# Bibliotheca Alexandrina's Model for Arabic Name Authority Control

## Magda El-Sherbini

*This paper describes the processes developed and implemented at the Bibliotheca Alexandrina (BA) to manage authority control in a multiscript environment. The author addresses key issues associated with creating a local authority file for multiscript materials, unique challenges associated with Arabic names, and authority control policy decisions and practices in place at the BA, including contributing records to the Virtual International Authority File. The author highlights important work that the BA is doing to promote standards for Arabic names in a way that takes into account user needs in the Arab community, as well as international standards, while laying the groundwork for further cooperative work between libraries in the Arab world and beyond. A detailed description of workflow with examples is presented.*

The Bibliotheca Alexandrina (BA) is building its own local authority file for personal names, corporate bodies, and subject headings, with authority records presented in Arabic, English, and French. One of the most powerful features of the BA catalog links records in multilingual scripts. This means that when an author writes in Arabic and in French, the library creates an Arabic-language record for the Arabic books and a French language record for the French language books. The former will be based on the Arabic bibliographic records and the latter will be based on the name of the author in the French language records. The BA staff link the two authority records to each other. This allows the user to search the database in either language and retrieve all the works by the same author regardless of the language of publication.

The objective of this paper is to describe the Arabic name authority file that the BA is developing and the policies and processes involved. To study the BA authority file (which is not available to non-BA staff) and associated decisions and workflow, the author spent six and a half months at the library and worked with the BA authority control processing staff. The author developed the following set of questions to gather information about the process of creating authority records at the BA. Some questions deal with specific technical issues, while others are more general.

- What are the important issues related to creating authority records for classical Arabic names?
- How is the BA authority control processing staffed?
- What are the reasons for creating a local BA authority file?

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- What are the local policies for creating BA authority records for classical and modern Arabic names?
- How is the authority work handled for Arabic language materials?
- How are authority records for authors writing in multiple scripts handled?
- How is the BA participating in the Virtual International Authority File (VIAF)?
- What are plans for sharing and cooperating with other libraries?

## Literature Review

Authority records constitute the backbone of the library catalog. Verification of authors' names accomplished through authority processing helps to merge the bibliographic records of a particular author's work, regardless of the language of publication, variations in the spelling of the name, or other points of confusion that may result from the publishing process. Authority control allows researchers to identify and locate works of an author regardless of what language they use in their search. The same form or version of a person and corporate body is used by everyone so that a researcher in Egypt, the United States, Japan, or any other country can use the exact same form of the name to find all the materials by a specific author.

Durance defined authority control as the function of providing access to the holdings of a repository through names and subjects, noting that authority records are being constructed in such a way that their relationships, or nonrelationships, to each other are apparent.[1] She wrote, "In effect, authority control in an archival setting introduces order into, and a road-map through, the complexities of corporate organizations and their predecessors, personal names, functions, and subjects of documents, and their interrelationships."[2] One of the fundamental steps in creating an authority record is for the cataloger to determine whether an intellectual relationship exists between the access points. Establishing and linking all the possible access points will collocate all relevant headings, including cross references, and display them in a meaningful way.

Harper and Tillett discussed the importance and the value of authority control in their "Library of Congress Controlled Vocabularies and their Application to the Semantic Web."[3] Among the issues discussed in their paper were the value of authority control and its important role in searching, navigation, collocation, and linking between various tools and resources. This is accomplished by establishing connections between related headings using cross-references, such as "see" and "see also."

Vassie provided an overview of many of the major issues confronting multiscript cataloging and display.[4] His article opened with the history of non-Latin script collections and access and went on to describe the situation at the Zayed Central Library of the United Arab Emirates University. The author correctly identified a lack of multiscript authority control as the major issue in non-Latin based language research. He went on to describe two options "for tackling authority control for names of authors represented in both available scripts in a bilingual, bi-script catalogue."[5] The article ended with a call for an international, controlled Arabic thesaurus that would be created and maintained according to international standards.

In her article on Arabic name authority, Speirs Plettner provided an overview of the Arabic name authority file from its origins to her time of writing (2003).[6] She started with an overview of the problem of transliteration of Arabic scripts and the decision to maintain two files, one for original Arabic scripts and anther for their transliterated form. She pointed out the limitations of the Anglo-American Authority File and called for including institutions outside the English language sphere to participate in a global multiscript name authority file. Speirs Plettner continued with an overview of the discussion on how to enhance the structure of authority records to accommodate the non-Latin scripts. As with any idea that calls for cooperation between institutions, this one also will require commitment from the global library community.

Kuntz addressed the issue of transliteration, or romanization of Arabic script, and compared the Library of Congress/American Library Association transliteration scheme with that developed by the International Organization for Standardization (ISO).[7] As he discussed the pros and cons of each system, Kuntz maintained that some form of transliteration must be used and that the libraries should inform the users which system is being employed. Kuntz indicted that both the Library of Congress (LC) and the ISO Arabic Romanization schemes have proven to be problematic, but he is not in favor of abandoning transliteration in favor of an exclusive use of vernacular.

Khairy took a different approach in her presentation at the 27th MELCOM (Middle East Libraries Committee) International Conference in 2005.[8] She addressed some of the issues facing creators of Arabic online catalogs in Arabic speaking countries. She focused her attention specifically on the use of different reference sources when an authorized access point for a classical Arabic name is created and how variations in the form of the name could be a barrier to cooperation in constructing an Arabic script union catalog and authority file. She pointed to the lack of specific cataloging tools designed for cataloging Arabic materials as a major issue.

## The Bibliotheca Alexandrina

The Bibliotheca Alexandrina (BA) was created in association

with the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Snohetta Arkitektur Landskap of Oslo, Norway, won the international competition to design the library.[9] Since its completion in 2002, the BA functions as a major library and cultural center serving the city of Alexandria and the region. In the words of Ismail Serageldin, Librarian of Alexandria, "The New Library of Alexandria, the New Bibliotheca Alexandrina is dedicated to recapture the spirit of openness and scholarship of the original Bibliotheca Alexandrina."[10]

The ancient Library of Alexandria was situated on the shores of the Mediterranean Sea and dates to around 300 BCE, when the Ptolemy dynasty ruled Egypt. Although it was subsequently destroyed, its story provided inspiration for the creation of the new BA some two thousand years later. Today the library houses collections of rare books and manuscripts, a children's library, a youth library, a library for the blind, and many others. It is open to scholars, researchers, and the public.

The BA's online catalog is tri-lingual, providing access to its collections of materials in Arabic, English, and French. In 2010, the library received a half a million French books as a donation from the Bibliothèque nationale de France. This gift made the BA the sixth-largest Francophone library in the world. The BA is also the largest depository of French books in the Arab world, surpassing Tunisia, Algeria, and Morocco, in addition to being the main French library in Asia and Africa.[11]

The organizational structure of the library consists of the General Directorate and six sectors: Academic and Cultural Affairs Sector, the Director's Office, the External Relations Sector, the Finance and Administration Sector, the Information Communication Section, and the Library Sector. The Library Sector is headed by the chief librarian, who supervises six departments: Arabic Bibliographic Standards, Francophone Library Department, Information Services Department, Main Library Department, Special Libraries Department, and Technical Services Department.

The Technical Services Department consists of two sections: Acquisitions and Bibliographic Access. The latter includes three units: Cataloging, Materials Processing, and Periodicals. The BA online public access catalog (OPAC) was designed to manage the multilingual bibliographic and authority files (Arabic, English, and French) and provide users with multilingual access to its materials. It allows the user to search the catalog in all three languages. The BA is currently using the Virginia Tech Library System (VTLS) integrated library system (ILS) known as Virtua. Virtua's cataloging system is compatible with the Unicode standard and stores data in bibliographic records in the Unicode encoding scheme. This allows the catalogers to access and create records in their natural languages (e.g., Arabic, Hebrew, Turkish, etc.). Virtua also supports direct input, indexing,

and display of characters in Unicode from a single, standard workstation. For example, catalogers or patrons can change the interface language and search for bibliographic records in their natural language without affecting others using the system.[12]

At the BA, Arabic, English and French language materials are cataloged in their original language of publication. The same also is true of the authority file. The BA built a local authority file for personal names, corporate bodies, and subject headings where the authority record is presented in Arabic, English, and French languages.[13]

One of the most powerful features of the BA catalog is its linking feature, which links records in multilingual scripts. This means that when an author writes in Arabic and in French, the library creates an Arabic language record for the Arabic books and a French language record for the French language books. Two authority records also are created for this author. One is based on the Arabic script bibliographic records and the other is based on the name of the author in the French language records. The BA staff link the two authority records, which allows the user to search the database in either language and retrieve all the works by the same author regardless of the language of publication.

## Important Issues Related to Creating Authority Records for Classical Arabic Names
### Classical Arabic Names Can Have Multiple Parts

A classical Arabic name consists of multiple elements that can be used as an authorized name.[14] Any element of the name can be used as the authorized name. The decision often depends on the country or the organization in which the cataloging is being done. Classical Arabic names in particular are problematic because catalogers have difficulty determining which element to choose as the authorized access. The following example illustrates the multiple elements of the classical Arabic name:

محمد بن محمد بن حسين بهاء الدين بلخى المعروف بمولانا جلال
الدين الرومي، (1207م –1273م)
(Arabic name)

Muḥammad bin Muḥammad bin Ḥusayn Bahā' al-Dīn Balkhī known as Mawlānā Jalāl al-Dīn al-Rūmī (1207م–1273م)
(romanized form of the name)

Muḥammad the son of Muḥammad the son of Ḥusayn the Glory of Religion Balkhī known as Our Guide the Magnificence of Religion al-Rūmī, (1207م–1273م)
(translated form of the name)

The elements in a classical Arabic name may include the following:

- Ism (given name) is a personal, proper name given shortly after birth. Commonly used names: Aḥmad, Muḥammad, Kamāl, etc.
- Laqab (descriptive epithet) is a combination of words making up a byname or epithet, usually religious, relating to nature, descriptive of some admirable quality the person had. Examples are al-Rashīd [the Rightly Guided], al-Fāḍil [the Prominent]. Laqabs follow the ism: Hārūn al-Rashīd [Aaron the Rightly Guided].
- Kunyah (appellation) is an honorific name which designates one individual as "Abū Aḥmad" (father of Aḥmad) or "Umm Sālim" (mother of Sālim). Married people (especially married women) are, as a general rule, simply called by their kunya (Abū or umm + the name of their first son). One does not need to have children to be called "Abū . . ." or "Umm . . ."
- Nasab (pedigree) is a patronymic or a series of patronymics that designate one individual as the son or daughter of someone. Examples are "ibn Ḥātim"(son of Ḥātim), "bint Aḥmad" (daughter of Aḥmad). The nasab follows the ism in usage, such as in Ḥasan ibn Faraj (Ḥasan the son of Faraj), Sumayyā bint Khubbat (Sumayyā the daughter of Khubbat). Many historical personages are more familiar by their nasab than by their ism, e.g., the historian ibn Khaldūn, the traveler ibn Baṭṭūṭa, and the philosopher ibn Sīnā [Avicenna]. Nasabs may be extended for several generations, such as Abū Bakr Muḥammad ibn Aḥmad ibn Muḥammad ibn Jaʿfar ibn al-Ḥaddād (Abū Bakr Muḥammad the son of Aḥmad the son of Muḥammad the son of Jaʿfar the son of al-Ḥaddād).
- Nisbah (attribution) is a surname. Nisbas follows the ism or nasab. Nisba has three primary types:
  - Occupational, derived from a person's trade or profession, e.g., Muḥammad al-Ḥallāj (Muḥammad, the dresser of cotton).
  - Of descent, derived from the name of a person's tribe of birth or family lineage, e.g., Mughīrah al-Juʿfī (Mughīrah of the tribe of Juʿfī); Yūsuf al-Ayyūbī (Joseph the Ayyubid, Joseph of the family line of Ayyub).
  - Geographical, derived from the place of residence or birth, e.g., Yaʿqūb al-Dimashqī (Jacob of Damascus).

The example below illustrates the various elements of the classical Arabic name.

محمد بن محمد بن حسين بهاء الدين بلخى المعروف بمولانا جلال
الدين الرومى, (1207م–1273م)
(Arabic form of the name)

Muḥammad bin Muḥammad bin Ḥusayn Bahāʾ al-Dīn Balkhī known by Mawlānā Jalāl al-Dīn al-Rūmī, (1207م –1273م)
(romanized form of the name)

In this example:
Ism (personal name) محمد
(Romanized form of Muḥammad)

Nasab (patronymic) بن محمد بن حسين
(Romanized form of bin Muḥammad bin Ḥusayn (Son of Muḥammad son of Ḥusayn))

Nisbah (attribution) البلخى and الرومى
(Romanized form of al-Rūmī and Balkhī)

Laqab (description of the person)
بهاء الدين؛ جلال الدين؛ مولانا
(Romanized form of Mawlānā, Jalāl al-Dīn, and Bahāʾ al-Dīn)

### Consequences of Using Various Reference Sources to Identify Elements of Classical Arabic Names

Various reference sources and methods are used by the library community for authorized classical Arabic names. As a general rule, the most commonly known element of the classical Arabic name is taken from reference sources as the entry element. Zirikli's *"Aʿlām [Luminaries],"* Kahalah's *"Muʿjam al-Muʾallifīn [Index of Authors],"* and Brockelmann's *Geschichte der arabischen Litteratur* are the reference sources most frequently used to establish classical Arabic names.[15] Note that because the modern Arabic personal names do not have to rely on the commonly known element, they are all entered under the last element of the name (surname).

The use of various references sources to establish author names resulted in the creation of multiple forms of the same person's name, even within a single library. Table 1 shows the various forms of the following name:

محمد بن محمد بن حسين بهاء الدين بلخى المعروف بمولانا جلال الدين الرومى,
(1207م–1273م)

These forms were chosen as the first element of the author's name in various international catalogs found in the VIAF (http://viaf.org), using the search "Rumi, Jalal al din."

### Problems with Arabic Scripts

Various types of Arabic calligraphy and typography can be read in different ways and this makes vocalizing Arabic words difficult. These difficulties are described by Ismail

**Table 1.** Varient Forms of the Same Name in the VIAF

| Author Name | International Catalogs |
|---|---|
| Jalāl al-Dīn Rūmī, Maulana, 1207–1273 | Vatican Library<br>National Library of Australia<br>Library of Congress |
| Jalāl al-Dīn Rūmī, Maulana | Norway<br>Biblioteca Nacional de España |
| رومی، جلا ل الدین، توفی ٣٧٢١م | National Library of Israel (Arabic) |
| Bakrī Balḥī, Moḥamad ibn Moḥamad ibn Ḥoseīn Ḥoseīnī Ḥaṭībī 1207–1273 | Bibliothèque nationale de France |
| Djalal Al-Din Roemi | Flemish Public Library |
| Ğalāl-ad-Dīn Rūmī 1207–1273 | Deutsche Nationalbibliothek |
| Rūmī, Ğalāl ad-Dīn [forme avant 2007] | RERO (Switzerland) |
| Rumi, Maulānā Ğalāl ad-Din (1207–1273) | NUKAT Center (Poland) |
| Rumi, 1207–1273 | Biblioteca Nacional de Portugal |
| جلال الدین الرومی ، محمد بن محمد، 604–672 هـ | Bibliotheca Alexandrina (Egypt) |
| Džalāluddin, Rūmī, 1207–1273 | National Library of the Czech Republic |
| Rumi, Jalal as-Din, 1207–1273 | National Library of Sweden |
| Muhammad Ibn Muhammad-I Rumi, Galal Ad-din | Swiss National Library |
| Rumi, Jalal al-Din, 1207–1273 | National Library of Israel (Latin) |
| Jalāl al-Dīn Rūmī Persian poet and mystic, 1207–1273 | Getty Union List of Artist Names |
| Ğalāl al-Dīn Muḥammad Rūmī, 1207–1273 | SUDOC (France) |
| Jala al-Din Rumi, Mawlana, 1207–1273 | National Diet Library (Japan) |
| Mevlāna Rumi, 1207–1273 | Vatican Library |

and Azurah, who noted that major problems were due to the Arabic scripts themselves.[16] Lengthy authors' names, vocalization of names, Arabization of English names, and many authors of a book also are among the problems faced by catalogers.

Another set of challenges is presented by the process of transliteration. The use of transliteration has been criticized by library users as well as the library community. Kuntz observed, "Transliteration is unreliable and serves neither librarians, bibliographers, nor users of bibliographic systems. The time spent transliterating text in a record, when it could simply be entered in its native script, is wasteful and unproductive."[17]

The following example is a good illustration of what can go wrong during the transliteration process. Arabic language catalogers have transliterated the name of Shakespeare back into Latin characters in a variety of ways.

شاكسپير، وليم Shākspīr, Walyam
شكسپير، وليم Shakspīr, Walyam
شكسپير، وليام Shakspīr, Walyām
شاكسپير، وليام Shākspīr, Walyām
شيكسبير، ويليام Shiksbīr, Wilyām
شيكسپير، وليم Shikspīr, Wilyam

For the library community in the West, the issue of transliteration of non-Latin scripts emerged relatively recently. In 2008, the LC along with the British Library, Library and Archives of Canada, National Library of Medicine, and OCLC decided in favor of allowing the addition of non-Latin script data to name authority records.[18] These records are contributed to the Name Authority Cooperative Program (NACO) of the Program for Cooperative Cataloging (PCC). Regarding the non-Latin script data that are added to the authority record, the organizations named above decided to follow the MARC 21 "Model B," which stipulates that "non-Latin script data is entered into the same MARC tags as roman/romanized data and the non-Latin fields are not linked to parallel roman fields."[19] Implementation of Model B in the authority records allowed libraries to consider adding the non-Latin scripts to their authority records if they choose to do so.

## Description of the BA Authority Control Staffing

The Authority Control Section is a major component of the Cataloging Unit at the BA. The section is responsible for all of the authority work, including personal names,

corporate bodies, and subject headings. Authority processing is divided into Arabic and Latin. A single staff member has responsibility for the Latin authority processing. This includes names and subjects in English and French. Three staff members work on creating Arabic authority records. A supervisor and an assistant supervisor also work with authority records. Each staff person creates between seventy and eighty headings a day.

## Reasons for Creating a Local BA Authority File

The BA started to build its local Arabic authority control file in 2004 and the subject authority control file in 2006. The goal was to build a local Arabic authority file in Arabic and Latin scripts for the materials that are acquired and housed at the BA. The main reasons for creating the BA Authority File were the following:

- Specific tools designed for use with the Arabic language are lacking.
- Most tools used today in cataloging Arabic materials are translations of the Western tools.
- The needs of Arabic users are different from those in Western countries. An Arabic language catalog helps to resolve some of the difficulties with non-Latin scripts and offers search options that are not always available elsewhere.

According to Khairy, the intention of creating this file was to

> implement an Arabic Script Union Catalog and Authority file by establishing something similar to NACO in Arabic script, which may be called ANACO (Arabic Name Authority Cooperation). This will allow an option for exchanging Arabic script name authority headings where Arabic script online libraries will have the advantage of keeping their local methodologies and practices, meanwhile conforming to one methodology under cooperation of the ANACO.[20]

In building the BA Arabic Name Authority file, the BA followed the MARC 21's Model B, which states that for simple multiscript records, "All data is contained in regular fields and script varies depending on the requirements of the data. Repeatability specifications of all fields should be followed."[21] The BA creates two different Name Authority Records (NARs): one for Arabic and one for Latin script. The two records are linked by using the MARC 21 field 7xx (Heading linking entry) in the record. In this field, the BA uses the romanized (Latin-script

equivalent) form of the classical name from the LC authority file. If the name is not in the LC authority file, the library romanizes the name according to the ALA-LC Romanization Table for Arabic.[22]

## Local Policies for Creating BA Authority Records for Classical and Modern Arabic Names and Corporate Names

To build the authority file, the BA staff identified several issues related to the creation of authority records for classical Arabic names and corporate bodies. These included the choice of element of the classical name that could be used to establish the authorized access point, the issue of transliteration, misspellings and various ways of writing the Arabic names, and the use of different reference sources to establish authorized forms of the name. Modern personal names and corporate bodies are not as much a problem as the classical names. As a first step in the process, the BA decided to record all the forms of names found in the main reference sources commonly used by libraries that collect Arabic script materials.

The intention of the BA is to create an authority file that is based on the LC authority file structure. The BA is using the same reference sources for Arabic names used by the LC and follows the NACO rules for establishing Arabic names. According to Khairy,

> The BA practice is to conform to one main reference source and methodology for entering the established Arabic script name heading, to record the rest of the forms in Arabic script within the other three reference sources as unused forms, and recording the transliterated form into Latin script according to the LC and OCLC in MARC 21 field 7xx (Linking Entry fields).[23]

Currently, the BA is not using the MARC 21 field 7xx field. Instead, the BA uses the MARC 21 field 500 (see also from tracing) to add the transliterated form of the Arabic name. This is a temporary situation until the BA system is configured properly.

### Classical Arabic Names

The BA creates two types of authority records for classical Arabic names: original authority records in Arabic script and copy authority records in Latin script. All the authority records for Arabic names, whether they are classical or modern names, are created originally in the BA local system. All Arabic authority records are input using the Arabic

script. The BA is currently a member of the LC PCC Name Authority Cooperative (NACO) Arabic Funnel project with the goal of contributing their Arabic name records to this program. The BA's contribution to the Arabic Funnel project is still very limited (fourteen records in 2010–2011 and thirty-three in 2009–2010) because the staff have not yet gained independence from the NACO reviewer.[24] When the BA staff contribute Arabic names to the NACO program, they apply the LC PCC policy for establishing the name. However, when they download this record into their local system, they modify the record to comply with their local practices.

When creating copy authority records in Latin script, the BA staff download authority records from OCLC or the LC online authority file (http://authorities.loc.gov) into their system. In some cases, they edit these records to apply their local policy, such as linking and adding the name in direct order. If the name is in French, the BA staff consult the French Name Authority file, "Recherche autorités RAMEAU" (http://catalogue.bnf.fr/jsp/recherche_autorites_rameau .jsp?nouvelleRecherche=O&host=catalogue).

## Local Policies for Creating Classical Arabic Name Authority Records

The BA staff consult the Arabic reference sources to construct the classical name. The primary reference source used in authority processing is

*Madākhil al-asmā' al-'Arabīyah al-qadīmah : qā'imat istinād lil-maktabāt wa-marākiz al-mā'lūmāt* [*Entries for Old Arabic Personal Names*][25]

This source provides the BA catalogers with the element by which the classical name would be best known, the fuller form of the name, and birth and death dates.

Other reference sources are used to either resolve conflicts as they arise, or to construct the main entry when the author is not found in Madākhil al-asmā' al- 'Arabīyah al-qadīmah. These reference sources (with English and Arabic titles in brackets) are the following:

'Umar Riḍā Kaḥālah. *Muʿjam al-Muʾallifin: tarājum muṣannifi al-kutub al-'arabīyah* [*Index of Authors*][26]

Khayr al-Dīn Ziriklī. *al-Aʿlām, qāmūs tarājim li-ashhar al-rijāl wa-al-nisā' min al-'Arab wa-al-mustaʿribīn wa-al-mustashriqīn* [*Luminaries*][27]

Yūsuf Ilyān Sarkīs. *Muʿjam al-maṭbūʿāt al-'Arabīyah wa-al-muʿarrabah: wa-huwa shāmil li-asmā' al-kutub al-maṭbūʿah fī al-aqṭār al-sharqīyah maʿa dhikr asmā' muʾallifihā wa-lumʿah min tarjamati-him wa-dhālika min yawm ẓuhūr al-ṭibāʿah ilā*

*nihāyat al-sanah al-Hijrīyah1339 al-muwāfiqah li-sanat 1919 Mīlādīyah, jamaʿahu wa-rattabahu Yūsuf Ilyān Sarkīs* [*Dictionary of Arabic Printed Books*][28]

Çelebi, Kâtip. *Kitāb kashf al-ẓunūn ʿan asāmī al-kutub wa-al-funūn* [*Revealed Misgivings of the Names of Books and Arts*][29]

Brockelmann, Carl. *Geschichte der arabischen Litteratur*.[30]

As a general rule, the BA distinguishes between classical and modern names according to the period of the author's life. Classical authors are mainly those who died before 1900 or about 1318 Hijri (Islamic Calendar). Under most circumstances, the date associated with the name is followed by the letter "هـ" (H) to indicate that the dates of birth and death are in the Islamic calendar (Hijri). If the Gregorian calendar (Miladi) is used, the birth and death date is followed by the letter "م" (M). According to this distinction, the following name is considered to be classical

محي الدين محمد بن علي بن محمد بن عربي الحاتمي الطائي الأندلسي
الملقب بالشيخ ا لاكبر، 560–638هـ / 1165–1240م
(Muḥyī al-Dīn Muḥammad ibn ʿAlī ibn Muḥammad ibn ʿArabī al-Ḥātimī al-Ṭāʾī al-Andalusī al-mulaqab bi-al-Shaykh al-Akbar, 560–638H/1165–1240 M)

The authorized access point for this name will be: انب العربي 560–638 هـ (Ibn al-'Arabī). Modern authors are those who were active after the year 1900, for example, فوزى ، محمود، –1950 (Fawzī, Maḥmūd, 1950–)

In establishing the classical names, the BA applies *Anglo-American Cataloguing Rules*, 2nd ed. (*AACR2*) chapter 22 for personal names and Library of Congress Rules Interpretations.[31] In addition, the BA developed local policies that differ from international standards. The following rules are the most commonly used:

- Use the Hijri date (Islamic Calendar) rather than the Christian date (Gregorian calendar) that is used in the transliterated form of the name, for example,

  ابو العلاء المعري ، احمد بن عبد الله ، 363–449 هـ
  (Abū al-ʿAlā' al-Maʿarrī, Aḥmad ibn ʿAbd Allāh, 363–449H)
- Do not to omit the article "ال" or "el/al" automatically from the name when it is an integral part of the name, as in الشربيني (el-Sherbīnī).
- Base the form of the name on the best-known element or combination of elements. The best-known elements appear first, followed by a comma and the other elements of the name. For example,

ابن قيم الجوزية ، محمد بن أبي بكر، 691–751هـ
Not
ابن قيم الجوزية ، 691–751هـ

(Ibn Qayyim al-Jawzīyah, Muḥammad ibn Abī Bakr, 691–751H Not Ibn Qayyim al-Jawzīyah, 691–751 H)

- Make the "see" cross references as follows:
  ○ direct order form, if the name is established in inverted order
  ○ inverted order form, if the name is established in direct order
  ○ other surnames
  ○ any other elements
- Make the "see also" cross reference in the MARC 21 field 500 (see also from tracing—personal name) for the romanized form.
- Cite all the references used in establishing the heading in MARC 21 field 670 (Source data found).
- If the author is writing in other scripts in addition to the Arabic script, add the other form of the author's name in the MARC21 field 7xx (Established heading linking entry—personal name), which links the two forms of the name and allows to display all the works by the same author, regardless of language.

Figure 1 illustrates the application of the BA local policy.

The BA also created local guidelines for handling special Arabic characters to provide consistency in establishing names. Specific letters, such as "hamza," "ya," and "alif," were contributing to the duplication of records for the same name. For example:

Hamza "ء" was omitted when it occurs at the beginning of Arabic names and subject headings.
ابادي ، على رضا على
Not
أبادي ، على رضا علىى

('Abbādī, 'Alī Riḍa 'Alī)

Notice the "ء" on the top of the letter "آ"
Ya' "ي" was omitted and substituted by "ى"

Birth and death date is recorded in Arabic numbers instead of Arabic numerals, for example,
ابن حزم، على بن احمد، 384–456 هـ
Not
ابن حزم، على بن احمد، ٤٥٦-٣٨٤ هـ
(Ibn Ḥazm, 'Alī ibn Aḥmad, 384–456 H)

### Modern Arabic Personal and Corporate Names

Establishing the modern Arabic name is much easier than establishing the classical Arabic name. The BA uses the



**Figure 1.** The Application of the BA Local Policy

inverted name order and makes "see" cross references in direct order. If an author writes under a real name and a pseudonym, both names will be established in two separate records. A "see also" cross reference is provided in both records in MARC 21 field 5xx (see also from tracing). If the author writes under a pseudonym only, a "see" cross reference is made in the MARC 21 field 4xx (see from tracing).

The BA also created guidelines for establishing corporate authors. As a rule, six types of corporate names are entered under the name of the country. These are listed below, followed by examples:

- Organizations that are managed by the government
  مصر. الجهاز المركزى للتعبئة العامة و الاحصاء
  (Egypt. Central Agency for Public Mobilization and statistics)
- Legislative bodies, such as parliaments or city councils or legislative councils of cities
  مصر. مجلس الامة
  (Egypt. The National Assembly)
- Courts
  مصر. محكمة النقض
  (Egypt. Court of Cassation)
- Armed Forces
  مصر. الجيش
  (Egypt. Army)
- Embassies and consulates
  مصر. سفاره (اسرائيل)
  (Egypt. Embassy (Israel))
- Government officials (heads of state, heads of government, such as the president and ministries)
  مصر. وزارة الداخلية
  (Egypt. Ministry of Interior)
  مصر. رئيس (1981–1971م : السادات)
  (Egypt. President (al-Sadat: 1971–1981 M))

All other organizations are established in two ways: direct or indirect.

Examples of organizations that are established in direct order are the following:

- International organizations

يونسكو

(UNESCO)
- Universities

جامعة ام القرى. معهد البحوث العلمية و احياء التراث الاسلامى. قسم الحاسب الآلى

(Umm al-Qura University. the Institute of Scientific Research and Revival of Islamic Heritage Research)

- Government organizations that have a general name

الهيئة العامه للاستعلامات

(State Public Information Services)
- Political parties

الحزب الشيوعى العراقى

(Iraqi Communist Party)

Examples of organizations that are established in indirect order are the following:

- Organization that is a branch of a higher government organization.

جامعة الازهر. المراقبة العامه للدراسات العليا و البحوث

(Azhar University. Public Scrutiny of Graduate Studies and Research)
- Organization that has its own distinctive name.

هيئة الدستور الغذائى

(Codex Alimentarius Commission)

## Authority Work Processing for Arabic Materials at the BA

During cataloging, BA staff check the local authority file for personal name and corporate body. If the heading is found in the local authority file, the staff derive it and add it to the bibliographic record. If the heading does not exist in the local authority file, the cataloging staff search the LC authority file and, if the name is found, the cataloger cuts and pastes some elements (such as the romanized form of the name and cross references) and applies them to the local record. If the name is not found in the LC authority file, the cataloger creates a name for the bibliographic record following *AACR2*.

After creating the bibliographic records, the system will automatically check the headings and all access points, including the subject headings, against the BA authority file and alert the cataloger that new headings were created and no authority record exists. This new heading is called



**Figure 2.** Derived Authority Record



**Figure 3.** Derived Authority Record after Editing

an "on-the-fly" record. This on-the-fly authority record will be deposited in the Virtua daily report, which will be processed by the authority control processing staff. The Virtua daily report generator was created locally by the BA library information system staff from the Information and Communication Technology department, the BA system librarian, and an advisor, Lena Isaksson, Systems Librarian at Göteborg University Library, Sweden. This report is based on the authority messages generated after the records have been saved, and duplicates and new headings are detected. The authority control staff can generate a report of duplicates or new unauthorized headings by cataloger name or by date.

This "new heading created" message directs the cataloger either to make an authority record or let the message go directly to the Virtua utilities database reports. If the cataloger chooses to create a new provisional on-the-fly authority record, the software will formulate a provisional authority record in the "View Authority Record" window, creating an on-the-fly MARC 21 field 1xx (Heading) from the appropriate authoritative field in the bibliographic record.

A provisional authority record has the following data:
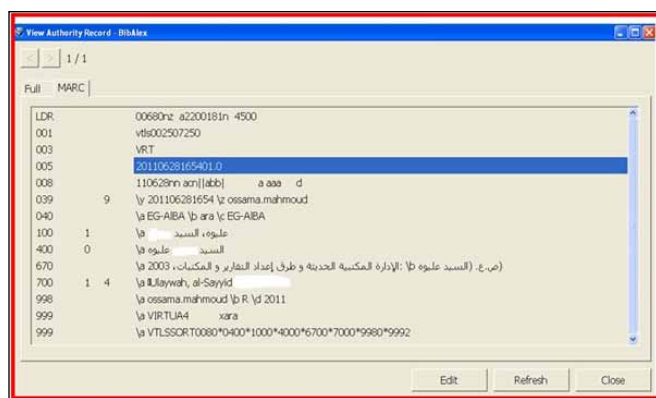
001 (Control number)
003 (Control number identifier)

**Figure 4.** Permanent Authority Record Created and Linked to the Record on the Fly via MARC21 001 Field



**Figure 5.** Authorized Name Displayed in the BA Catalog

005 (Date and time of latest transaction)
default 008 (Fixed-length data elements)
1xx (Headings—general information)
999 (Locally defined field) with the value of VIRTUA2

The authority processing staff check the VTLS utilities database reports daily to review the new headings created. To access the new headings, the authority cataloger will open the VTLS utilities menu and select "Authority Messages" from the "Cataloging" options. This will display various reports, including a report that indicates that new headings were created in MARC21, 998 field 1xx, 7xx, or 6xx ("complex see" and "see also" references, "series treatment" and "notes"). Records can be retrieved by a specific date and date range, and can limited by the cataloger's initial. Each record also can be the control number assigned to the on-the-fly record in the MARC 21 field 001 (Control number). The cataloger then selects the heading that needs an authority record. Clicking on the heading will open the bibliographic record and the system will ask the cataloger to select an action, which will be "Create Authority Record(s)." The system displays all the new headings for



**Figure 6.** Cross References Display in the BA Catalog

this particular bibliographic record and asks which heading needs an authority record. The cataloger selects and checks the MARC 21 field 1xx (Heading) that contains the on-the-fly record data requiring a permanent authority heading. The system provides a concise authority record, with some information derived from the bibliographic record that was created earlier. Figure 2 is an example of a derived authority record.

The cataloger edits the authority record and fields, such as the MARC 21 field 400 (See From Tracing) for cross-references and the linking MARC 21 700 field for the established transliterated form of the name as it appears in the LC authority file. The locally defined MARC 21 998 field is used to indicate who created the record. Figure 3 shows the example of a derived record after editing. After completing the editing, the system will provide a message that a new heading has been created.

When the cataloger saves the authority records, the system will determine whether a heading in the authority record matches a heading that already exists in the authority headings table (in this case the on-the-fly authority record). If all the criteria match, the heading is linked to an existing authority record. In this case, the permanent record will be linked to the on-the-fly record via the MARC 21 field 001, and the MARC 21 field 999 (locally defined field) will be converted to VIRTUA4 to indicate that the record is permanent. If all the criteria of the saved authority record do not match, a new permanent authority record is created; see figure 4.

## Authority Record Display in the BA OPAC

A user can conduct a search using the authorized form of the name of the cross references. For example, searching under "السيد، عليوه" will present the result shown in figure 5. If the user searched by the author's first name and not the surname, a cross reference will show "0" hits and will provide the correct form of the name; see figure 6.

Unfortunately, the terminology used in the display for cross references is not clear or instructive. The cross reference in figure 6 shows the "original term," which is the unused form of the name, and "related term," which is the

**Figure 7.** Romanized Authority Record



**Figure 8.** Arabic Authority Record

authorized form of the name. Ideally, the screen should display the "see" reference instead.

## Authority Records for Authors Writing in Multiple Scripts

When the author is writing in Latin and Arabic scripts, the catalogers will create two authority records and link them to each other to do the following:

- Identify and collocate all the works by the same author.
- Establish consistency in the language of the bibliographic record and a cross reference to records in other scripts.
- Maintain authority records in the language of the work. In this case, the three main languages the BA catalog uses are Arabic, English, and French.
- Create Arabic language records for the primary user groups at the BA and have those records linked to records created in other languages. Access to the catalog for Arabic script users is of primary importance as it reflects both the emphasis of the collections and the preferences of the user community.

The authority record for the Latin script work is derived from the LC authority file. The BA staff create the authority record for Arabic script. For the Latin script record, the BA staff add the Arabic script as "see also" in MARC 21 field 500; see figure 7. In the Arabic script authority record, the BA staff adds the Latin script in MARC 21 field 500 as "see also"; see figure 8. The BA uses the MARC 21 field 500 temporarily because of issues with system configuration. In the future, the linkage will be through the MARC 21 field 700. Notice that in the Arabic script record, no additional MARC

21 field 670 (Source of Data) is present for the sources of the Latin heading.

Searching the BA OPAC under "Mustafa, Saleh Lamei" will retrieve a heading that is not used; see figure 9. The heading displayed with the minus sign in front is a cross reference that comes from the MARC 21 field 400 (see from tracing). Clicking on the minus sign heading "Mustafa, Saleh Lamei" will display the cross reference for the romanized form of the name. The number "1" in front of the related term shows that that the library has another title in a different script by the same author. Clicking on the plus sign in front of the author's name will collocate the title under the romanized and the Arabic forms of the name.

Searching by the Arabic script will retrieve all the titles by this author. The plus sign in front of the hit count (figure 10) will show that this author has another title in different script.

## The Virtual International Authority File (VIAF) and the BA

A wide range of bibliographic agencies on the national and international level are creating and maintaining their own authority files. Significant overlap exists between the contents of these files, and the responsible agencies are expanding significant resources to maintain them. The concept of creating a Virtual International Authority file that would link these various international files was introduced in the early 1970s at the International Federation of Library Associations and Institutions (IFLA).[32]

The LC, Deutsche Nationalbibliothek, and Bibliothèque nationale de France, in cooperation with fifteen other national libraries and other agencies, jointly administer the VIAF project.[33] The VIAF explores virtually combining the name authority files of participating institutions into a single name authority gateway service. As Tillett pointed out, the VIAF "is virtual because it is not really a file itself, but a linked system that connects existing Authority files." The VIAF contains names of people and corporate bodies.[34] Other access points such as geographical names are planned for the future.
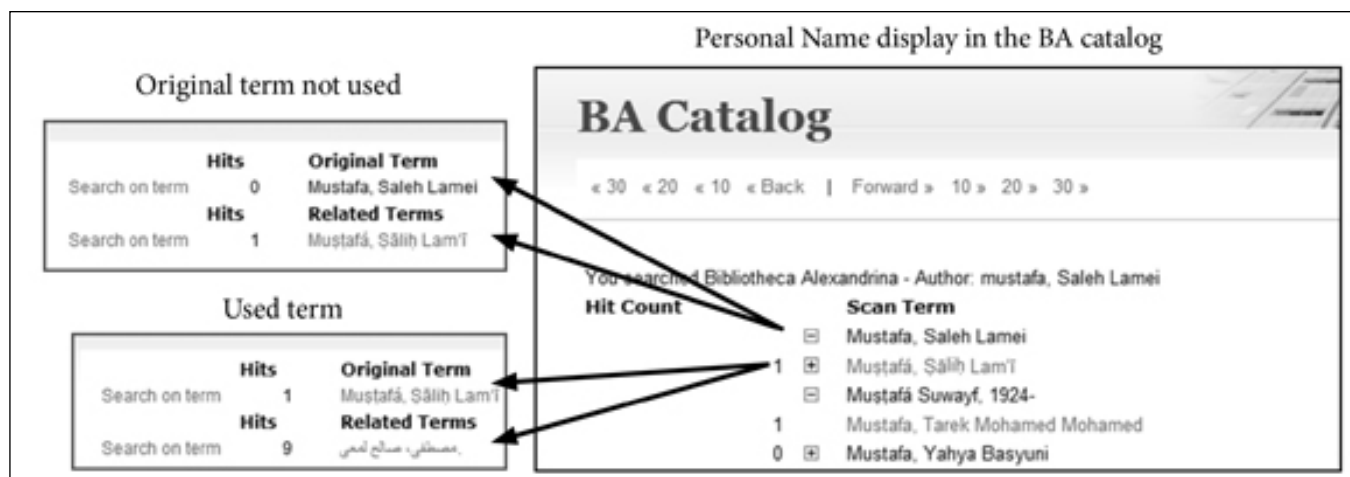
**Figure 9.** Sample Search of the OPAC by Personal Name

Objectives of the VIAF as defined by Bourdon are to do the following:

- Share authority data around the world
- Reduce cataloguing costs
- Simplify authority control internationally
- Provide authority data in form, language and script users want
- Provide linked data services[35]

VIAF has the potential to solve many name authority problems that result from romanization of names written in non-Latin scripts. By providing links between records in numerous languages and scripts, it offers searching options in all those languages and produces multiscript cross references. This localization of bibliographic data by making local versions of names (e.g., in different scripts, spellings, or other variations) available for searching and display makes bibliographic searching easy and more effective.

The BA is participating in VIAF by submitting its authority records. Every month, the BA staff collect bibliographic and authority records and send them to OCLC for matching and linking the records to other authority files. In case of problems, OCLC returns the records to BA for correction and these are resubmitted the following month.

## Supporting and Cooperating with Other Libraries

BA is creating an Arabic union catalog that can provide services to native Arabic speakers, researchers, and scholars. Early in the process, the BA decided to the use Arabic script instead of romanization when creating bibliographic and authority records. Despite that decision, the structure of the authority file still conforms to LC and PCC NACO practices. To make sure that the conformity is maintained, the BA uses the Arabic references sources identified earlier to establish preferred access points and MARC 21 for authority control.

Khairy stated that

> the goal of the BA is to implement an Arabic Script Union Catalogue and Authority file by establishing something similar to NACO in Arabic script, which may be called ANACO, Arabic Name Authority Cooperation. This will allow an option for exchanging Arabic script name authority headings where Arabic script online libraries will have the advantage of keeping their local methodologies and practices, meanwhile conforming to one methodology under cooperation of the ANACO.[36]

This approach opens the way for future cooperation with other libraries in the area. Thanks to their association with VIAF, the BA could become a conduit for including other Egyptian libraries in a larger project. More coordination between the libraries in the region as well as in Egypt itself is needed to achieve this goal.

## Conclusion

The cataloging unit at the BA has undertaken an ambitious, multifaceted project to create an Arabic language authority file, similar to the LC PCC NACO project. Their vision is to create an authority center that would serve the Arab world through cooperative arrangements. The project is still in its initial phases, but expectations are that it will develop and grow as circumstances permit.

A number of important steps already have been

**Figure 10.** Sample Result of Searching by Arabic Name

accomplished. First among these is the effort to resolve the issues with the classical Arabic names. The BA has established procedures for creating standard forms for classical Arabic names. These procedures follow those established by the international library community, including NACO. However, the BA has selected and is using a set of standard reference sources in Arabic for establishing authorized forms of names. These are published sources that are generally available, although not all are being used by the international community. This is a very important development that can establish a foundation for future cooperative work between libraries in the Arab world and beyond.

Indirectly, the BA initiative has helped in resolving the problem of romanization of non-Latin script. Until now, most libraries in the Western world have transliterated non-Latin scripts because most of the databases they use do not have the capacity to display non-Latin scripts. By creating catalog records in Latin and non-Latin scripts and linking them through their authority records, the BA has found a solution to the transliteration dilemma. Because the BA creates records in multiple scripts and the BA OPAC has the capacity to display all the scripts, transliterating records is no longer necessary.

The BA has now established an in-house authority database for its own collections. This database is growing exponentially, with nearly one hundred records added each day. The vast majority of the authority records the BA creates are for Arabic language authors and corporate bodies. The BA creates records for these works in Arabic that are searchable in that language. These records provide links to bibliographic records in languages other than Arabic when the author writes in multiple languages.

The BA authority database is currently unavailable to the broader library community. However, the BA authority records are available to the international community through VIAF. These records are integrated with and linked to the records that are being contributed to VIAF by other national and international libraries. This is an important step toward future collaborative efforts between the libraries in Egypt and the rest of the world.

Some of the solutions developed at the BA can lead to future developments in resource-sharing and cooperation on a global scale. Their system of creating authority records in three languages and cross referencing them to provide multilingual displays is one major step toward overcoming

the transliteration dilemma. This could serve as a model to many institutions that are currently transliterating and transcribing foreign-language records and creating name headings in a single language. This could be an opportunity for other libraries to rethink their current process of authority control. BA's decision to contribute their records to the VIAF program may be an encouragement for other libraries in the region to follow in their footsteps.

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