

**To:** Joint Steering Committee for Development of RDA

**From:** Edith Röschlau, DNB Representative

**Subject:** Discussion paper: Hidden relationships in attributes (examples: RDA 9.4.1.4.2, 9.13, 10.6, 11.3, 16.2.2)

## **1. Background**

One of the big assets of RDA is the emphasis laid on the relationships between entities. This opens up new routes of navigation and makes it possible to explore the bibliographic universe in a new way. However, RDA is not always consistent in its treatment of these relationships.

Notably, there are a number of cases where relationships are, as it were, hidden within descriptions of group 2 and group 3 entities: Certain information elements are modelled either as an attribute or as part of an attribute of one entity, although we believe they should rather be seen as a relationship between two entities. In a FRBR-based standard, it stands to reason that something which is an entity in its own right – like a person or a corporate body – should not be modelled as an attribute of another entity (or a part of it). However, exactly this situation can be found in a number of cases.

The following examples are meant to highlight the problem in a general way. They are not intended as a complete list of all the cases where the phenomenon appears in RDA. If the JSC should decide to take further action in this matter, the whole text of RDA would have to be closely examined in order to find all relevant rules.

## **2. Examples for Hidden Relationships**

### **2.1 Relationships Modelled as Attributes**

- RDA 9.13 Affiliation**

Affiliation is an attribute of a person. When recording affiliation, RDA 9.13.1.3 instructs us to record "the names of groups with which the person is affiliated or has been affiliated through employment, membership, cultural identity, etc." (RDA 9.13.1.3). As the examples show, usually the preferred name of a corporate body is recorded in this element. It is difficult to see why this should not be covered by RDA 32.1 (Related Corporate Body). In fact, Appendix K.2.3 includes the relationship designators "employee" and "member". At present, it seems that catalogers are free to choose between an

attribute (RDA 9.13) and a relationship (RDA 32.1) in order to record the same information.

- **RDA 10.6 Prominent Member of the Family**

"Prominent Member of the Family" is an attribute of a family. RDA 10.6.1.3 essentially instructs us to record the authorized access point representing the person in question. Again, it is difficult to understand why this should be distinct from RDA 30.1 (Related Person): Here, we read that a related person is "a person who is associated with the person, family, or corporate body being identified (e.g., a collaborator, a member of a family, a founder of a corporate body)" (RDA 30.1.1.1). One of the methods for recording this relationship is to use the authorized access point representing the person. So, while generally a member of a family falls under RDA 30.1, a prominent member falls under RDA 10.6. It seems somewhat contradictory that one of them is a relationship and the other an attribute, especially as the same method of recording can be used in both cases.

- **RDA 11.3 Place Associated with the Corporate Body**

"Place Associated with the Corporate Body" comes with two subelements (RDA 11.3.2 Location of Conference, etc., and RDA 11.3.3 Location of Headquarters). Names of places are recorded in this element, which is an attribute of a corporate body. Since RDA 37 (Related Places) is yet to be written, there is at present no parallel relationship element in section 10 of RDA. However, it seems plausible that the information covered in this attribute could just as well be expressed as a relationship between a corporate body and a place. Note that the possibility of recording places as relationships is also mentioned in FRAD.<sup>1</sup>

## **2.2 Relationships Modelled as Parts of Attributes**

- **RDA 9.4.1.4.2 Consorts of Royal Persons**

Under "Titles of Royalty" (RDA 9.4.1.4), which is an attribute of a person, we find the following instruction for consorts of royal persons: "For a consort (spouse) of a person with the highest royal status within a state or people, record his or her title followed by *consort of* and the preferred name for the royal person and his or her title", e.g. "Prince, consort of Beatrix, Queen of the Netherlands" (RDA 9.4.1.4.2). If analyzed as to its contents, this complex attribute consists of three different pieces of information: (1) an attribute of the person in question (its title), (2) a term which looks suspiciously like a relationship designator ("consort of"), and (3) an identification of another person. The second and

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<sup>1</sup> Cf. FRAD, chapter 4, p. 37f.: "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 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 two entities."

third part of the attribute is in fact a description of a relationship, naming both the kind of relationship and the related person. Again, it seems that the same information could have been given by using RDA 30.1 (Related Person).

- **RDA 16.2.2 Preferred Name of the Place**

When recording the preferred name of a place, which is an attribute, RDA instructs us to record "as part of the name of a place (...) the name of the larger place in which it is located or the larger jurisdiction to which it belongs" (RDA 16.2.2.4). Here, the name of an entity in its own right (the larger place) is recorded as part of an attribute – the preferred name – of another place. This instruction was already mentioned in DNB's 2013 proposal "Larger Place" (6JSC/DNB/2), stating on page 2: "Giving information about a larger place can be seen as recording a relationship between two places." The proposal suggested to extract the name of the larger place from the attribute, recording it instead as a separate element falling under RDA 37 (yet to be developed).

### **3. Reason for the Present Situation**

#### **3.1 Identification**

One of the reasons for the present situation may lie in an unspoken assumption that only attributes can be used to identify an entity. At least, it is rather striking that the word "identifying" only appears in the captions of the "attributes" part of RDA, but never in the "relationships" part. However, an entity can be equally well identified by a relationship. Giving the name, date of birth etc., is certainly one way of identifying a person, but this aim can also be reached by saying e.g. "X's wife" or "the president of company Y".

In the German Integrated Authority File (Gemeinsame Normdatei, GND), a large part of information about e.g. persons is modelled in the form of relationships: For example, affiliation is recorded as a link to the authority record for the corporate body; place of birth is recorded as a link to the authority record for the place; occupation is recorded as a link to the subject authority record for this profession. The rule behind this practice is quite simple: Whenever there is another entity involved, the information is treated as a relationship.

#### **3.2 Access Points**

Perhaps another reason for treating relationships as attributes is the fact that some of them are also used as parts of access points. There might be doubts whether a relationship could also be used in this way. However, we believe that this can be done without difficulty, provided that the relationship is expressed verbally. Here is an example taken from RDA 10.11.1.5:

Peale (Family : Peale, Charles Willson, 1741-1827)

At present, the information "Peale, Charles Willson, 1741-1827" within this authorized access point is regarded as an attribute of the family, according to RDA 10.6 "Prominent Member of the

Family". But it could also be rewritten as a relationship, giving the relationship element, the authorized access point for the related entity and a suitable relationship designator. The result might look like this (the punctuation is tentative only):

Peale (Family : Related Person: Peale, Charles Willson, 1741-1827 (Prominent member))

A shorter, more legible form of this access point could be achieved by (1) leaving out the relationship designator, or by (2) using the relationship designator instead of the relationship element, or by (3) only recording the related entity:

- (1) Peale (Family : Related Person: Peale, Charles Willson, 1741-1827)
- (2) Peale (Family : Prominent member: Peale, Charles Willson, 1741-1827)
- (3) Peale (Family : Peale, Charles Willson, 1741-1827)

Note that option 3 is identical to the present authorized access point. Yet there is still a conceptual difference, as the information is no longer regarded as an attribute but as a relationship. Consequently, RDA 10.11.1.5 would have to be rewritten. It would no longer refer to RDA 10.6, but to RDA 30.1. The same would apply to a number of other instructions in RDA.

Admittedly, this would mean that not everything needed for the authorized access point of an entity would be found in the same chapter, and catalogers would have to get used to this. However, this seems to be in line with current developments on a larger scale: Although we're still used to the concept of static records, this may no longer be state-of-the-art. Instead, we should prepare RDA for a semantic web environment, where pieces of information can be put together "on the fly" to meet the user's need.

#### **4. Possible advantages of a revision**

Treating cases like the ones mentioned in 2.1 and 2.2 as relationships instead of attributes would bring RDA closer to the principles of FRBR. It would also improve the consistency of RDA and make it easier to apply for catalogers (e.g. by getting rid of exceptions).

Also, the number of RDA elements could be reduced. For example, affiliation would no longer be needed as a separate element; it would be absorbed by 32.1. If place was included in the revision, several elements ("place of birth", "place of death", "location of conference", "place associated with the family" etc.) could be removed. Instead of using a separate element for each kind of place, the same information could be given by using only one single relationship element (related place) in combination with a suitable relationship designator.

In fact, this is already common practice in the German Integrated Authority File. There, all related places are recorded in the same field (551), with a code in subfield \$4 signifying the kind of relationship. The codes work as relationship designators and give essentially the same information which is expressed in RDA by using separate elements. Here is an example<sup>2</sup>:

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<sup>2</sup> Note that „Stuttgart“ is not stored as a text string in this field, but as a link to the authority record for Stuttgart (using the control number as identifier).

551 Stuttgart\$4ortg	Stuttgart as the place of birth (RDA 9.8)
551 Stuttgart\$4orts	Stuttgart as the place of death (RDA 9.9)
551 Stuttgart\$4ortw	Stuttgart as the place of residence, etc. (RDA 9.11)
551 Stuttgart\$4ortv	Stuttgart as the location of a conference, etc. (RDA 11.3.2)
551 Stuttgart\$4orta etc.	Stuttgart as headquarters of a corporate body (RDA 11.3.3)

Using a relationship element in combination with a relationship designator would also make it easier for RDA data to function in a linked data environment. Relations and mappings to other data could be established on two levels of granularity: According to the available level of detail, the relation could either work on a broader scale ("there is a relationship to a place X") or in a more sophisticated way, giving also the exact kind of relationship.

It should also be noted that relationships modelled as parts of attributes pose particular problems for machine-processing. For a computer, it is very difficult to parse a text string like "Prince, consort of Beatrix, Queen of the Netherlands" semantically. Breaking up this phrase into several separate, clearly labelled elements would certainly be an improvement. It would also be in alignment with RDA's general aim of making our data suitable for the semantic web.

## **5. Questions to the JSC**

The German cataloguing community would like to pose the following questions:

- a) Does the JSC agree that the examples mentioned in 2.1 and 2.2 are cases of "hidden" relationships?
- b) Does the JSC agree that it would also be possible to model these and similar cases by making use of relationship elements and relationship designators?
- c) Does the JSC agree that modelling these and similar cases as relationships might have a number of advantages?
- d) Should this question be explored in more depth?