

The Standardisation of Names to Improve Quality and Co-operation in the Development of Bibliographic Databases

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The need for an authority list of South African names to ensure standardisation of these names on a national level has been expressed on various occasions. This paper investigates the need to standardise South African names to eliminate one of the main obstacles to co-operation and to the delivery of quality products and services in South Africa. Problems experienced with the standardisation of South African names

were identified by means of a sample of names obtained from the South African National Bibliography (SANB) database. These problems can be categorised as variations in the presentation of the same name, identical names for different authors and the changing of personal and corporate names. The implications these hold for standardisation of South African names are also discussed.

Introduction

South Africa's more than three thousand libraries and information centres play a very important role in making information more accessible and available to the South African public. The ability to identify and locate relevant information, however, is dependent on bibliographic records of a high standard and the consistent use of access points giving access to the bibliographic records. One of the obstacles to co-operation in South African databases is the lack of consistency of South African names in name authority lists. The need for an authority list of South African names to ensure the standardisation of these names on a national level has been raised on various occasions.

In this article the necessity for the standardisation of names, the problems experienced with the presentation of South African names on information sources, and the implications of these problems for the standardisation of South African names are discussed.

Methodology

In order to address these three problem areas, the necessity for the standardisation of South African names was studied with the assistance of relevant documentation (specific subject literature, related research projects and reports). Using a sample of South African names obtained from the South African National Bibliography (SANB) database, the problems which may arise regarding South African names were studied, as well as the impact these problems would have on the standardisation of South African names. A simple random sample test was done to identify a test sample of name authority records.

During the analysis of the 363 names originally drawn, it was found that 49% of the names were linked to only one title each. With this information the minimum size of the sample for the study was determined by using the statistical formula $N = (z/e)^2(p)(1-p)$ (Fink & Kosecoff 1985, 62). In this formula "e" is a 0.05 error level of significance, "z" represents a 95% confidence inter-

val ($z=1.96$) and “p” represents a 49% probability of occurrence (in this case, the probability that a person who wrote only one title will have a name authority record linked to only one title, or 0.49 – 49% of the test sample). Thus it was determined that the minimum sample size from a total of 35,200 names should be 384. For this study, however, a sample of 394 names was used.

The necessity for the standardisation of names

The necessity for standardisation of names in an online environment is sometimes questioned. There are, according to Johnston (1990) and Younger (1995), several supporters of the view that an online catalogue needs no authority control, because by using truncation, keywords or Boolean operators, information can be retrieved under any form of a name. However, these retrieval techniques can never replace the valuable liaison and accompaniment function provided by the standardisation of names. Oddy (1986, 3) is of the opinion that “The computer cannot create associations in the same way that a human can.”

Authority control will always require intellectual judgement. The decision about the form of a personal or corporate name for a specific author or body is determined by human opinion or intellect. The computer only manipulates the data provided by a human being. Subsequently, it will never be possible to completely automate name authority control. As a matter of fact, with the arrival of the online catalogue, the need for the standardisation of names has actually increased. Utilisation of computer technology has made communication possible on a much bigger scale than was the case with manual systems. Boll (1990, 17) takes the view that “In a paper file each library could develop its own standards for their own authority files. Online catalogs do not permit this variety or luxury but demand far greater comprehensiveness and standardization of name authority work”.

Therefore it is reasonable to conclude that the standardisation of names will remain essential despite the capabilities of the computer. The validity of this argument finds support in the following discussion of the functions of name authority control.

Functions of name authority control

To support the catalogue's find and collatio functions.

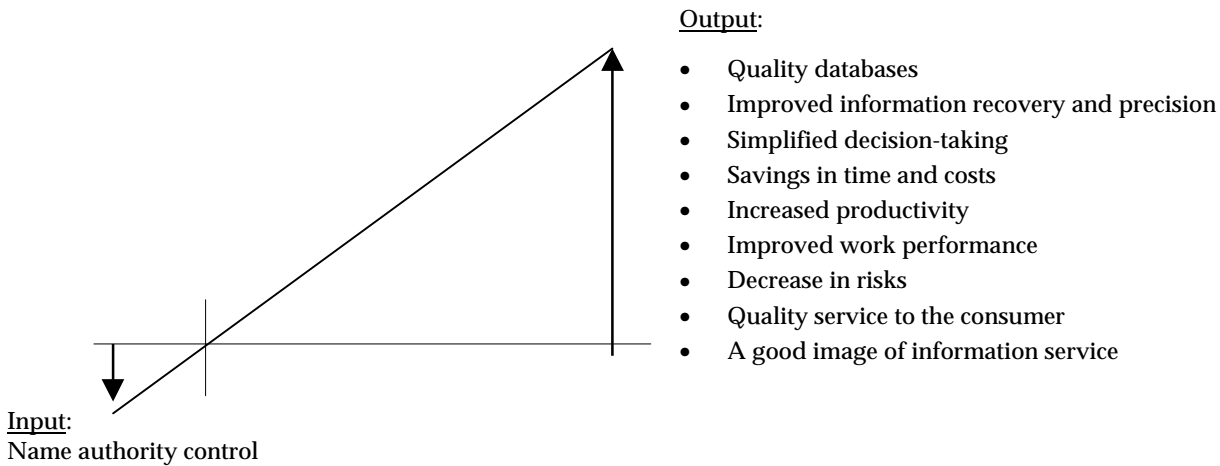
The functions of the library catalogue, namely to give access to a specific item by a specific author or authors or to indicate which sources of information by a specific author are available in a collection, can only be performed if all information giving access to the sources of information is used in a standardised manner. Furthermore, in order to ensure that the user recovers all the information necessary, a reference network is needed which links the variant forms of names with one another.

Without name authority control the user would need to know every name or form of the name used by the author, in order to find an item. The user will also have to think of all the possible ways in which the name can be expressed verbally. In addition, the user will also have to eliminate all the possibilities that will not satisfy his needs. Many library users do not have any of this information or expertise. Library users can not be expected to know the rules regarding the selection and form of names that lend form and structure to the catalogue. It is therefore necessary that the structure of the catalogue is consequent and clear to support those who are not familiar with the rules regarding the selection and form of names.

To ensure quality interaction between the user and the information

Nowadays, much prominence is given to delivering quality products and services. Daniel (1993, 646) says that “‘Quality’ is the byword in the 1990s”. She also says (1993, 646) that “information professionals must take greater responsibility for the quality of the products and services delivered to the client”. Lozano (1997, 148) takes it a step further by saying “quality is not only reduced to ‘what is offered’ (the product or service that is supposed to have quality), but also to ‘how it is offered’”. Terms and statements like “quality control”, “quality assurance”, “getting the product or service right the first time”, “you don’t inspect quality into a product, you have to build it in”, “quality begins with the prevention of errors” are common in the literature.

Figure 1. Interaction between name authority control as input and the benefit to the user as output



In order to meet the client's expectations, systems within an organisation should be able to:

- deliver quality products and services;
- increase productivity;
- decrease risk; and
- improve the organisation's performance and image (SABS 1996).

A library or information service is an industry like any other industry. The clients and end users of this service are very aware of issues concerning quality. According to Daniel (1993, 646) they demand "greater reliability and precision commensurate with the dollar and/or time cost they incur in use". Morris (Thomas 1996, 493) says, "Quality in cataloguing is measured by the degree to which a library's catalog fosters access to materials which benefit the user". Oddy (1986, 3) takes the view that any library that ignores authority control "is seriously misusing and under-using its collection and is certainly not giving the user the service they [sic] deserve". The quality of cataloguing records, therefore, determines the effective functioning of the catalogue. Records of good quality lead to improved access, optimal utilisation of the stock and a better service to the users.

Name authority control can therefore be seen as one of the essential processes in delivering a quality service to the client, in increasing productivity, in decreasing risk and in improving the institution's performance and image. Name authority control is in itself a form of quality as-

urance. It can be regarded as a measure that is built into the catalogue or database to ensure the quality of the interaction between the user and the information. Without name authority control the user will have to spend much more time to obtain information. Furthermore the user has no assurance that the information needed, was recovered optimally. Simply by giving a name authority control input at an early stage, a bigger interaction benefit for the user results at a later stage. Figure 1 presents this concept.

In Figure 1 the diagram operates like a lever with the hinge point on the 0 vertical line. The significance of the axes is to show that for a relative small input in effort a large output can be achieved. Through the input of name authority control, useful outputs are generated. This can best be explained by using the opposite argument. Suppose that name authority control does not take place, what will be the effect on the output for the user? The following effects have been identified:

- Lack of unique consistent name access points, which in turn effects the usefulness of bibliographical databases and recovery of information.
- The user will have to think of all variant forms of names and know the rules concerning selection and forms of names. Subsequently, a more comprehensive intellectual input is expected from the user.
- The user can be misled because he or she may be under the impression that all information sought under a specific name has been recovered, when this might not be the case.

- Increased risk to the user may occur – without name authority control the user does not know whether he or she has missed any information.
- Poor service to the user.
- Decrease in the user's productivity.
- Inefficient work performance by the user.
- The user has a bad image of the service.

When name authority control is entered, all the above-mentioned negative aspects are cleared and the quality of the interaction between the user and the information is improved.

To promote co-operation between libraries and information services.

It has become impossible for institutions to collect all the items to satisfy their consumers' needs because of economic restrictions and the increase in published sources of information. The current scenario for libraries is that there is too much information being published in all formats, too little money available for purchases and too few staff on hand to handle the processing. Co-operation and co-operative bibliographical projects are, in fact, the only way to limit expenses. Co-operation occurs especially with regard to shared cataloguing and sharing of resources. Within this context the individual library catalogue is a subset of a virtual national and international database. Therefore the name authority records created by a library must fit into the larger universe.

To support national and universal bibliographic control

National bibliographic control

Bibliographic control on the national level provides a system that makes the identification and localising of information sources within the country's borders possible. National bibliographic control represents two important concepts, namely identification, recovery, collection and preservation of the physical items (books and other material) which originated in the country; and creation of bibliographic records which describe and identify the publications (IFLA International Office for UBC 1979, 2).

It is especially with regard to this last aspect that authority control of names has an important role to play. Publications on their own are of no value to the information community without the records indicating their existence and giving access to their contents. Presentation of names in a standard form is therefore of great importance to identify and locate the works of authors.

Universal bibliographic control

When looking at national bibliographic control in relation to universal control it is important, in addition to collection of items, for the national bibliographic agency to also be responsible for the creation of authority and bibliographic records for every new publication issued in accordance with accepted international bibliographic standards. If all countries tried to apply bibliographic control on the national level, a degree of universal bibliographic control would be possible. The United Nations Educational, Scientific and Cultural Organization (UNESCO) together with the International Federation for Library Associations and Institutions (IFLA) therefore also encourage countries to contribute to the Universal Bibliographic Control (UBC) programme by practicing bibliographic control first of all.

The aim of the UBC programme is "to develop a world-wide system for the control and exchange of bibliographic information, in order to make universally and promptly available, in a form which is internationally acceptable, bibliographic information on publications issued in all countries" (IFLA International Office for UBC 1979, 1). In regards to name authority control, the UBC programme states that "each country should assume responsibility for establishing authority headings for its own personal and corporate authors; and that the authority headings produced by each national bibliographic agency should be made available to be used by other countries requiring authorities for those same authors" (Delsey 1989, 14). To satisfy these requirements, authority control of names of personal and corporate bodies on national level is therefore of the utmost importance. Furthermore, it is also important that control occurs according to international guidelines and standards.

It is therefore clear that name authority control will remain essential in order to support the cata-

logue's find and collocation functions, to ensure quality interaction between the user and information, to promote co-operation between libraries and information services, and to support national and universal bibliographic control.

Problems with the presentation of South African names on sources of information

The structure of South African names is similar to what is found in Western countries. However, certain forms of names are fairly unique to South Africa, for example the use of a surname as a first name. The name Van Zyl Slabbert, for instance, consists of two surnames, namely Van Zyl (first name) and Slabbert (surname). Another distinguishing factor is the combination of two acknowledgeable surnames to form a surname, for example Miranda (first name) Jansen van Rensburg (surname). Apart from the above-mentioned forms of names, the problems experienced with South African names are also experienced universally. Most problems can be attributed to a lack of standardisation in the presentation of names on publications.

Referring to the problems experienced by national bibliographic agencies and their task regarding bibliographic control, Lor (1995, 5) mentions that details are not necessarily complete and accurate in the publications received by bibliographic agencies. As has already been mentioned, a sample of names obtained from the SANB database was analysed in order to determine which problems occur regarding South African names.

Bibliographic records are created for SANB using AACR2R. According to AACR2R, a name in the first area of description (title and statement of responsibility area) has to be entered as it appears on the prescribed source of information for the area. Rule 1.1F1 of the AACR2R reads "Transcribe statements of responsibility appearing prominently in the item in the form in which they appear there" (AACR2R 1988, 24). This rule is applied strictly in SANB.

Names entered in other areas of the description, for example, in the publisher's element of the publication, distribution, etc. area and the note area were not considered in the analysis of the results. The reason for this is that names in this area are not necessarily entered as they ap-

pear on the publication. In the case of names of publishers entered into the publication, distribution, etc. area of the bibliographic description, rule 1.4D2 of the AACR2R states "Give the name of a publisher, distributor, etc. in the shortest form in which it can be understood and identified internationally" (AACR2R 1988, 37).

As a result the possibility exists that the cataloguer can shorten a name serving as publisher in the publication, distribution, etc. area of the bibliographic description. An example would be the South African Bureau of Standards that may be abbreviated as SA Bureau of Standards or SABS. As far as the note area is concerned, the policy of SANB is to enter the authority form of the name in the note area. When, for example, no author appears on the work, but on further inquiry the name of the author is obtained from the publisher, such names are entered into the note area. A note of this type may read Author: Smith, J.P. As a result the names entered in notes were also not considered.

Bibliographic records created for SANB are thoroughly checked by a professional librarian specifically appointed for the control of name authority records. Further checking is done during the preparation of the quarterly and annual tapes of SANB. Therefore, it can be assumed that the names, as they are entered in the bibliographic description, appeared in the same form on the source of information.

Study of South African names

By analysing the sample of names, three main types of problems were identified:

- Variations in the form of the same names.
- Changes in corporate names.
- The same name for different authors.

As far as variations in form are concerned, several different types of variations were distinguished. These were studied by looking at the variations appearing for the same author in the bibliographic descriptions of the records associated with every author. The names as they appear in the bibliographic descriptions were also compared to the form of the name as it appears in the name authority file of SANB. All types of variations among all forms of names were taken into

account, but each type was only counted once for every person or corporate body. For an individual with the names “Francois A. Swanepoel”, “F. A. Swanepoel” and “Francois Swanepoel” in the bibliographic description, the variation for full first names was counted only once, although it appeared twice (between the first and the second form, and between the second and the third form). The variation between “Francois A. Swanepoel” and “Francois Swanepoel” was, however, also counted for the variation with respect to additional initials.

As far as corporate names are concerned, the same principle was followed. For example, for a corporate body with the names Johannesburgse Effektebeurs, Johannesburg Effektebeurs, Johannesburg Stock Exchange, JEB and JSE, the variation with respect to the full name and the acronyms/abbreviations was counted only once although it appears twice. The variation between Johannesburg Effektebeurs and Johannesburgse Effektebeurs, however, was also counted for the category Variation in wording.

Findings of the study

In this preliminary investigation 394 names were identified. Of these 245 were personal and 149 corporate names. The corporate names include conferences and government organisations. A total of 2,579 bibliographic records were associated with the 394 names. 1,300 bibliographic records were linked to the 245 personal names, while 1,279 bibliographic records were linked to the 149 corporate names. However, 129 (53%) of the personal and 66 (44%) of the corporate names were linked to only one bibliographic record. The study regarding variations, the same names for different authors and changes in names was therefore limited to 116 personal name authority forms and 1,357 bibliographic records. As far as corporate names are concerned, the study was limited to 83 corporate names and 1,214 bibliographic records.

Variations regarding personal names

From the 116 personal names obtained from the SANB database, 65 showed variations (56% of the total number of names linked to more than one bibliographic record). The analysis of the 65 personal names revealed the following variations:

- *Fullness of first names*
This includes those cases where first names and initials occurred alternately in the bibliographic description, for example, J. L. Hattingh and Johannes Leon Hattingh. This type of variation made up 56.9% of all the variations.
- *Additional initials*
This includes forms of names where initials represent one or more names and others have less or none at all, for example, Frederick Pelser and F. C. Pelser or Koleka Siwundla and K. P. Siwundla. This type of variation represented 13.8% of all variations.
- *Additional first names*
This includes situations where variations occurred regarding the number of first names for the same person, for example, Peter Havenga and Peter Henry Havenga or Berna Ackerman and Berna Barbara Ackerman. This type of variation represented 6.2% of all variations.
- *Different forms of first names*
This includes cases where different forms of first names occur on publications by the author, for example, Susan van Rensburg and Susanna van Rensburg. This type of variation represented 3% of all variations.
- *Different first names*
This includes those cases where completely different first names of an author appeared on publications. An example would be Erich Leistner and Gerhard Leistner. The authority form of the name is Leistner, G.M.E. (Gerhard Max Erich). This variation represented 1.5% of the total number of variations.
- *Inverted word order*
This includes variations occurring in terms of the use or absence of Janse or Jansen (or initials representing these forms) in surnames like Janse(n) van Rensburg or Janse(n) van Vuuren. Take as an example Jacobus Barend van Rensburg as opposed to Jacobus Barend Jansen van Rensburg. This type of variation represents 16.9% of the total number of variations.
- *Incorrect initials or first names*
Here initials and first names, which were given incorrectly by the publishers on the chief source of information, were considered. In the bibliographic records these errors were indicated by the use of [i.e.] as prescribed by AACR2R, rule 1.0F1. An example of this is Caroline Z. J. Mzolo instead of Caroline Z. T. Mzolo. This variation represented 1.5% of the total number of variations.
- *Different entry elements*
This category represents the alternate use of pseudonyms and actual names by authors as well as the alternate use of only first names as opposed to first names and surnames. Examples of this are Piet Muller, who also wrote under the name Jan Mallet, W. F. Loots who also used the pseudonym Leunende Christen and Rufus Papenfus who also wrote as Rufus. This category made up 7.7% of the total number of variations.

From the above information it is clear that the most common type of variation was with regards to the fullness of names (56.9%). Inverted word order represented the second largest category (16.9%), followed by additional initials (13.8%).

It should also be noted that the total percentage (107.5%) is larger than 100%. This can be attributed to the number of variant names that represent more than one type of variant.

Variations in terms of corporate names

As was previously mentioned, the study was limited to 83 corporate names. The following types of variations regarding corporate names were identified during the study:

- *Alternate use of the full form and acronyms/abbreviations of names*
There is a tendency to use the fully written out forms or the acronyms/abbreviations of corporate bodies alternatively in publications, for example, ABSA as opposed to Amalgamated Banks of South Africa. This type of variation made up 28.8% of the total number of variations as far as corporate names are concerned.
- *Written out form of the name as opposed to abbreviating certain parts of the name*
Here cases where parts of a name were abbreviated as opposed to the written out form of the name of the body, were included. An example is South African National Museum for Military History as opposed to SA National Museum for Military History. This type of variation represented 10.8% of the total number of variations.
- *Inverted word order*
This includes those instances where corporate names do not always start with the same elements/words, for example, Citrus and Subtropical Fruit Research Institute as opposed to Research Institute for Citrus and Subtropical Fruit. This type of variation made up 3.6% of all variations.
- *Variations in wording*
The following can serve as an example, Johannesburgse Effektebeurs as opposed to Johannesburg Effektebeurs or Tukkie Rekenmeesterskool as opposed to Skool vir Rekenmeestersopleiding, Universiteit van Pretoria. This category represented 3.6% of all variations regarding corporate names.
- *Erroneous wording*
Sometimes erroneous wording of a corporate name appears on the prescribed sources of information. Take as an example Research Unit of Mathematics Education and Research Unit on Mathematics Education. This should, in fact, read Research Unit for Mathematics Education. This type of variation represented 4.8% of all variations.

- *Additional or missing elements in a name*
It can happen that certain elements of a name are missing or extra elements are added on a publication. Examples include: Ford Motor Company as opposed to simply Ford; National Council for Mental Health as opposed to South African National Council for Mental Health; Ombudsman, Republic of South Africa as opposed to Office of the Ombudsman, Republic of South Africa. This category represented 10.8% of all variations.
- *Variations in terms of the presence or absence of the names of higher bodies in the case of subordinate bodies*
This variation is especially prevalent at centres, schools and institutes attached to universities. Examples include Centre for Health Policy (at the University of the Witwatersrand); School for Accountancy Training (University of Pretoria); Institute for Child and Youth Literature (Potchefstroom University for Christian Higher Education); Advice Bureau for Small Business Undertakings (Potchefstroom University for Christian Higher Education). This variation represented 21.7% of the total number of variations.

From the preceding it is clear that the biggest type of variation regarding corporate names is the alternate use of the written out form of the name as opposed to the use of the acronym/abbreviation (28.8%). This is followed by the presence or absence of the names of higher bodies in the case of subordinate bodies (21.7%). The third place is occupied by changes in names (16.9%).

Different authors with the same names

During the analysis of the sample of names, the phenomenon of the same name for different personal authors was also observed. Out of a total of 116 personal names studied, four instances occurred where different authors have exactly the same names. These instances include the following:

Landman, W.A. (Willem Adolf), Rev.
Landman, W.A. (Willem Adolf), 1909 –
Landman, W.A. (Willem Adolf), 1923 –
Landman, W.A. (Willem Adolf), 1964 –
Landman, Willem Adolf, 1948 –

Müller, J. J. (Jacobus Johannes)
Müller, J. J. (Jacobus Johannes)

(These two authors whose birth dates are unknown, are working in two different subject fields)

Van Rensburg, M. J. J. (Marthinus Johannes Janse), 1923 –
Van Rensburg, M. J. J. (Marthinus Johannes Janse), 1945 –

Van Wyk, Deon
Van Wyk, Deon, 1944 –

(The two authors are working in two different subject fields)

Changes in corporate names

Although changes can occur with regard to personal names (a female author, for example, can marry and decide to use her married name or a combination of her maiden and married names in future), during the analysis of the sample of names, only corporate names were identified that had changed. With the analysis of the 83 corporate names it was found that in 16.9% of the cases a change occurred at some stage. For example, the South African Amateur Athletic Union which was later known as the South African Track and Field Association and since 1993 as Athletics South Africa.

Implications of the findings for the standardisation of South African names

The problems experienced with the presentation of South African names on information sources hold various implications for the standardisation of South African names.

Variations in the form of the same names

Name access points are used to give access to bibliographic records. When variations in the name of the author exist, the collocation function of the bibliographic aid is influenced and recovery of the information hampered. From the study it was clear that variations in the name access points in bibliographic databases are mainly caused by variations of the name as it occurs on the chief source of information. ISO 1086:1991 gives an explanation of the way in which names of authors should be presented on the title page of books. Paragraph 4.1.1 Name(s) of author(s) reads as follows: "The name(s) of the individual and/or corporate author(s) shall be given in full and such a form that the part of the name under which the author(s) should be entered in alphabetical lists can be clearly identified. Corporate names and their constituent parts should be given in hierarchical order" (ISO 1991, 3). Despite the guidelines given in ISO 1086:1991, variations occur in the presentation of names on

title pages. Bierbaum states "Unfortunately, because of authors' whims, the name appearing on one title page or record label may not appear on another created by the same person." (1994, 84)

The variations identified during the study create problems with the authority control of South African names. The cataloguer is expected to select an authorised form from all the different variations of the same name with the assistance of the cataloguing code (AACR2R). With regard to, for example, the fullness of personal names rule 22.3A of AACR2R determines: "Choose the form most commonly found. As required, make references from the other form(s). If no one form predominates, choose the latest form. In case of doubt about which form is the latest form, choose the fuller or fullest form". As far as corporate names are concerned, rule 24.2D, for example, determines: "If variant names appear in the chief source of information, use the name that is presented formally. If no name is presented formally, or if all the names are presented formally, use the predominant form of the name. If there is no predominant form, use a brief form ..." Such vague guidelines, however, make it difficult for cataloguers to make the correct choice. Often much research is necessary. Such research includes contacting the author him or herself, consulting biographic dictionaries, encyclopaedias, international name authority lists such as the Library of Congress Name Authority File (LCNAF). Despite all these inputs it could still happen that the cataloguers may decide on different forms of a name as the authority form. This, in turn, could lead to variations in the presentation of the same names in bibliographic tools, which in turn hampers the recovery of information.

Identical names for different authors

Every user of a bibliographical tool looking under the name of an author expects, in addition to high recovery, also high precision. This means that the user not only expects to find all the documents relating to an author, but also only *those* documents relating to a specific author. From the study it was clear that it can happen that two authors have the same name. In such cases it can happen that with the retrieval of works by a specific author, non-relevant work by another author may also be retrieved.

The possibility, therefore, that the same names occurring in bibliographic descriptions can belong to different authors creates problems. Without distinguishing such names “false matching” or “mismatches” can occur and there is a good chance that the user may recover non-relevant documents.

In the case of identical names for different authors a lot of inputs are required from the cataloguer in order to link the bibliographical record to the correct name. Although AACR2R offers two options for distinguishing between identical names, namely adding birth and death dates (rule 22.17) and/or full names (rule 22.18), these distinctions require a lot of inputs. Often an author’s date of birth does not appear on a publication. Sometimes it is also impossible, for various reasons, to trace the dates of birth. An author may, for example, refuse to give his/her date of birth. In such a case the best guideline is to identify the subject field each author practices and do the linking accordingly. However, it can also happen that two authors work in the same subject field (for example a father and son with the same names), that will result in more research having to be done.

Change of corporate names

As a result of political, cultural and economic factors it happens that an institution’s name changes. AACR2R (rule 24.1C1) determines: “If the name of a corporate body has changed ... establish a new heading under the new name for items appearing under that name. Refer from the old heading to the new and from the new heading to the old”. It is therefore clear that as names change, changes also have to be made in name authority files. These changes can include the creation of additional see also references and adding notes regarding the name changes to the authority file. The collocation function of bibliographic tools (the catalogue, for example) also suffers as a result of the name change because works by the same organisation are recorded in different locations in the tool. Furthermore, cataloguers often only become aware of the name change when the bibliographic item is received.

It is therefore clear that the name changes of South African corporate bodies create problems for those people who are involved in authority

control of South African names. Considerable inputs are required in verifying the name and making the changes in the name authority files. Name changes will, however, always occur. As a result of the economic situation in the country corporate bodies can decide to merge in order to survive, or a merger can take place because of a number of other strategic reasons. Corporate bodies can also decide to make changes to their names for the sake of marketing. The country’s political situation has also not stabilised yet. With the political changes, there will obviously also be changes in geographical names.

Intellectual inputs

From the preceding it is clear that a high level of knowledge and intellectual inputs is required in order to have effective authority control in respect of South African names. In the literature there are also frequent references to intellectual inputs during authority control. Oddy (1986, 1), in referring to name authority control, indicates that name authority control is an area that requires “subtlety of intellectual judgement”. Weiss (1994, 267) states that name authority control requires knowledge of a complex set of rules as well as its correct interpretation. Referring specifically to chapter 22 of AACR2R with its contradictory and ambiguous rules, undefined words and phrases, Weiss (1994, 270) says, “The chapter is far more complex than most catalogers ever realize and requires a great deal of real-world knowledge”.

Time and cost

It is also clear that the creation of the intellectual content of the authority record and the control of the consistency and relationship between access points and references is a comprehensive task, taking up considerable time. In the literature reference is often made to the time and costs involved in name authority work. In 1990 Fiegen, Heitshu and Miller (1990, 253) said that “Two of the highest cost components of the cataloging process are authority work and the labour associated with that work”. In 1994 Murtooma, Greig & Aliprand (1994, 55) mentioned that “authority control being possibly the single costly aspect of cataloguing today”. Two years later Murtooma

(1996, 68) stated that "authority control is very time consuming and expensive."

In 1986, during a study done at the National Library of Medicine it was found that the Library spends 45% of the cataloguing time on name authority work as opposed to 36% spent on descriptive cataloguing and 19% on subject cataloguing and classification (Weiss 1994, 267). Weiss (1994, 267) therefore stated that "authority work ... is one of the most time consuming, and therefore costliest aspects of cataloguing."

In order to get an indication of the time and cost relating to the authority control of South African names, the statistics and cost figures obtained from the National Library of South Africa (NLSA) and the Pretoria Community Library were used. From the statistics provided by the NLSA it was calculated that the average time it takes to check and correct one authority record is 20 minutes. The calculation was done as follows:

Average number of authority records per month:	400
Average number of hours per work day:	8
Acceptable effective productivity factor (good industrial average):	75%
Number of productive hours per day:	$8 \times .75 = 6$
Average number of working days per month:	22
Number of authority records per hour:	$400 \div (22 \times 6) = 3$
Therefore, time per record:	20 minutes

This calculation only takes into account the time the person responsible for name authority work spends on checking and correcting of an authority record. It does not include the time the cataloguers take to link an existing name to a bibliographic record or to create a new name and enter it into the authority file.

In order to calculate the cost per authority record the following information was used:

Average number of records per month:	400
Average salary per annum:	R50,000[1]
Overhead cost factor:	90%

Based on this information the cost per record was calculated as follows:

$$(50\,000 \times 1.9) \div (12 \times 400) = R20-00 \text{ per record}$$

Once again the R20-00 includes only the cost associated with the control of authority records.

When the time and cost involved in creating an authority record are also taken into account it will be considerably higher, as is clear from the calculations done in regards to the Pretoria Community Library. Two years ago the cost associated with cataloguing a record at the Pretoria Community Library was roughly R90-00 per record (Du Preez 1998). This included the bibliographic description, authority control of names as well as subject cataloguing (verbally and notational). When taking into account the percentages of the National Library of Medicine, referred to above, as well as inflation, the following calculation was done:

$$\begin{aligned} &45\% \text{ of } (R90-00 + 2 \text{ years inflation at } 10\% \text{ per year}) \\ &= 45 (R90-00 \times 1.1 \times 1.1) = R49-00 \text{ per name authority} \\ &\text{record.} \end{aligned}$$

It is clear that variations in South African names, the occurrence of identical names for different authors and changes in corporate names require substantial intellectual inputs during the authority control of South African names. These inputs take up considerable time that in turn implies high costs.

Conclusion and summary

The standardisation of South African names is essential in order to support the functions of the catalogue, ensure quality interaction between the user and the information, support national and universal bibliographic control and promote co-operation among libraries. The standardisation of names, however, is associated with a considerable number of problems. Variations in the forms of names as they are presented on sources of information occur, identical names exist for different authors and corporate names change for political or economic reasons. Considerable intellectual inputs are required to cope with these problems and much time and money are spent on the authority control of South African names. An authority list containing the authoritative form of South African names with accompanying essential references could, therefore, be a very valuable tool for bibliographic control on local, national and universal levels and for the enhancement of the quality of databases.

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Notes

1. \$1 = R7.60 in November 2000.

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