

# **Functional Requirements for Authority Data**

## **A Conceptual Model**

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

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## 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). Following the end of the UBCIM Programme in 2003, the IFLA-CDNL Alliance for Bibliographic Standards (ICABS) took over joint responsibility for the FRANAR Working Group with the British Library as the responsible body.

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: <indec> (Interoperability of Data in E-Commerce Systems), ICA/CDS (International Council on Archives Committee on Descriptive Standards; later, International Council on Archives Committee on Best Practices and Professional 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 Data

## Part I: A Conceptual Model

### 1. Purpose

In libraries, in museums or in archives, a catalogue is a set of organized data that describes the information content managed by the institution. To group the various works by one person or one corporate body, or the various editions of a same work in that catalogue requires controlled access points for authors and titles. These controlled forms represent authorized forms and variant forms, in a given catalogue, for names and titles, which collect together all the forms of a given author's name or of a given title. So the concept of "authority control", which means both management of authorized forms and identification of the entities that are represented by those access points, is integral to the concept of "catalogue". Authority control is beneficial to cataloguers who are able to see at a glance all the access points to an authorized form that exist in a catalogue and to identify quickly the entity. Even more importantly, it benefits end users who can use any form of the author's name or of the title in their searches to retrieve the resources described in the catalogue.

The primary purpose of this conceptual model is to provide an analytical framework for the analysis of functional requirements for the kind of authority data that is required to support authority control and for the international sharing of authority data. The model focuses on data, regardless of how it may be packaged (e.g., in authority records).

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

The functional scope of the study was intentionally limited to the library sector, but the study has been conducted with a view to comparative analysis with other sectors. Section 7 presents a view of how the model applies specifically to the library sector and may help to provide clarification for readers most familiar with that sector.

For the purposes of this model, the users of authority data include both the authority data creators who create and maintain authority files and end users who use authority information either through direct access to authority files or indirectly through the controlled access points and reference structures in library catalogues, national bibliographies, etc.

For the purposes of this study, an authority record is defined as the aggregate of information about an instance of an entity whose name is used as a controlled access point for bibliographic citations or records in a library catalogue or bibliographic file.

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 (GARR)*<sup>1</sup> and/or cataloguing rules. In current practice, the authority record normally contains the authorized form of name for the entity as established by the library as the preferred form for displays in its catalogue, as well as variant forms of name and related names also used as controlled access points. In addition, the authority record may contain information pertaining to the entity (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 controlled access points were established, the sources consulted, the cataloguing agency responsible for establishing the controlled access point. It may also identify the agency responsible for establishing specific preferred forms of name.

For the purposes of this study, however, there are no *a priori* assumptions made about the physical structure of authority data, nor are there any assumptions made as to whether the data are 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 data of all types. The entity relationship diagram (section 3.3) and the entity definitions (section 3.4) are intended to reflect authority data for names (personal, family, corporate, and geographic names), title authority data (uniform titles and collective uniform titles), name-title authority data, subject authority data (subject terms, thesauri terms, and classification indicia), and authority data for various types of identifiers (standard numbers, codes, etc.). However, the detailed analysis of entity attributes (section 4) and relationships (section 5) focuses only on library authority data for name controlled access points associated with persons, families, and corporate bodies, and for name-title and title controlled access points associated with works, expressions, manifestations, and items. In those sections, attributes and relationships associated exclusively with other types of authority data (such as subject authority data) are not included. Management information that may be maintained as part of authority data, such as version control information or treatment decisions about the management of the resource described by the data, are also not included.

### **3. Entity-Relationship Diagram and Definitions**

#### **3.1 Entity-Relationship Methodology**

The methodology used to build this conceptual model is the same entity analysis technique used in the *Functional Requirements for Bibliographic Records (FRBR)*<sup>2</sup>. As described in section 2.3 of *FRBR*, the first step is the identification of the key objects that are of interest to users of information in a particular domain. Each of these key objects, or *entities*, then serves as the focal point for a cluster of data. A model developed using these techniques also depicts the relationships between one type of entity and another type of entity.

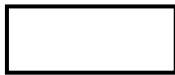
Once the high-level structure for the model has been laid out by identifying the entities and the relationships between those entities, the next step is to identify the primary characteristics or *attributes* of each entity. At a more detailed level, the model can also depict the relationships that may exist between instances of entities.

The entity-relationship model described in the following section has been used in this study to assess the relevance of each attribute and relationship to the set of user tasks defined later in this document.

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 other entities laid out in that model. 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 data are focused and the names and/or identifiers by which those entities are known and on which the controlled access points for those entities will be based.

### 3.2 Diagramming Conventions



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



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.

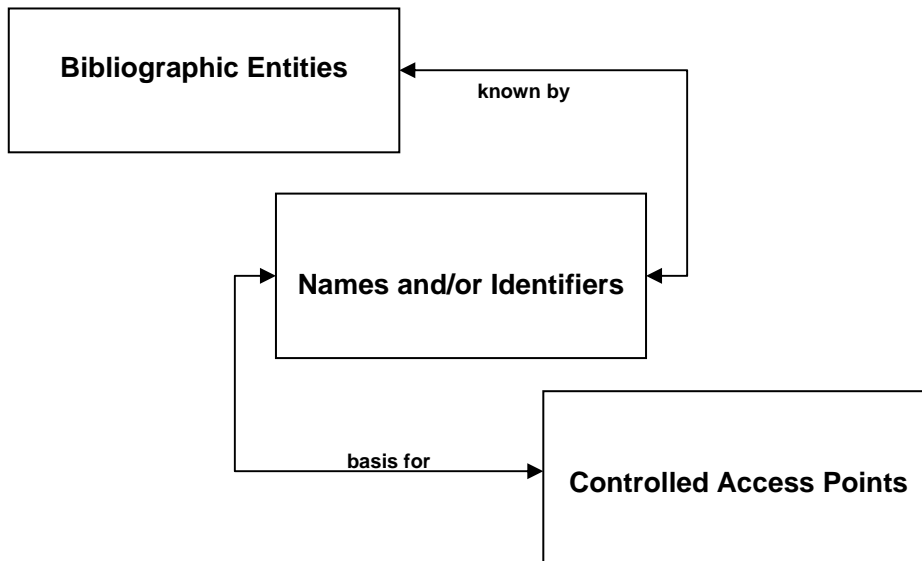


A double-headed arrow on a line represents a relationship in which any given instance of the entity at the opposite end of the line may be associated with one or more instances of the entity to which the arrow is pointing.

### 3.3. Entity-Relationship Diagram

The fundamental basis for the conceptual model is illustrated in **Figure 1**. The model can be simply described as follows: Entities in the bibliographic universe (such as those identified in the *Functional Requirements for Bibliographic Records*) are known by names and/or identifiers. In the cataloguing process (whether it happens in libraries, museums, or archives), those names and identifiers are used as the basis for constructing controlled access points.





**Figure 1: Fundamental Basis for the Conceptual Model**

A fuller form of the conceptual model for authority data is presented graphically in the diagram in **Figure 2**. The entities depicted in the diagram are defined in section 3.4.

**Entities:** The entities depicted in the diagram represent the key objects of interest to the users of authority data. The resulting diagram represents a model of the relationships between those entities, not a model for an authority record, which is a specific application of authority data.

The entities on which authority data are focused (i.e., the ten entities defined in *Functional Requirements for Bibliographic Records*<sup>2</sup>—*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 *controlled 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*.

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 terms, 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.

**Relationships between entities:** The relationships depicted in the diagram (**Figure 2**) 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 (**Figure 2**) 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 (**Figure 2**) represent the associations between the entities *name* and *identifier* and the formal or structural entity *controlled access point*, and the association between that entity and the entities *rules* and *agency*. A specific *name* or *identifier* may be the “basis for” a *controlled access point*, and conversely a *controlled access point* may be based on a *name* or *identifier*.

A *controlled access point* may 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. The controlled access point will be centred on an instance of the *work* entity. However, in order to function effectively, the access point will need to reflect the relationship of that work not only to instances of the *name* entity (i.e., to the various titles by which the work is known) but its relationship to instances of the other entities depicted in the upper half of the diagram as well (most notably the person, family, or corporate body responsible for the work). The result is a name/title access point.

*Controlled access points* may be “governed by” *rules*, and those *rules* in turn may be “applied by” one or more *agencies*. Likewise, *controlled access points* may be “created by”, or “modified by” one or more *agencies*.

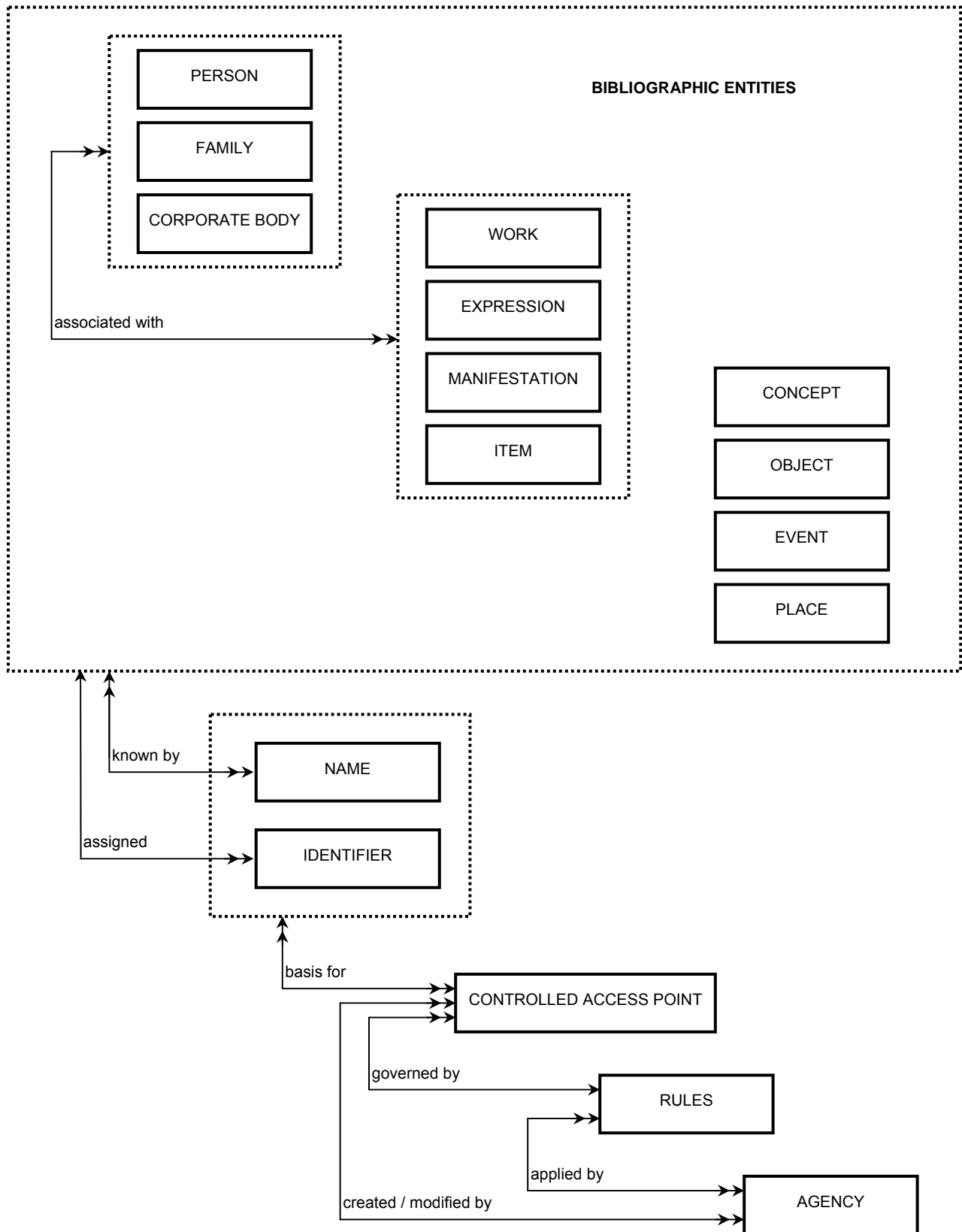
These relationships are further described in section 5.2.

**Relationships between instances of an entity:** 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 5.3.

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 5.4.

Other types of relationships that may operate between specific instances of the entity *controlled 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 5.5.

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 a controlled 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: Conceptual Model for Authority Data**

### 3.4 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 vary in their treatment of personas (i.e., bibliographic identities) established or adopted by the same individual. Some cataloguing rules recognize pseudonyms used by an individual as separate personas and an authorized form will be established for each persona with see also references connecting the resulting authorized forms of names for those personas. Other cataloguing rules recognize only one persona for an individual and pseudonyms used; one persona is the authorized form and the names of other personas are treated as variant forms of name for the individual.*

#### **Family**

Two or more persons related by birth, marriage, adoption, or similar legal status, or otherwise present themselves as a family.

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 musical performing groups, groups of visual artists, and dance companies producing collective work.

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<sup>3</sup>]

Includes texts (written or spoken), musical works, graphic works, photographic works, moving image 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 or the panels of an altarpiece).

*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, from one discipline to another or from one cataloguing agency to another. Consequently, bibliographic conventions established by various cultures, national groups, or cataloguing agencies 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 alphanumeric, 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).

Includes the particular notes, phrasing, etc. resulting from the realization of a musical work (e.g., through performance).

Includes the specific sequences of moving images, combined with sounds or not, that are available in a given version of a cinematic work.

Excludes aspects of physical form, such as typeface and page layout, if they 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 controlled access points incorporating additions that reflect attributes of an expression (e.g., language of expression, form of expression) normally serve to collocate 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, PDF files, MP3 files, 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.

Includes categories of persons, populations, biological species, classes of objects, etc.

*Note: For the purposes of this study, entities that are 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, plants, insects).

Includes individual animate objects occurring in nature, other than human beings (except human beings known only as fossils and whose activity is otherwise unknown) (e.g., animals, birds, insects, as individuals, not as species).

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 that are 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 and future 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 that are categorized as events but do not function as corporate bodies 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 and future locations.

Includes geographic features (e.g., lakes, mountains, rivers).

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, numerals, or symbols.

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 manifestation 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 controlled 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 identifiers assigned by registration authorities identifying content (e.g., ISRC, ISWC, ISAN).

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

Includes thematic index numbers assigned to a musical work by the publisher, or a musicologist.

Includes catalogue raisonné numbers.

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

Includes classification numbers referencing specific entities (e.g., a classification number assigned to a particular painting).

Includes registered trademarks.

*Note: Some of these identifiers may be included in authority data but kept confidential for reasons of privacy.*

*Note: These identifiers are limited to those associated with entities and do not include record numbers assigned to authority records.*

**Controlled Access  
Point**

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

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

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 consisting of 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.

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.

*Note: The focus of this model is names and terms that are controlled through an authority file.*

## **Rules**

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

Includes cataloguing rules and interpretations of those rules.

Includes coding conventions.

## **Agency**

An organization responsible for creating or modifying a controlled access point. The agency is responsible for application and interpretation of the rules it uses.

Includes libraries, national bibliographic agencies, bibliographic utilities, consortia, museums, archives, rights management organizations, etc.

## **4. Attributes**

Attributes for each of the entities defined above are listed and defined in sections 4.1 through 4.16 below.

The attributes listed and defined below were derived from an examination of data identified and/or defined in FRBR, GARR, *UNIMARC Manual - AuthoritiesFormat*<sup>4</sup>, *Mandatory Data Elements for Internationally Shared Resource Authority Records*<sup>5</sup> (MLAR), as well as in the *International Standard Archival Authority Record for Corporate Bodies, Persons and Families*<sup>6</sup> (ISAAR(CPF)). Thus, they may represent a broader list of possible attributes than may traditionally be recorded in library authority data. There is no intended implication that the attributes are mandatory or required for any application.

Other models, such as the *Encoded Archival Context*<sup>7</sup>, 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.

Some of the attributes defined in the model could be considered as components of the entity rather than attributes of the entity. Considering them as components would be justified if it were necessary to define attributes for the components that differ from those of the aggregate entity or if the mapping of user tasks to the components differs from the mapping of user tasks to the aggregate entity. For purposes of this model, neither of these cases was deemed to apply.

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, treated 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.

#### 4.1 Attributes of a Person

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

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 4.12 - Attributes of a name.)

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

Includes phrases associating the person with another person (e.g., “Follower of Rembrandt”)

<b>Gender*</b>	A gender by which the person is identified (e.g., male, female).
<b>Place of birth*</b>	The town, city, province, state, and/or country in which the person was born.
<b>Place of death*</b>	The town, city, province, state, and/or country in which the person died.
<b>Country*</b>	A country with which the person is identified.
<b>Place of residence*</b>	A country, state/province, city, etc. in which the person resides or has resided.
<b>Affiliation*</b>	A group with which the person is affiliated or has been affiliated through employment, membership, cultural identity, etc.
<b>Address*</b>	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.
<b>Language of person*</b>	A language the person uses when writing for publication, broadcasting, etc.
<b>Field of activity*</b>	A field of endeavour, area of expertise, etc. in which the person is engaged or was engaged.
<b>Profession/occupation*</b>	A profession or occupation in which the person works or

worked.

**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*.

## 4.2 Attributes of a Family

**Type of family** A categorization or generic descriptor for the type of family.  
Includes terms such as clan, dynasty, family unit, patriarchy, matriarchy, etc.

**Dates of family** Dates associated with the family.

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

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

## 4.3 Attributes of a Corporate Body

**Place associated with the corporate body** A geographic place at any level associated with the corporate body.  
Includes countries, states, provinces, counties, etc.  
Includes cities, towns, regional municipalities, etc.  
Includes a location in which a meeting, conference, exhibition, fair, etc. is held.  
Includes location of headquarters.

**Date associated with the corporate body** A date or range of dates on which a meeting, conference, exhibition, fair, etc. is held, or a date with which the corporate body is otherwise associated.  
Includes dates of establishment of organizations, business firms, etc.  
Includes dates of existence of an organization, government, etc.

**Other designation associated with the** A word, phrase, or abbreviation indicating incorporation or legal status of the body, or any term serving to differentiate

<b>corporate body</b>	<p>the body from other corporate bodies, persons, etc. [FRBR]</p> <p>Includes terms indicating incorporation, etc. (e.g., GmbH).</p> <p>Includes terms designating the type of body or type of jurisdiction (e.g., Fraternal Order, County, Musical Group).</p> <p>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).</p>
<b>Type of corporate body*</b>	<p>A categorization or generic descriptor for the corporate body.</p> <p>Includes terms such as government body, conference, etc.</p>
<b>Language of the corporate body*</b>	<p>A language that the corporate body uses in its communications.</p>
<b>Address*</b>	<p>The address of the corporate body's office(s).</p> <p>Includes addresses for the corporate body's headquarters and/or other offices.</p> <p>Includes street address, postal address, e-mail address, etc.</p> <p>Includes the http address of a World Wide Web site operated by the corporate body.</p>
<b>Field of activity*</b>	<p>A field of business in which the corporate body is engaged, its area of competence, responsibility, jurisdiction, etc.</p>
<b>History*</b>	<p>Information pertaining to the history of the corporate body.</p> <p>Includes historical information pertaining to an organization, institution, etc.</p>

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

#### 4.4 Attributes of a Work

<b>Form of work</b>	<p>A class to which the work belongs. [FRBR]</p> <p>Includes forms, genres, etc. (e.g., novel, play, poem, essay, biography, symphony, concerto, sonata, map, drawing, painting, photograph, etc.)</p>
<b>Date of the work</b>	<p>The first date (normally the year) associated with the work.</p>



	<p>[FRBR, modified]</p> <p>Includes single dates and ranges of dates.</p> <p>Includes date of creation.</p> <p>Includes date of first publication or release.</p>
<b>Medium of performance</b>	<p>The instrumental, vocal, and/or other medium of performance for which a musical work was originally conceived. [FRBR]</p> <p>Includes individual instruments, instrumental ensembles, orchestras, etc.</p> <p>Includes individual voices, vocal ensembles, choirs, etc.</p> <p>Includes other objects to be used in the performance of the work (e.g., spoons, washboard).</p>
<b>Subject of the work*</b>	<p>The subject aspects of the work and its content.</p> <p>Includes subject terms.</p> <p>Includes classification numbers.</p>
<b>Numeric designation</b>	<p>A number assigned to the work. [FRBR, modified]</p> <p>Includes serial numbers, opus numbers assigned by the composer of a musical work, etc.</p>
<b>Key</b>	<p>The set of pitch relationships that establishes a single pitch class as a tonal centre for a musical work. [FRBR]</p> <p>Includes the key in which the work was originally composed.</p>
<b>Place of origin of the work*</b>	<p>The country or other territorial jurisdiction or cultural area from which the work originated.</p> <p>Includes area of origin, etc.</p>
<b>Original language of the work*</b>	<p>The language in which the work was first expressed.</p>
<b>History*</b>	<p>Information pertaining to the history of the work.</p> <p>Includes historical information pertaining to a work, including title changes for continuing resources.</p>

**Other distinguishing characteristic** Any characteristic that serves to differentiate the work from another work with the same title. [FRBR]

Includes parts of intellectual or artistic content.

Includes musical incipits.

\*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 controlled 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.*

#### 4.5 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.

**Technique** The method used to create a graphic image (e.g., engraving, etc.) or to realize motion in a projected image (e.g., animation, live action, computer generation, 3D, etc.) [FRBR]

Includes statements of technique used to distinguish expressions of a work.

**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; abridged ed.).

*Note: The attributes of an expression listed above include only those that are normally reflected in controlled 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.*

#### **4.6 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 controlled 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.*

## 4.7 Attributes of an Item

**Location of item\*** The collection and/or institution in which the item is held, stored, or made available for access.

\*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 controlled 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.*

## 4.8 Attributes of a Concept

**Type of concept\*** A categorization or generic descriptor for the concept.  
  
Includes categories 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*.

## 4.9 Attributes of an Object

**Type of object\*** A categorization or generic descriptor for the object.  
  
Includes categories 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 controlled 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. They also do not include other attributes of animate objects and naturally occurring objects that would not be recorded in authority records.*

#### 4.10 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*.

#### 4.11 Attributes of a Place

**Coordinates\*** The degrees, minutes, and seconds (or degrees, minutes, and decimal parts of minutes) 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*.

#### 4.12 Attributes of a Name

**Type of name** The category of a name.

Includes personal names, corporate names, names of families, trade names and titles of works, expressions, and manifestations.

<b>Scope of usage</b>	The form 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.
<b>Dates of usage</b>	Dates associated with the use of a particular name established by a person, corporate body, or family.
<b>Language of name</b>	The language in which the name is expressed.
<b>Script of name</b>	The script in which the name is rendered.
<b>Transliteration scheme of name</b>	The scheme used to produce the transliterated form of the name.

#### 4.13 Attributes of an Identifier

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

#### 4.14 Attributes of a Controlled Access Point

<b>Type of controlled access point</b>	<p>A categorization or generic descriptor for the controlled access point.</p> <p>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 or access points consisting of a combination of names such as personal name/title access points).</p>
<b>Status of controlled access point</b>	<p>An indication of the level of establishment of the controlled access point for the preferred form of name for the entity (e.g., provisional).</p>
<b>Designated usage of controlled access point</b>	<p>An indication of whether the rules under which the controlled access point was constructed designate it as an authorized (or preferred) form or as a variant (or non-preferred) form.</p>
<b>Undifferentiated access point</b>	<p>An indication that the controlled access point for the authorized/preferred form of name is insufficiently precise to differentiate between two or more entities identified by the same name.</p>
<b>Language of base access point</b>	<p>The language in which the base access point is recorded.</p>
<b>Language of cataloguing</b>	<p>The language in which additions to the base access point are recorded.</p>
<b>Script of base access point</b>	<p>The form of graphic characters in which the data in the base access point are recorded.</p>
<b>Script of cataloguing</b>	<p>The form of graphic characters in which any additions to the base access point are recorded.</p>
<b>Transliteration scheme of base access point</b>	<p>An indication of the scheme used in transliterating the base access point.</p>
<b>Transliteration scheme of cataloguing</b>	<p>An indication of the scheme used in transliterating any additions to the base access point.</p>

**Source of controlled access point**

The publication or reference source used in establishing the form of name or title on which the controlled access point is based.

Includes the title, publisher, date, etc. of the resource for which the controlled access point was originally created.

Includes the title, edition, etc. of the reference source(s) used to establish the conventional name or title.

**Base access point**

All elements in a controlled access point that are integral to the name or identifier that forms the basis for the access point.

Includes the name element in a controlled access point beginning with the name of a person, family, or corporate body.

Includes the title of the person element in a controlled access point that begins with the title of nobility or ecclesiastical title of a person.

Includes the phrase element in a controlled 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 a controlled access point beginning with the name of a superior body.

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

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

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

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

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

Includes the subtitle element in a collective uniform title controlled access point (i.e., a subsequent term or terms used to subdivide the collective uniform title)



## **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 controlled 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 controlled access points.*

## **4.15 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.

#### **4.16 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.

## 5. Relationships

### 5.1 Authority Relationships in the Context of the Model

The sections that follow describe four broad categories of relationships reflected in authority data. The first category (described in section 5.2) comprises the relationships that operate at a generic level between the entity types depicted in the entity-relationship diagram in section 3.2 (**Figure 2**). The second and third categories (described in sections 5.3 and 5.4) 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 5.5) comprises the relationships between specific instances of the entity *controlled 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.).

### 5.2 Relationships Depicted in the High-Level Diagrams

The entity-relationship diagram in section 3.2 (**Figure 2**) shows 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”) may be 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 controlled access points based on those names and identifiers, the rules that govern the form and structure of controlled access points, and the agencies that apply the rules in creating and modifying controlled access points.

### 5.3 Relationships between Persons, Families, Corporate Bodies, and Works

Within authority files there are a number of 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 relationships 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 relationships between a person and a corporate body). These relationships are usually expressed in authority data as the relationship between the authorized names (preferred form of name) given to each entity. These 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 of name for each entity and another (see 5.4 Relationships between Names and Persons, Families, Corporate Bodies, and Works and 5.5 Relationships between Controlled Access Points).

**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 records.

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.)

In addition to the types of relationships listed in **Table 1**, terms added to controlled access points (e.g., editor, illustrator, translator, defendant, typographer, previous owner, etc.) may reflect the specific nature of the relationships 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 “role” relationships are considered out of scope.

Definitions and examples for each of the relationship types identified in **Table 1** are given below in sections 5.3.1-5.3.6. Terminology and symbols used in the examples (authorized heading, see also reference tracing, etc.) is that used in *GARR*<sup>1</sup>, (p. 7):

>	See/Search under	Precedes the authorized heading
<	Used for/See from	Precedes the variant heading
>>	See also	Precedes the related heading
<<	See also from	Precedes the authorized heading

Other communities may use different terminology and symbols. The examples also present suggestions of how the conceptual model might be applied in a particular application of authority data. Examples are not given for those relationships not usually expressed in authority records.

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

Entity Type	Sample Relationship Types
Person ⇒ Person	<ul style="list-style-type: none"> <li>▪ pseudonymous relationship</li> <li>▪ attributive relationship</li> <li>▪ collaborative relationship</li> <li>▪ sibling relationship</li> <li>▪ parent/child relationship</li> </ul>

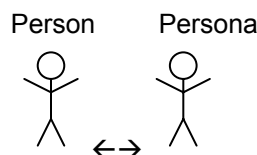
Person ⇔ Family	<ul style="list-style-type: none"> <li>▪ membership relationship</li> </ul>
Person ⇔ Corporate Body	<ul style="list-style-type: none"> <li>▪ membership relationship</li> </ul>
Family ⇔ Family	<ul style="list-style-type: none"> <li>▪ genealogical relationship</li> </ul>
Corporate Body ⇔ Corporate Body	<ul style="list-style-type: none"> <li>▪ hierarchical relationship</li> <li>▪ sequential relationship</li> </ul>
Work ⇔ Work	<ul style="list-style-type: none"> <li>▪ equivalence relationship</li> <li>▪ derivative relationship</li> <li>▪ descriptive relationship</li> <li>▪ whole/part relationship</li> <li>▪ accompanying relationship (part-to-part)</li> <li>▪ sequential relationship</li> <li>▪ shared characteristic relationship</li> </ul>

### 5.3.1 Relationships between Persons

#### ***Pseudonymous relationship***

The relationship between a “real” person(s) (i.e., one or more individuals) and a persona adopted by that individual through the use of one or more pseudonyms.

#### **Example**



This is usually expressed in authority data through links between the authorized names (preferred form of name) given to each entity (see also references) and/or information notes:

#### *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:

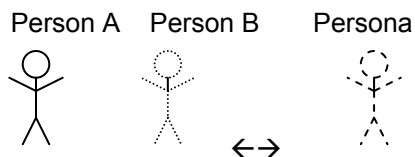
>> Michaels, Barbara, 1927-

>> Peters, Elizabeth

#### *See also reference tracings:*

<< Michaels, Barbara, 1927-

<< Peters, Elizabeth



*Authorized heading*

Erckmann, Émile (1822-1899)

*Information note/see also references:*

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

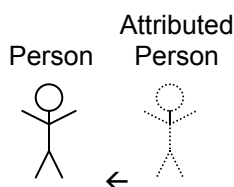
*See also reference tracing:*

<< Erckmann-Chatrian

**Attributive relationship**

The relationship between one person and another person (either a “real” individual or a persona) to whom one or more works by the former have been attributed, either erroneously or falsely.

**Example**



This is usually expressed in authority data through links between the authorized names given to each entity (see also references) and/or information notes:

*Authorized heading*

Brutus, Marcus Junius

*Information note/see also references:*

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**



This relationship is usually expressed in authority data as the relationship between the authorized names given to each entity in reference to a particular work, expression, manifestation, or item:

*Authorized heading:*

Strauss, Richard, 1864-1949

*Information note:*

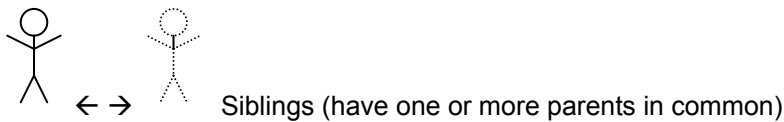
Composer of *Ariadne auf Naxos*.

*Authorized heading:*  
Hofmannsthal, Hugo von, 1874-1929  
*Information note:*  
Librettist of *Ariadne auf Naxos*.

### **Sibling relationship**

The relationship between two persons who have the same “parent(s)” (in an actual family or within a group). This type of relationship is often presented by virtue of the relationship to the parents or family or group to which the “siblings” belong. See “Membership relationship” in 5.3.2 Relationships between Persons and Families and 5.3.3 Relationships between Persons and Corporate Bodies.

#### **Example**

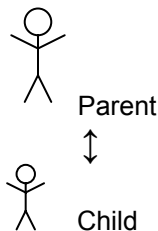


This type of relationship is rarely expressed in bibliographic or authority data.

### **Parent/Child relationship**

The relationship between two persons, one of whom is a “parent” or “child” of the other. This type of relationship is often presented by virtue of the relationship to the family or group to which the “child” belongs. See “Membership relationship” in 5.3.2 Relationships between Persons and Families and 5.3.3 Relationships between Persons and Corporate Bodies.

#### **Example**



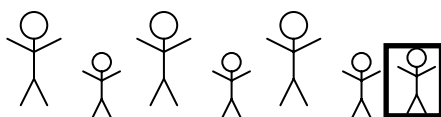
This type of relationship is rarely expressed in bibliographic or authority data.

## **5.3.2 Relationships between Persons and Families**

### **Membership relationship**

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

#### **Example**



This is usually expressed in authority data through links between the authorized names given to each entity (see also references) and/or information notes:

*Authorized heading*

Wulz, Wanda (1903-1984)

*Information note/see also references:*

Photographe italienne née et morte à Trieste

[Translation: Italian photographer born and died in Trieste.]

*See also reference/reference tracing:*

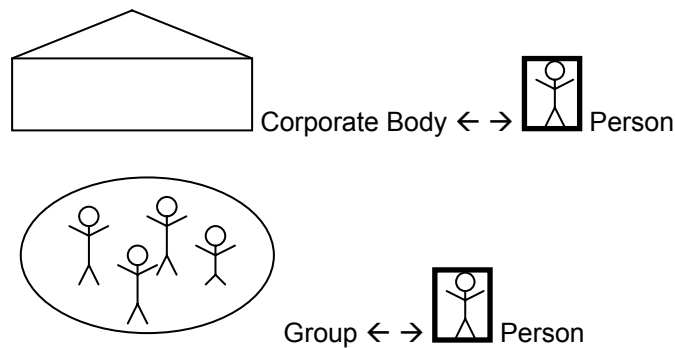
>><< Wulz (famille)

### 5.3.3. 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**



This is usually expressed in authority data through links between the authorized names given to each entity (see also references), cataloguer's notes, and/or information notes:

*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]

*Authorized heading:*

Buddy Rich Band

*See also reference/reference tracing:*

>><< Rich, Buddy, 1917-

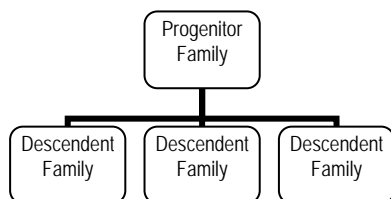


### 5.3.4 Relationships between Families

#### ***Genealogical relationship***

The relationship between one family and another that descended from the first or is the predecessor to the other.

#### **Example**



This is usually expressed in authority data through links between the authorized names given to each entity (see also references), catalogue's notes, and/or information notes:

#### *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. – Grand encyclopédie (Conti (maison de)).

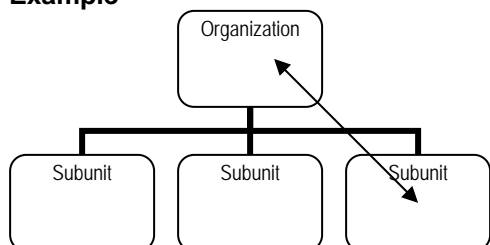
The House of Conti is a junior branch of the House of Condé. – Grand Larousse (Conti, Conty (maison de)).

### 5.3.5 Relationships between Corporate Bodies

#### ***Hierarchical relationship***

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

#### **Example**



This relationship is usually expressed in authority data through the hierarchical structure of the preferred form of name given to the subordinate body (to include the preferred form of name of the higher level body), through see references, and/or explained through information notes or catalogue's notes:

*Authorized heading:*

Journée de la kinésithérapie (1994 ; Nancy)

*Information note:*

Organisée dans le cadre du 11<sup>e</sup> 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 l'Association française de kinésithérapie respiratoire et cardio-vasculaire.

*See reference tracing:*

<< Congrès de pneumologie de langue française (11 ; 1994 ; Nancy). Journée de la kinésithérapie

*Authorized heading:*

Carl A. Kroch Library (Cornell University)

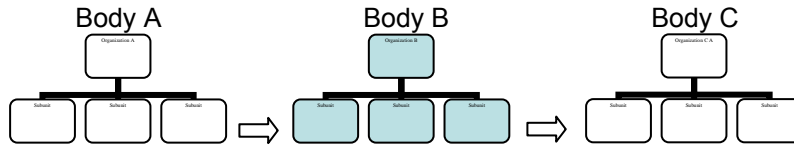
*See reference tracing:*

<< Cornell University. Carl A. Kroch Library

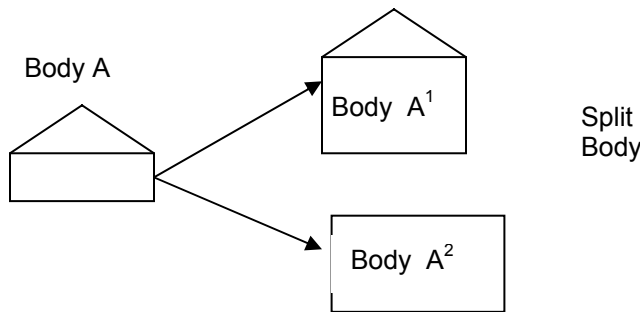
**Sequential relationship**

The relationship between two or more corporate bodies (i.e., organizations, meetings, conferences, etc.) that follow the first in order or time (e.g., predecessor/successor, splits, mergers, subsequent meetings/conferences, etc.).

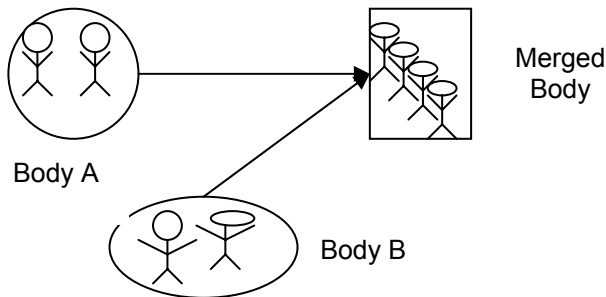
**Example**



Or



Or



This relationship is usually expressed in authority data through see also references, information notes, and/ or catalogue's notes linking the authorized names given to each entity:

*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.)

*Authorized heading:*

Eppupopedanormaali (yhitye)

*Information note/see also references:*

Eppupopedanormaali on Eppu Normaalin, Popedan ja Röp Popedan yhteisköönpanon nimi:

[*Translation: Eppupopedanormaali was formed by the amalgamation of three musical groups: Eppu Normaali, Popeda, and Röp Popeda. For works entered under those groups, search also under:*]

>> Eppu Normaali (yhitye)

>> Popeda (yhitye)

>> Röp Popeda (yhitye)

*See also reference tracings:*

<< Eppu Normaali (yhitye)

<< Popeda (yhitye)

<< Röp Popeda (yhitye)

*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

*Authorized heading:*

Technical Thick Film Symposium (1<sup>st</sup> : 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 (2<sup>nd</sup> : 1967 : Boston, Mass.)

>> Hybrid Microelectronics Symposium (3<sup>rd</sup> : 1968 : Rosemont, Ill.)

>> International Hybrid Microelectronics Symposium (5<sup>th</sup> : 1970 : Beverly Hills, Calif.)

*See also reference tracings:*

<< Symposium on Hybrid Microelectronics (2<sup>nd</sup> : 1967 : Boston, Mass.)

<< Hybrid Microelectronics Symposium (3<sup>rd</sup> : 1968 : Rosemont, Ill.)

<< International Hybrid Microelectronics Symposium (5<sup>th</sup> : 1970 : Beverly Hills, Calif.)

### 5.3.6 Relationships between Works <sup>8</sup>

#### ***Equivalence relationship***

The subjective relationship between one manifestation or item and another that embodies the same intellectual or artistic content (work or work/expression) and authorship, but are packaged or presented in different ways (e.g., an original and exact copies, digitizations, facsimiles,

reprints, photocopies, microform versions, and similar other reproductions, such as, an original printed map on paper and a photocopy or a microform copy or a digital copy of it, a sound recording on a disk and a CD of the same music, a motion picture of a reel and on a videocassette or DVD, etc.)

This is a type of shared characteristic, where the characteristic in common is the work. The equivalence is subjective because it depends on what the user deems to be the “same.” However, this can be a very useful relationship to bring together all manifestations and items that embody the same work or work/expression.

This relationship is usually expressed in bibliographic data through the use of a controlled access point for the work in common (the shared characteristic), and/or through notes or through linked holdings data, rather than in authority data.

### ***Derivative relationship***

The relationship comprises two types. It includes relationships between an original work and a broad range of modifications from the original, including variations or versions of that work, such as editions, revisions, translations, summaries, abstracts, and digests. It also includes new works that are adaptations or modifications that become new works but are based on an earlier work (improvisations, etc.); new works that are changes of genre (transformations, dramatizations, novelizations, etc.); and, new works based on the style or thematic content of other works (free translations, paraphrases, imitations, parodies, etc.).

This relationship, also known as a “horizontal relationship”, is usually expressed in authority data as the relationship between the authorized names given to each entity, and/or through information notes. It has also been expressed in bibliographic data through the use of a controlled access point for the preferred form of name for the original work with the extension of identifying elements to name the derived expression or manifestation.

### **Example**

[Work X] → [Work X']

#### *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]

#### *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

#### *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.]

*Authorized heading:*

Poe, Edgar Allan, 1809-1849.  
[Fall of the house of Usher]

*See also reference:*

For a musical composition based on this work search under:  
>> Deubssy, Claude, 1862-1918. Chute de la maison Usher

*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

### ***Descriptive relationship***

The relationship between a target work or expression or manifestation or item and a new work that refers to that target as its subject (e.g., criticism, commentary, review, casebook, etc. and the object of that analysis).

This type of relationship is usually expressed in bibliographic data through a subject controlled access point for the target work rather than through authority data.

### ***Whole/part relationship***

The relationship between a work and one or more works that form part of that larger work. (e.g., the whole anthology and its individual works, the whole monographic series and its individual monographic parts, the whole serial and an individual special thematic issue or an article of importance.

This type of relationship, also known as a “vertical relationship” or “hierarchical relationship”, is usually expressed in authority data through the use of see also references and/or information notes or catalogue’s notes. It also is often expressed through bibliographic data using the controlled access point for the preferred form of name to identify the “whole” and/or notes to describe the relationship of the part to its whole; or through the use of contents notes and/or controlled access points for the preferred form of name for each of the parts to describe the relationship between the whole and its parts.

### **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

### ***Accompanying relationship (Part-to-Part)***

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 or to augment the related work, such as a teacher's guide or incidental music to a play; or intended to **complement** or be a **companion** to another work, such as a set of maps to a video travelogue, a computer disk to accompany a textbook, a set of coloured plates to accompany a text, the equal parts of a kit, etc.).

This type of relationship is usually expressed in bibliographic data using an addition to the physical description, notes, and/or controlled access points for the preferred form of name of the related part, rather than through authority data. However, accompanying relationships can appear in authority data, especially when there are many manifestations involved, to provide see also references or information notes.

### **Examples**

*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

*Authorized heading:*

Barbison, John. Incidental music for Shakespeare's The merchant of Venice

*See also reference tracing:*

<< Shakespeare, William, 1564-1616. Merchant of Venice

### ***Sequential relationship***

The relationship between one work and another that is a successor or a predecessor of that work (e.g., a sequel, a serial or series that has changed title).

This type of relationship, known as a "chronological relationship", is usually expressed in bibliographic data through a controlled access point for the preferred form of name for the prequel and/or sequel and/or a note, or in authority data through a see also reference and/or an information note or cataloguer's note. It could be indicated through the labelling of the controlled access point for the preferred forms of name of the related works within an authority record for the "family of works."

### **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., 15<sup>th</sup> ed. (Amiens, Treaty of, March 27, 1802; signed by Britain, France, Spain, and the Batavian Republic on basis of preliminaries of Oct. 1801)

*Authorized heading:*

African historical dictionaries

*See also reference:*

>> Historical dictionaries of Africa

*See also reference tracing:*

<< Historical dictionaries of Africa

*Cataloguer's note:*

Phone call to publisher, Aug. 2, 2005 (Historical dictionaries of Africa; name was changed from African historical dictionaries in 2003)

### **Shared characteristic relationship**

The relationship between two works/expression/manifestations/items that have some characteristic in common, apart from any of the other relationships (e.g., same language, same color binding, same publisher, same date of issuance, etc.).

This type of relationship is expressed through the common access point in bibliographic or authority data for the entities involved.

## **5.4 Relationships between Names and Persons, Families, Corporate Bodies, and Works (“Known by” Relationships)**

Within authority files there are also a number of other relationship types that operate between specific instances of the entity *name* and 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 are normally reflected implicitly as name to name relationships by means of a “see” reference from a variant form to the authorized form of name or by means of “see also” references between related authorized forms of name for two or more related entities.

**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. Note that these relationship types do not include those cases in which a person is known by multiple identities (see section 5.3 for person-to-person or corporate body-and-person relationships).

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 5.4.1 – 5.4.4.

**Table 2: Relationships between Names and Persons, Families, Corporate Bodies, and Works (“Known by” Relationships)**

<b>Entity Type</b>	<b>Sample Relationship Types</b>
Person ⇒ Name	<ul style="list-style-type: none"><li>▪ real name relationship</li><li>▪ pseudonym relationship</li><li>▪ secular name relationship</li><li>▪ name in religion relationship</li><li>▪ official name relationship</li><li>▪ earlier name relationship</li><li>▪ later name relationship</li><li>▪ alternative linguistic form relationship</li><li>▪ other variant name relationships</li></ul>
Family ⇒ Name	<ul style="list-style-type: none"><li>▪ alternative linguistic form relationship</li></ul>
	<ul style="list-style-type: none"><li>▪</li></ul>

Corporate Body ⇔ Name	<ul style="list-style-type: none"> <li>▪ expanded name relationship</li> <li>▪ acronym / initials / abbreviations relationship</li> <li>▪ pseudonym relationship</li> <li>▪ alternative linguistic form relationship</li> <li>▪ other variant name relationships</li> </ul>
Work ⇔ Name	<ul style="list-style-type: none"> <li>▪ alternative linguistic form relationship</li> <li>▪ conventional name relationship</li> <li>▪ other variant name relationships</li> </ul>

### 5.4.1 Relationship between Persons and Names

#### ***Real name relationship***

The relationship between a person and a name that person uses as his or her real name, regardless of the fullness of the name.

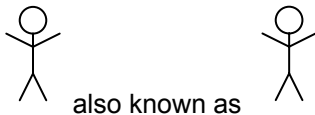
#### **Example**



The person known by his real name, Eric Arthur Blair

#### ***Pseudonym relationship***

The relationship between a person and a name that person uses as a pseudonym, including stage names and other assumed names.



The person linked to his/her “bibliographic identity” under a pseudonym.

#### ***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]

### **Official name relationship**

The relationship between a person and a name assigned to the person in their official capacity.

### **Example**

*Variant heading:*

United States. President (1961-1963 : Kennedy)

*See also reference:*

See also under:

>> Kennedy, John Fitzgerald, 1917-1963

### **Earlier name relationship**

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

### **Examples**

*Variant heading:*

Beaconsfield, Benjamin Disraeli, Earl of

*See reference:*

See under the author's earlier name:

> Disraeli, Benjamin

*Variant heading:*

Nicholls, Charlotte

*See reference:*

See under the author's name before marriage:

> Brontë, Charlotte

### **Later name relationship**

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

### **Examples**

*Variant heading:*

Thibeault, Jacques-Anatole

*See reference:*

See under the author's later name:

> France, Anatole

*Variant heading:*

Barrett, Elizabeth

*See reference:*

See under the author's married name:

> Browning, Elizabeth Barrett

### **Alternative linguistic form relationship**

The relationship between a person and an alternative linguistic form of name by which that person is known. This includes translations of a name into other languages.

## Example

*Authorized heading:*

Horace

*See reference tracing:*

< Horatius Flaccus, Quintus

### ***Other variant name relationships***

The relationship between a person and several other variations on a name, such as orthographic relationships (spelling variations, transliterations, punctuation variations, capitalization variations), word order relationships (inversions, permutations), alternative name/synonym relationships (bynames, nicknames, courtesy names), etc.

For some purposes it may be sufficient to simply identify all of these as “variant forms” of name for a person and to link them to the preferred form of name for the name of the person.

## Examples

*Authorized heading:*

Ruth, Babe, 1895-1948

*See reference tracing:*

< Bambino, 1895-1948

< Sultan of Swat, 1895-1948

*Authorized heading:*

González Ortega, Alberto

*See reference tracing:*

< Ortega, Alberto González

## 5.4.2 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]

## 5.4.3 Relationship 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 / abbreviations relationship***

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

## Example

*Variant heading:*

United Nations International Children's Emergency Fund

*See reference:*

See under the initials:

> UNICEF

### ***Pseudonym relationship***

The relationship between a corporate body and a name that body uses as a pseudonym. For example, General Mills uses the personal name pseudonym Betty Crocker in its advertising and promotional materials. This type of relationship is rarely expressed in bibliographic or authority data..

### ***Alternative linguistic form relationship***

The relationship between a corporate body and an alternative linguistic form of name by which that body is known. This includes translations of the name for the corporate body.

## Example

*Authorized heading:*

United Nations

*See reference tracing:*

< Nations Unies [French]

< Организация Объединённых Наций [Russian]

### ***Other variant name relationships***

The relationship between a corporate body and a name by which that body is known, such as orthographic relationships (spelling variations, transliterations, punctuation variations, capitalization variations), word order relationships (inversions, permutations), etc.

## Examples

*Authorized heading:*

Women of Color Quilters Network

*See reference tracing:*

< Women of Colour Quilters Network

## 5.4.4 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]

### ***Conventional name relationship***

The relationship between a work and a conventional name by which that work is known.

#### **Example**

*Authorized heading:*  
Beethoven, Ludwig van, 1770-1827. Symphonies, no. 3, op. 55, E $\flat$  major  
*See reference tracing:*  
< Beethoven, Ludwig van, 1770-1827. Eroica symphony

### ***Other variant name relationships***

The relationship between a work and a name by which that work is known, such as orthographic relationships (spelling variations, transliterations, punctuation variations, capitalization variations), word order relationships (inversions, permutations), variant title relationships (titles for the work based on titles found on manifestations or items, including cover title, spine title, caption title, binding title, running title, parallel title, key title, catalogue's title, etc.), etc.

#### **Examples**

*Authorized heading:*  
Shakespeare, William, 1564-1616. Hamlet  
*See reference tracing:*  
< Shakespeare, William, 1564-1616. Tragical historie of Hamlet Prince of Denmarke

*Authorized heading:*  
Kent, Alexander. Honour this day  
*See reference tracing:*  
< Kent, Alexander. Honor this day

## 5.5 Relationships between Controlled Access Points

Within authority files there are also a number of other relationship types that operate between specific instances of the entity *controlled 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 controlled 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 controlled access point).

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

Additional relationships exist between controlled access points for the names of the bibliographic entities and access points for the corresponding classification number or subject term for the same entity. Further links can also provide relationships to the digitized version of an entity through relating the name access point with the entity's identifier.

**Table 3: Relationships between Controlled Access Points**

Entity Type	Relationship Type
Access Point ⇔ Access Point	<ul style="list-style-type: none"> <li>▪ Parallel language relationship</li> <li>▪ Alternate script relationship</li> <li>▪ Different rules relationship</li> <li>▪ Name/corresponding subject term or classification number relationship</li> <li>▪ Name/identifier relationship</li> </ul>

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

***Parallel language relationship***

The relationship between two or more controlled access points that are established as parallel language forms of access point for the preferred forms of name 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 controlled access points that are established as alternate script forms of the access point for the preferred forms of name for the same entity.

**Example**

*Access point:*

Gogol, Nikolai Vasilievitch

*Access point in an alternate script:*

Гоголь, Николай Васильевич

***Different rules relationship***

The relationship between two or more controlled access points for the preferred forms of name 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

## ***Name/Corresponding subject term or classification number relationship***

The relationship between two or more controlled access points for the preferred forms of name for the same concept expressed as a name (for a person, family, corporate body, work, expression, manifestation, item, concept, object, event, place) and as a subject term in a controlled vocabulary and/or a classification number.

## **Example**

*Access point:*

Library education [Library of Congress Subject Headings]

*Access point:*

020.7 [Dewey Decimal Classification]

*Access point:*

Guatama Buddha [AACR2 authorized form of name]

*Access point:*

Guatama Buddha [Library of Congress Subject Headings]

*Access point:*

BQ860-939 [Library of Congress Classification for biographies of Guatama Buddha]

## ***Name/identifier relationship***

The relationship between two or more controlled access points for the same entity expressed as an access point for the name of the entity as related to an identifier for the entity.

## **Example**

*Access point:*

Austen, Jane, 1775-1817. Pride and prejudice [creator/title citation for the work]

*Access point:*

ISTC: nnn-nnnn-nnnnnnnn-n [International Standard Text Code for the work]

## 6. User Tasks

For the purposes of this analysis, the users of authority data are broadly defined to include:

- authority data creators who create and maintain authority files;
- users who use authority information either through direct access to authority files or indirectly through the controlled access points (authorized forms, references, etc.) in catalogues, national bibliographies, other similar databases, etc.

Four tasks representing all users are defined as follows:

<b>Find</b>	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 combination of attributes or a relationship of the entity as the search criteria); or to explore the universe of bibliographic entities using those attributes and relationships.
<b>Identify</b>	Identify an entity (i.e., to confirm that the entity represented corresponds to the entity sought, to distinguish between two or more entities with similar characteristics) or to validate the form of name to be used as a controlled access point.
<b>Contextualize</b>	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).
<b>Justify</b>	Document the authority data creator's reason for choosing the name or form of name on which a controlled access point is based.

**Table 4** maps the attributes and relationships defined in sections 4 and 5 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. Designations of which attributes and relationships are considered mandatory need to be determined on an application-specific basis.

*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 4: Mapping of Attributes and Relationships to User Tasks**

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
<b>Person</b>	“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*				■
	Sibling relationship ⇨ person*				■
	Parent/child relationship ⇨ person*				■
	Membership relationship ⇨ family*				■
	Membership relationship ⇨ corporate body*				■
	Real name relationship ⇨ name*	■		■	
	Pseudonym relationship ⇨ name*	■		■	
	Secular name relationship ⇨ name*	■		■	
	Name in religion relationship ⇨ name*	■		■	
	Earlier name relationship ⇨ name*	■		■	
	Later name relationship ⇨ name*	■		■	
	Alternative linguistic form relationship ⇨ name*	■		■	
	Other variant name relationship ⇨ name*	■		■	



Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
<b>Family</b>	“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*	■		■	
<b>Corporate Body</b>	“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*		■		
	Language of the corporate body*		■		■
	Address*		■		
	Field of activity*		■		
	History*		■	■	
	Hierarchical relationship ⇨ corporate body*			■	
	Sequential relationship ⇨ corporate body*			■	
	Expanded name relationship ⇨ name*	■		■	
	Acronym / initials / abbreviations relationship ⇨ name*	■		■	
	Pseudonym relationship ⇨ name*	■		■	
	Alternative linguistic form relationship ⇨ name*	■		■	
	Other variant name relationship ⇨ name*	■		■	
<b>Work</b>	“Known by” relationship ⇨ name	■			
	“Assigned” relationship ⇨ identifier	■	■		
	Form of work	■	■		
	Date of the work	■	■		■
	Medium of performance	■	■		
	Subject of the work*			■	
	Numeric designation	■	■		
	Key	■	■		

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
	Place of origin of the work*		■		
	Original language of the work*		■		■
	Other distinguishing characteristic	■	■		
	Equivalence relationship ⇨ work			■	
	Supplement relationship ⇨ work*			■	
	Derivative relationship ⇨ work*			■	
	Descriptive relationship ⇨ work*			■	
	Whole/part relationship ⇨ work			■	
	Accompanying (part-to-part) relationship ⇨ work*			■	
	Sequential relationship ⇨ work*			■	
	Shared characteristic relationship ⇨ work*			■	
	Alternative linguistic form relationship ⇨ name*	■		■	
	Conventional name relationship ⇨ name*	■	■	■	
	Other variant name relationship ⇨ name*	■		■	
<b>Expression</b>	“Known by” relationship ⇨ name	■			
	“Assigned” relationship ⇨ identifier	■	■		
	Form of expression	■	■		
	Date of expression	■	■		
	Language of expression	■	■		
	Technique*		■	■	
	Other distinguishing characteristic	■	■		
<b>Manifestation</b>	“Known by” relationship ⇨ name	■			
	“Assigned” relationship ⇨ identifier	■			
	Edition/issue designation		■		
	Place of publication/ distribution		■		
	Publisher/distributor		■		
	Date of publication/distribution		■		
	Form of carrier		■		
	Numbering		■		
<b>Item</b>	“Known by” relationship ⇨ name	■			
	“Assigned” relationship ⇨ identifier	■	■		
	Location of item*		■		

Entity	Attribute/Relationship	FIND	IDENTIFY	CONTEXTUALIZE	JUSTIFY
<b>Concept</b>	“Known by” relationship ⇔ name	■			
	“Assigned” relationship ⇔ identifier	■	■		
	Type of concept*		■		
<b>Object</b>	“Known by” relationship ⇔ name	■			
	“Assigned” relationship ⇔ identifier	■	■		
	Type of object*		■		
	Date of production*		■		
	Place of production*		■		
	Producer/fabricator*		■		
	Physical medium*		■		
<b>Event</b>	“Known by” relationship ⇔ name	■			
	“Assigned” relationship ⇔ identifier	■	■		
	Date associated with the event*	■	■		
	Place associated with the event*	■	■		
<b>Place</b>	“Known by” relationship ⇔ name	■			
	“Assigned” relationship ⇔ identifier	■	■		
	Coordinates*		■	■	
	Other geographical information*		■	■	
<b>Name</b>	Type of name	■	■	■	
	Scope of usage			■	
	Dates of usage			■	
	Language of name		■		
	Script of name		■		
	Transliteration scheme of name		■		
	“Basis for” relationship ⇔ controlled access point	■			
<b>Identifier</b>	Type of identifier		■		
	Identifier string	■	■		
	Suffix		■		
	“Basis for” relationship ⇔ controlled access point	■			

Entity	Attribute/Relationship	F I N D	I D E N T I F Y	C O N T E X T U A L I Z E	J U S T I F Y
<b>Controlled Access Point</b>	Type of controlled access point		■		
	Status of controlled access point for the preferred form		■		
	Designated usage of controlled 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 controlled access point		■		■
	Base access point	■	■		
	Addition	■	■		
	“Governed by” relationship ⇔ rules		■		■
	“Created/modified by” relationship ⇔ agency		■		■
	Parallel language relationship ⇔ controlled access point for the preferred form			■	
	Alternate script relationship ⇔ controlled access point for the preferred form			■	
	Different rules relationship ⇔ controlled access point for the preferred form			■	
	Name/Corresponding subject term or classification number relationship ⇔ controlled access point for the preferred form	■	■	■	
	Name/identifier relationship ⇔ controlled access point	■	■		
<b>Rules</b>	Citation for rules		■		■
	Rules identifier		■		
	“Applied by” relationship ⇔ agency				■
<b>Agency</b>	Name of agency		■		
	Agency identifier		■		
	Location of agency		■		

## Part II: Authority Data: Current Practice

### 7. Authority Data in the Library Sector

#### 7.1 The Cataloguing Process

**Figure 3** 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.

**Create Bibliographic Description:** 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.

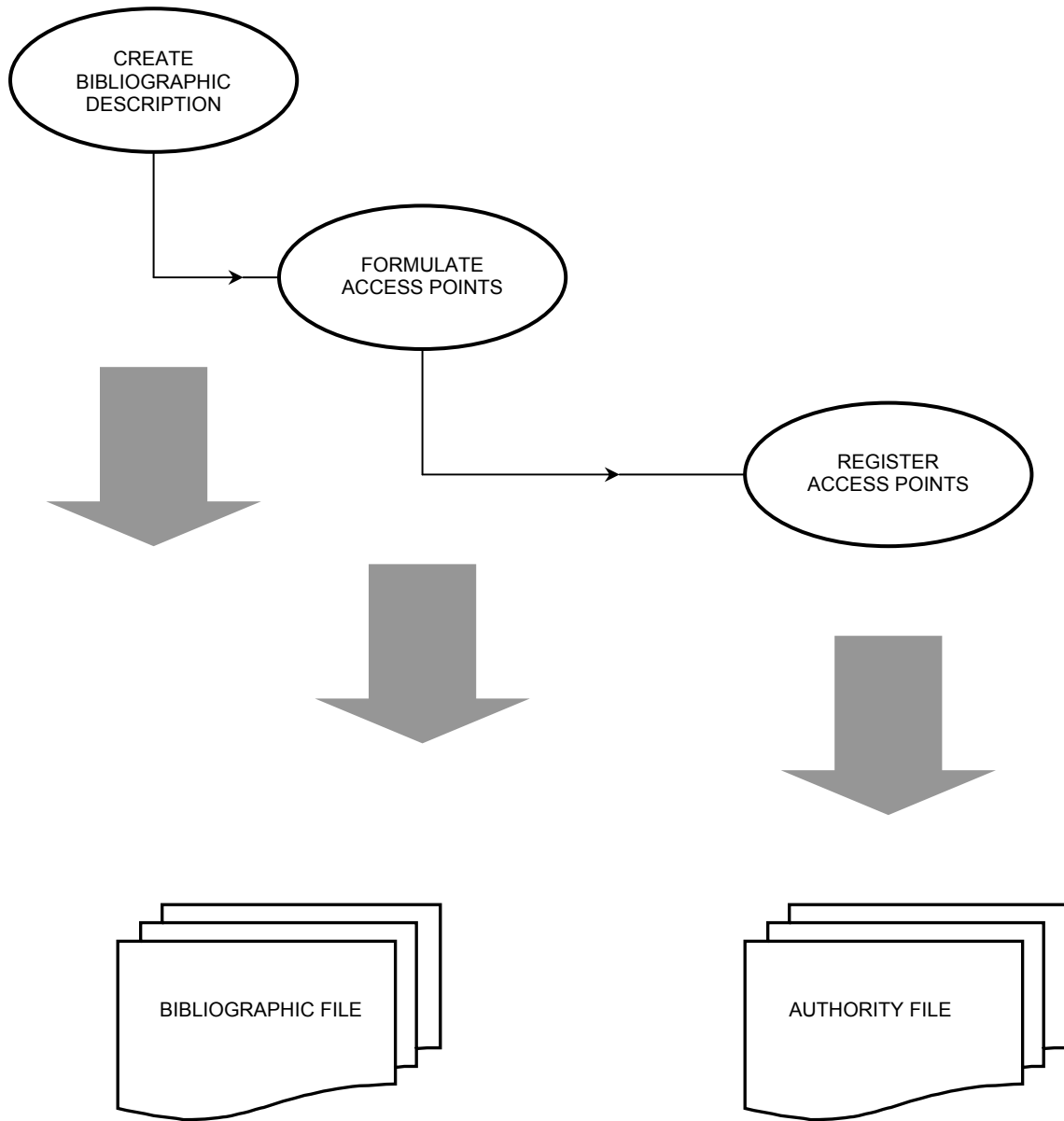
**Formulate Access Points:** The oval in the centre represents the stage in which the cataloguer formulates controlled access points—both the authorized forms of name representing the author, title, subject, etc. of the resource and the variant forms of those authorized forms. The rules applied in formulating controlled 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 preferred form of name 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 preferred form of name and to related forms.

**Register Access Points:** The oval on the right represents the stage in which the cataloguer registers controlled access points in an authority file. The guidelines applied in registering controlled access points normally set out the order and form in which authorized/preferred 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 controlled 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.

**Bibliographic File:** 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).

**Authority File:** The data emanating from the registration of controlled access points (authorized/preferred 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).



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**Figure 3: 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 controlled 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.

## 7.2 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 controlled 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 controlled 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 authorized/preferred forms of name to be used with a new bibliographic description being added to the catalogue or when formulating a new access point (authorized/preferred form of name, 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 of a work, or a citation for the work for which the authorized/preferred form of name was originally established) in order to differentiate one person, body, or work from another. Having differentiated the persons, bodies, and works represented by particular authorized/preferred forms of name, 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 controlled access point is required. End users may also search the authority file directly as a reference tool.

**Control Form of Access Points:** A third function of the authority file is to validate or 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 within a bibliographic record. If a new controlled 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 controlled access point and any previously registered 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 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, scope notes, and references that the user requires when searching under variant access points or under access points for related entities. 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. 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.

**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.

These five functions of the authority file relate in various ways to the four user tasks laid out in Section 6. The information recorded as a part of documenting the cataloguer’s decisions serves the Justify user task. The use of the authority file as a reference tool for both library staff and end users serves the Contextualize user task. The functions of validating and controlling the form of access point, of supporting access to the bibliographic file and of linking bibliographic and authority files all support the Find and Identify user tasks.

### **7.3 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 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 whether by humans or systems:

- Searching;
- Evaluation of search results to identify matching hits, or 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 to 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.

## 7.4 Authority Records in the Library Sector

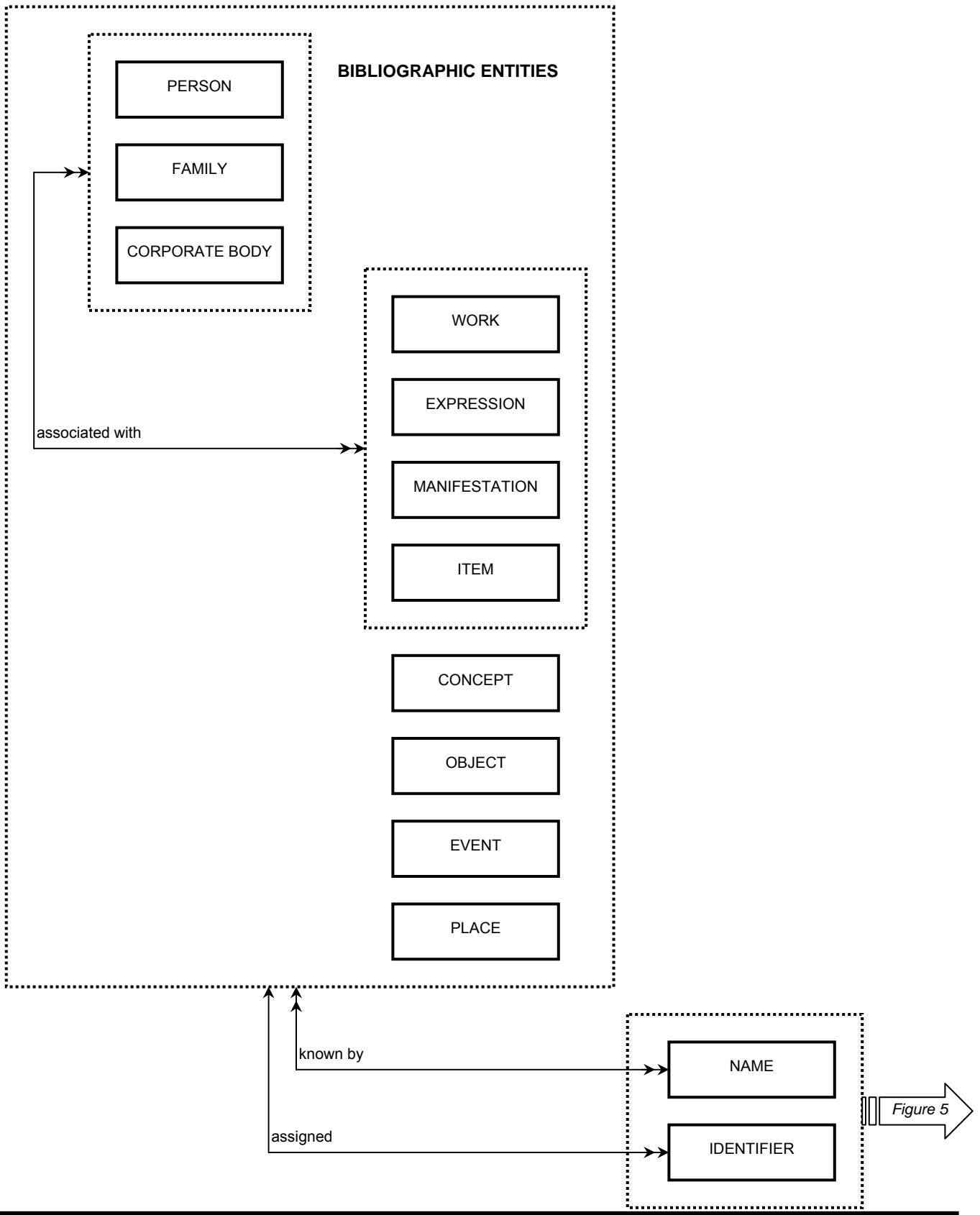
The entity-relationship model depicted in **Figure 2** and described in section 3.3 focuses, like the FRBR model does, on the information carried in authority records, the relationship of that information to external entities (person, corporate body, work, etc.), and how the information supports user 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.

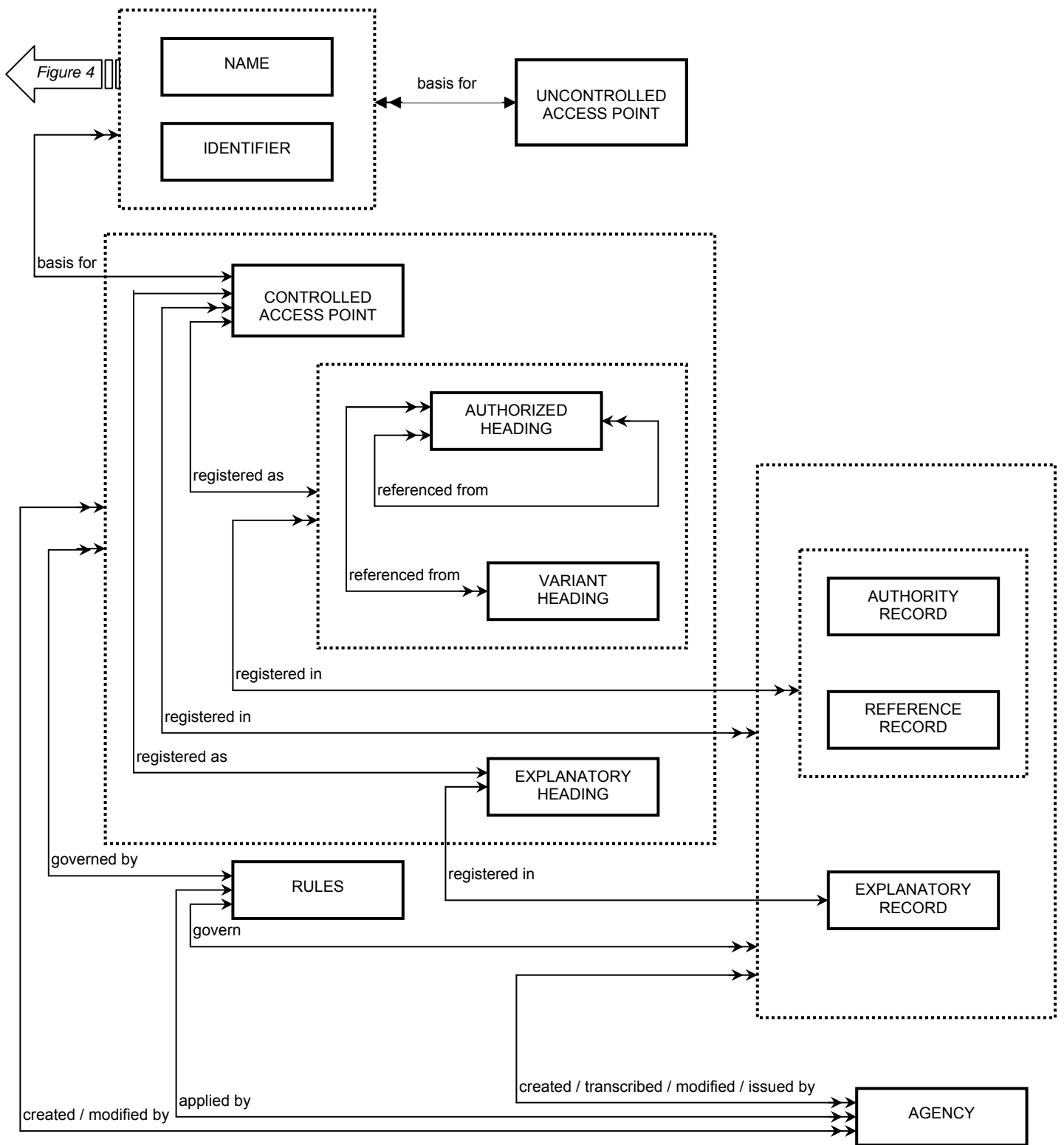
The entities depicted in **Figure 4** correspond to the “external” entities described in section 3.3 and depicted in the upper half of **Figure 2**. These entities are defined in section 3.4.

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 a *controlled 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*<sup>1</sup> and are not repeated here. Some of the entities included in **Figure 5** such as *reference records* and *general explanatory records* are not usually found in electronic catalogues.

**Figure 5** also depicts the relationships between the entities *name* and *identifier* and the formal or structural entities (*controlled access point*, *authorized form* (i.e., *preferred 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” a *controlled access point*, and conversely a *controlled access point* may be based on a *name* or *identifier*. A *controlled 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. A *controlled access point* may be “registered as” an *authorized form* or *variant form*, which in turn may be “registered in” one or more *authority records* or *reference records*, 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 a *controlled 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**



**Figure 5: Access Points and Authority Records in a Library Context**

## 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 a controlled 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 an 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 controlled 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 controlled 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 can be highlighted by comparing the bibliographic entities from the library sector to entities defined in other models. An increasing number of models from other sectors exist, including *Encoded Archival Context*, the International Council of Museums International Committee on Documentation (CIDOC) model,<sup>9</sup> and *Cataloging Cultural Objects*.<sup>10</sup> **Figure 6** compares bibliographic entities from the library sector to those of the <indec> model.<sup>11</sup>

On the right of the diagram are the eleven bibliographic entities associated with the names and identifiers that serve as the basis for the controlled 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 <indec> 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 6** operate at the highest level of generalization in the <indec> model, and are defined as follows:

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

*Thing*: An entity without the characteristics of animate life.

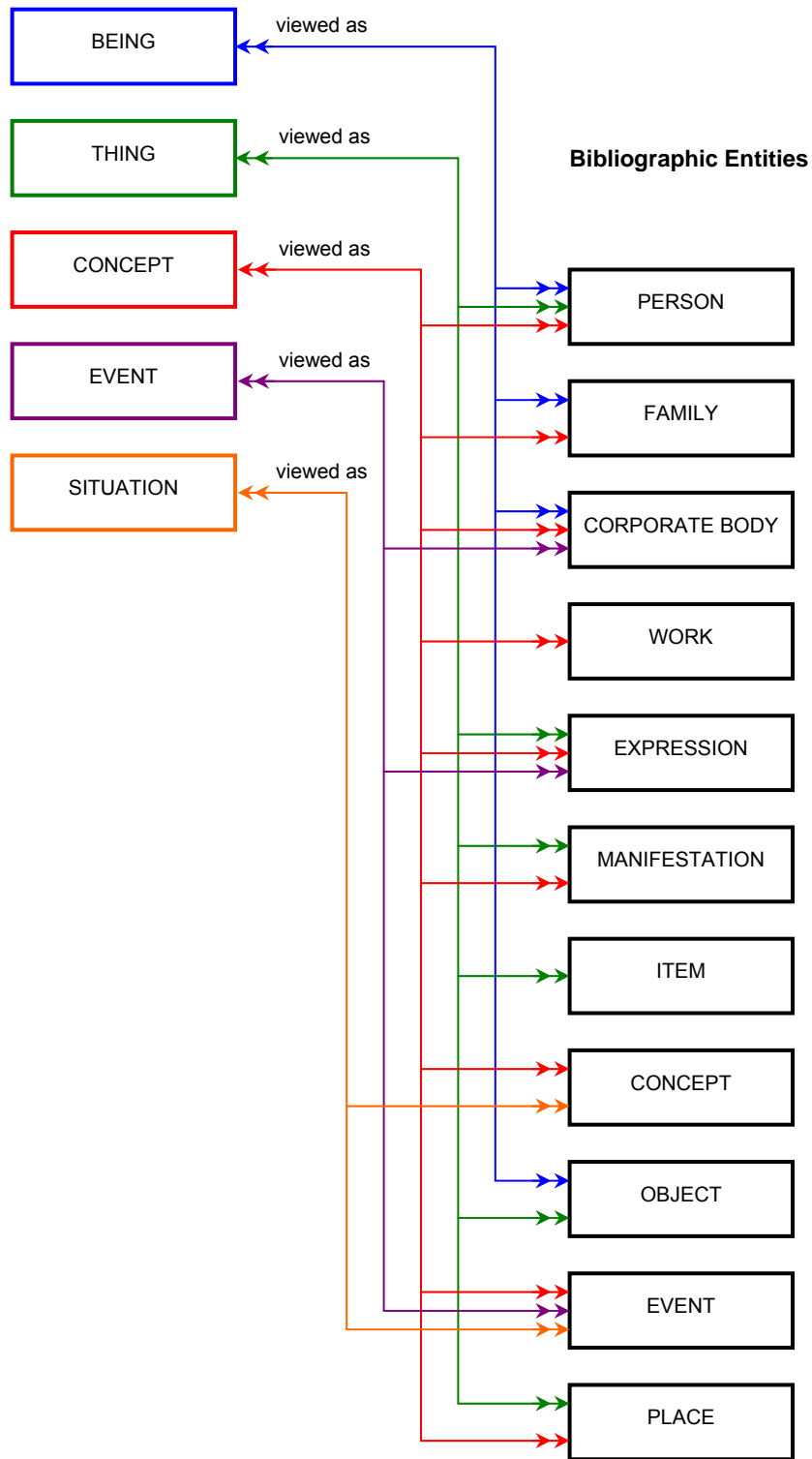
*Concept*: An entity which cannot be perceived directly through the mode of one of the five senses; an abstract entity, a notion or idea; an observable proposition which exists independently of time and space.

*Event*: A dynamic relation involving two or more entities; something that happens; a relation through 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.

The relationships depicted in **Figure 6** 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 <indec> 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

**<index> Primitives**



**Figure 6: Mapping Bibliographic Entities to <index> Primitives**

instances of the entity *being*, as defined in the <indec> 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 <indec> 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 <indec> 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 <indec> 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 data to the primitive entities defined in the <indec> 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. The direct mapping of “bibliographic identities” established in authority records in different sectors may be complicated by the fact that some mappings will be asymmetric. For instance a library might establish two bibliographic identities with separate authority records for the author Ruth Rendell and Barbara Vine, where a rights management agency might resolve both identities to a single record because they relate to the same real individual with intellectual property rights for works produced under both names. Resolving such “fuzzy” matches between different sectors may require work to be done on data derived from one sector to make it usable in another.

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. While the direct sharing of authority records across sectors may not now be feasible, it is certainly possible to share the intellectual aspects of the work involved in creating those authority records in one sector to contribute to authority records needed in another sector. Perhaps future systems will be able to clarify the relationships among the matched entities in a retrieved cluster to explain the available paths an end user may wish to follow.



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