the diagram are the eleven bibliographic entities associated with the names and identifiers that serve as the basis for the access points registered in library authority files (*person*, *family*, *corporate body*, *work*, etc.). On the left of the diagram are five "primitive" entities defined in the <in*d*ecs> model, a reference model developed to support interoperability across various content industries (publishing, sound recording and film production and distribution, etc.).

The five "primitive" entities shown in **Figure 3** operate at the highest level of generalization in the <in*d*ecs> model, and are defined as follows:[8]

    Being: An entity which has the characteristics of animate life; anything which lives and dies.

    Thing: An entity without the characteristics of animate life.

    Concept: An entity which cannot be perceived directly through the mode of one of the five senses; an abstract entity, a notion or idea; an observable proposition which exists independently of time and space.

    Event: A dynamic relation involving two or more entities; something that happens; a relation though which an attribute of an entity is changed, added, or removed.

    Situation: A static relation involving two or more entities; something that continues to be the case; a relation in which the attributes of entities remain unchanged.
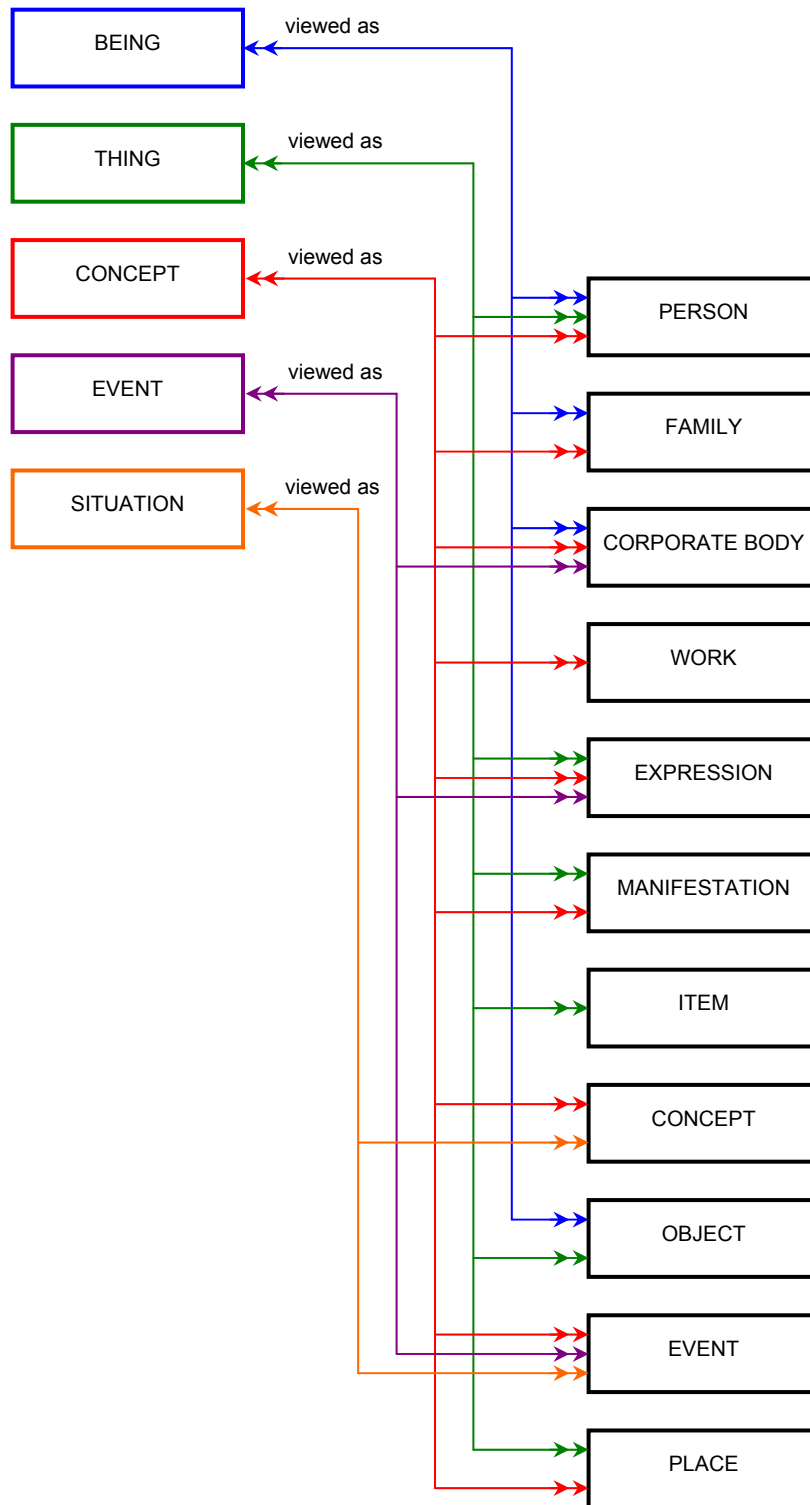
Figure 3: Mapping Bibliographic Entities to <in*d*ecs> Primitives

The relationships depicted in **Figure 3** serve to "map" the bibliographic entities defined in the conceptual model for library authority files developed for this study to the primitive entities defined in the <in*d*ecs> model. That mapping, in turn, serves to highlight the complexities of the bibliographic entities. Read from left to right, the relationships depicted illustrate how, for example, specific instances of the entity *being*, as defined in the <in*d*ecs> model, may be viewed in a library context as a *person* (in the case of a single individual), a *family* (in the case of two or more individuals related by birth, etc.), or a *corporate body* (in the case of two or more individuals acting as a unit). Conversely, a specific instance of the entity *person*, as defined in the library model, may be classed as any one of three primitive entities in the <indecs> model: *being* (in the case of an actual individual), *thing* (in the case of an "author" that is in fact an automaton of some kind), or *concept* (in the case of a fictional identity assumed by an individual). Similarly, a specific instance of the entity *event*, as defined in the <in*d*ecs> model, may be viewed in a library context as a *corporate body* (in the case of an organized meeting, etc.), an *expression* (in the case of a performance), or an *event* (in the case of an historical event). Conversely, a specific instance of the entity *event*, as defined in the library model, may be classed as any one of three primitive entities in the <in*d*ecs> model: a *concept* (in the case of a fictitious event), an *event* (in the case of an historical event), or a *situation* (in the case of a period of stasis).

The complexities of mapping the bibliographic entities that are the focus for library authority records to the primitive entities defined in the <in*d*ecs> model would suggest that correlating the library model developed for this study with similar models that might be developed to reflect practices in archives, museums, and rights management organizations could be even more problematic. To the extent that practices in those sectors differ from those in the library sector (for example with respect to the recognition of separate "bibliographic identities" established by individuals and groups), there is the potential for asymmetric relationships between the entities on which library authority records are centred and those on which records created in other sectors are centred. Where those asymmetric relationships exist, there is, in turn, the potential for assuming that a specific instance of an entity recognized in one sector is the same as a specific instance of a similar entity recognized in another sector when in fact it is not.

For example, an authority record created in the archival sector for a corporate body (using the legal name of the body as an authorized form) may be identified as a "match" by a library creating an authority record for that body. However, the archival authority record is likely to have been created for use with all documents associated with that body throughout the course of its existence as a legal entity. The library, on the other hand, may require two or more records, each representing the body during the specific period at which it used a particular form of name (not necessarily its legal name) to identify itself in its publications. In that case, while the archival authority record may contain information that may be useful to the library in creating its own authority records, the archival authority record *per se* will not be directly transferable to the library's authority file. Because the entity on which the archival authority record is centred is not in fact the same as any one of the two or more entities on which the library's authority records would be centred, no assumptions can be made about the applicability of information contained in the archival authority record to the entities represented in the library's authority file. The authorized form established for the archival authority record may or may not be directly transferable to one of the library authority records, depending on whether or not the form and structure of the authorized form is consistent with the rules governing authorized forms created for the library authority file. The content and form of an information note in the archival authority record outlining the history of the corporate body may be in a form suitable for use in one or more of the corresponding library authority records, but the note may well have to be reworked. Some or all of the variant forms for the body as given in the archival authority record may be relevant to one or more of the corresponding library authority records. However, they would have to be sorted through to determine which would form the basis of authorized forms (linked by see also references) for the various records required for the library's authority file and which would be appropriate as variant forms in each of those records.

APPENDIX A

The entity-relationship model depicted in Figure 2 and described in section 4.2 focuses, like the FRBR model does, on the information carried in authority records, the relationship of that information to external entities (person, corporate body, work, etc.), and how the information supports user tasks, without explicitly making the authority record as it exists in the traditional library environment (and formal elements of the record structures commonly used in libraries) part of the model. Taking this approach has facilitated the comparison of the model with models used in other sectors. This approach also offers a greater potential that this entity-relationship model can serve as the basis for implementations that break from the traditional authority file structure.

The working group, however, found it useful to include the structural entities such as authorized forms and references in earlier versions of the model as a means of assessing the degree to which issues related to the sharing of authority data in a networked environment were dependent on understanding the structural and formal conventions of a traditional authority file. The most fully developed version of a model that reflects the traditional structure is included in this Appendix in the hope that it may be of use to readers who fully understand those conventions and how they operate in current implementations.

The entities depicted in **Figure 4** correspond to the "external" entities described in section 4.2 and depicted in the upper half of **Figure 2**. These entities are defined in section 4.3

The second diagram (**Figure 5**) focuses on the formal or structural entities that come into play when a *name* or *identifier* is used to formulate an *access point* and the access point is subsequently registered in an authority file as an *authorized form* or a *variant form* in an *authority record* or *reference record*, or as an *explanatory heading* in a *general explanatory record*. The second diagram also highlights two entities that are instrumental in determining the content and form of authorized forms, references, and records—*rules* and *agency*. The terminology used and the definitions of these entities largely correspond to those used in *Guidelines for Authority References and Records*[1] and are not repeated in this appendix.

Figure 5 also depicts the relationships between the entities *name* and *identifier* and the formal or structural entities (*access point*, *authorized form*, *variant form*, *explanatory heading*, *authority record*, *reference record*, and *general explanatory record*) as well as the relationships between those formal or structural entities and the entities *rules* and *agency*. A specific *name* or *identifier* may be the "basis for" an *access point*, and conversely an *access point* may be based on a *name* or *identifier*. An *access point* may also be based on a combination of two *names* and/or *identifiers*, as in the case of a name/title access point representing a *work* that combines the name of the author with the name (i.e., the title) of the work. An *access point* may be "registered as" an *authorized form* or *variant form*, which in turn may be "registered in" one or more *authority record* or *reference record*, or may be "registered as" an *explanatory heading* which in turn may be "registered in" a *general explanatory record*. The diagram also allows for the possibility of an *access point* being "registered in" a record in an authority file without being designated as either an authorized form, a variant form, or an explanatory heading (as may be the case in a file that simply links related forms without designating one as the authorized form). An authorized form may be "referenced from" a variant form, or from another authorized form. Finally, an *authorized form*, *variant form*, or *explanatory heading* may be "governed by" *rules*, and those *rules* in turn may be "applied by" an *agency*. Likewise, *rules* may "govern" an *authority record*, *reference record*, or *general explanatory record* (i.e., its form and structure), and an *authority record*, *reference record*, or *general explanatory record* may be "created by", "transcribed by", "modified by", or "issued by" an *agency*.
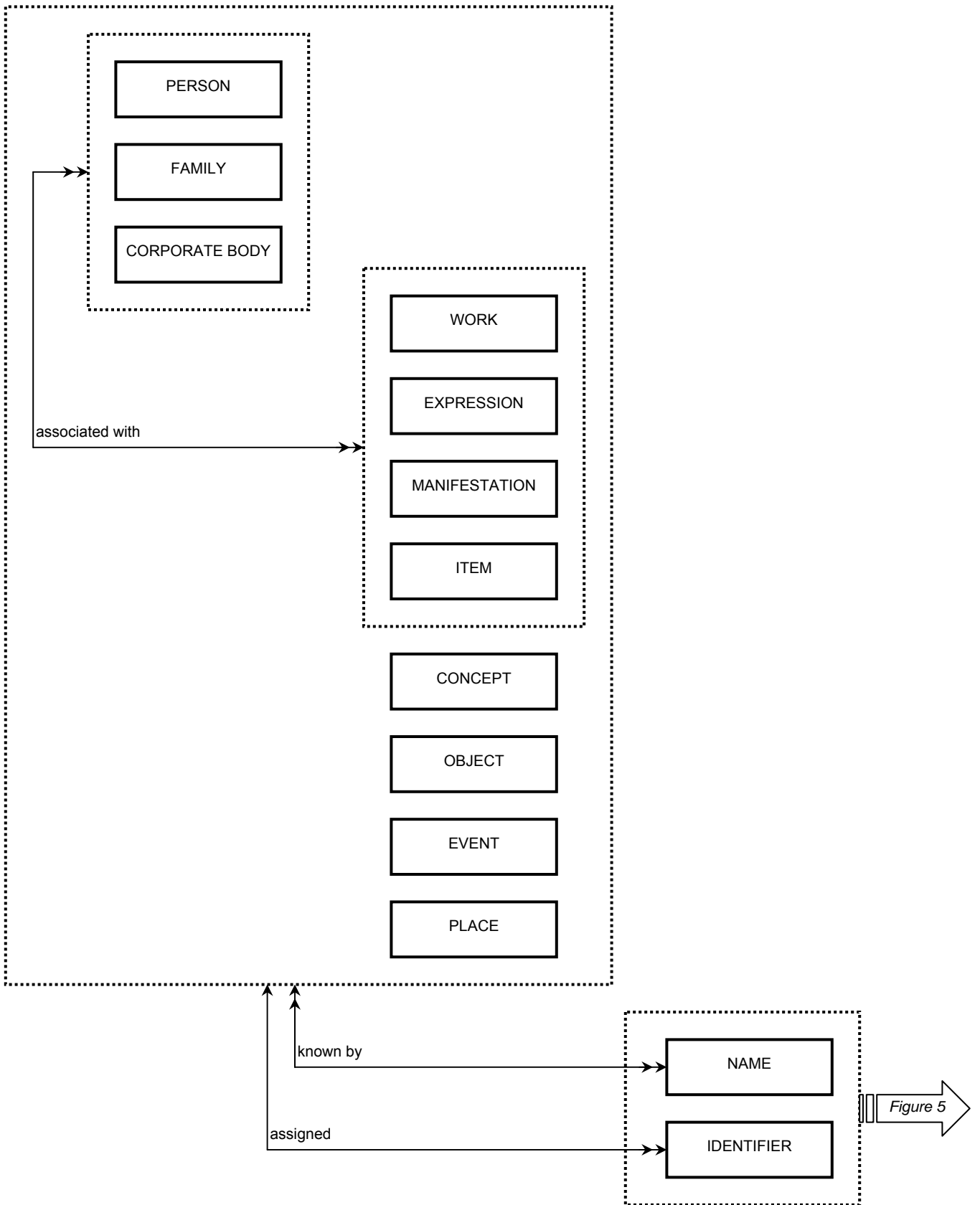
Figure 4: Entity Names and Identifiers 58
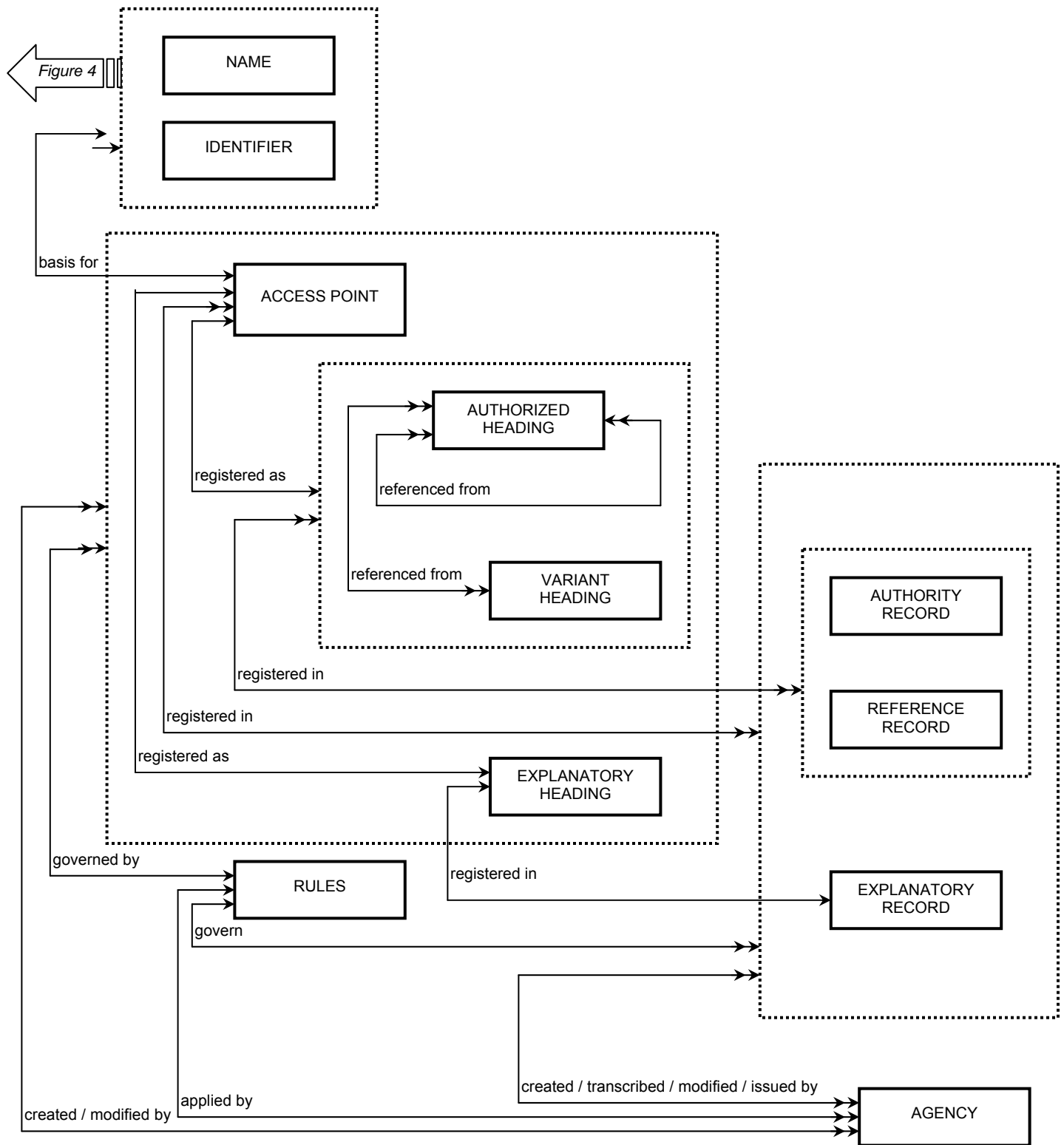
Figure 5: Access Points and Authority Records <mark>in a Library Context</mark>

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