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TOWARDS A DIGITAL LIBRARY FOR MANUSCRIPT COLLECTIONS IN MOROCCO

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Manuscript Collections in Morocco in Historical Perspective

The corpus of Moroccan manuscripts is estimated at more than 80,000 titles and 200,000 volumes[1] held at a number of public and private libraries—mostly religious institutions and *zawāyā*.[2] These collections are invaluable both as repositories of human knowledge and memory and for their aesthetic value in terms of calligraphy, illumination, iconography and craftsmanship. Several medieval authors position Morocco as an important center in the Muslim West (*al-Gharb al-Islami*) for manuscript production, illumination, binding and exchange. However, except for a few scattered publications, a history of North African Arabic calligraphy (*al-khatt al-maghribi*) remains to be written. By providing the tools for making these collections readily accessible to the scholarly community in the Maghrib and beyond, ICT will make possible the study of North African scripts within the broader context of Arabic calligraphy and the Islamic arts of the book in general.

The two main manuscript collections in Morocco are hosted at the National Library of Morocco *(*Bibliothèque nationale du royaume du Maroc, or BNRM, formerly General Library and Archive) in Rabat (12,140 titles), and the Qarawiyyin Library in Fez (5,600 titles, 3,157 of which in several volumes).[3] Theses collections originated mostly from *waqf* (pious endowments)[4] and state appropriation of private collections (e.g., 1,311 and 3,371 titles from the al-Glawi and al-Kattani collections respectively).[5] They are written almost entirely in Arabic and in various scripts; Amazigh (Berber) manuscripts in Arabic script and Hebrew manuscripts constitute less than one percent of the total collections.[6] In terms of content, these manuscripts

cover a wide range of disciplines including sacred (i.e., Qur'ānic) texts, Islamic religious sciences (exegesis of the Qur'ān, Traditions of the Prophet Muhammad, and jurisprudence), Arabic grammar and lexicography, Arabic poetry, hagiography and genealogy, Islamic theology and mysticism, philosophy and logic, historiography, medicine, astronomy and astrology, mathematics, agriculture and natural sciences. Most of these manuscripts are several centuries old and their content is now in the public domain. One of the earliest inventories of manuscript collections in Morocco is the *Catalogue des manuscrits arabes de deux bibliothèques de Fès* (al-Qarawiyyin and al-Rasif), compiled in 1883 by René Basset. Many other catalogues, inventories and indexes, in Arabic as well as in French, were published since then.[7]

Most manuscripts in Morocco are written on paper produced locally and, to a lesser extent, imported from Europe.[8] Only two to three percent of those at the BNRM are on parchment (*raqq*), and most of them are Qur'ānic texts. Until the end of the 10th century, however, parchment remained the support of writing *par excellence*, especially for *mus<u>h</u>af*s. The first evidence of a paper (*kaghad* or *kaghid*) industry in Morocco dates to the Almoravid period (1073-1147 C.E.), when Fez had no less than 104 paper-mills. By the Almohad period (1130-1276 C.E.), their number had increased four times. Furthermore, Fez had a special quarter for paper makers (*kaghghadin*), located near the river (*Wadi al-Zaytun*) so that water energy could be used to operate paper mills, and special quarters for bookbinders/booksellers (*warraqin*) and parchment makers (*raqqaqin*) near the Qarawiyyin mosque.[9] In Marrakesh, the booksellers' quarter gave its name to the congregational mosque of the city (*Jami' al-Kutubiyya*), as attested by Leo Africanus (al-Hasan ibn Muhammad al-Wazzan al-Fasi): "Sous le portique de ce temple [*Jami' al-Kutubiyya*], il y avait autrefois une centaine de boutiques de libraires, mais maintenant il n'y en a plus une seule."[10]

This booksellers' quarter dates to the Almohad period and has been identified archaeologically.[11] In another passage, Leo Africanus states that Maghribi manuscripts were prized merchandise in Timbuktu markets: "On vend aussi beaucoup de livres mansucrits qui viennent de Berbérie. On tire plus de bénéfice de cette vente que de tout le reste des marchandises."[12] In addition to paper production, bookbinding (*al-Tasfir*) was a well established and highly specialized profession, as attested by two treatises, the *Al-Taysir fi Sina'at al-Tasfir* ("Bookbinding Manual"), compiled during the Almohad period by Abu 'Amr Bakr ibn Ibrahim ibn al-Mujahid al-Llakhmi al-Ishbili (d. 628-9 A.H.) and consisting of twenty chapters on bookbinding and manuscript restoration,[13] and the *inā'at tasfīr al-kutub wa hall al-dhahab*,[14] written by Abu al-'Abbas Ahmed ibn Muhammad al-Sufyānī in 1619 C.E., under the Sa'adians. From the mid-19th century on, when paper production in Fez, and most likely elsewhere in Morocco, ceased almost completely, manuscripts were made using European paper.[15]

Digitization of manuscript collections in Morocco

The most important initiative in the last ten years to use ICT for the preservation and valorization of manuscript collections in Morocco is The Manuscript Treasures in the Kingdom of Morocco (*Dhakha'ir al-Makhtutat bi al-Mamlaka al-Maghribiyya*), a collaboration between the Moroccan Ministry of Cultural Affairs, UNESCO and the Centre National du Patrimoine Manuscrit (CNPM) at the BNRM in Rabat.[16] The project consists of complete computer cataloging and selected digitization of the manuscript collections at the Qarawiyyin Library in Fez, the Library of the Great Mosque of Meknès and the Ibn Yusuf Library in Marrakech.[17] Based on existing print catalogs[18] and in-house inventories, the new digital database (available in Arabic only) features a bibliographic index for each of the three libraries; 3,823 searchable entries for the

Qarawiyyin Library; 473 for the Library of the Great Mosque of Meknès, and 1,057 for the Ibn Yusuf Library.[19] Each entry features twenty-three searchable fields including inventory number (*al-sijjil*), library catalog number,*[20] subject matter,* title,* number of volumes,* volume catalog number,* author name,* alias (a.k.a.),* author's date of death,* opening line,* colophon, dimensions (*miqyas*),* number of folios,* quality of book-making (*al-wiraqa*),* ruling (*al-mistara*),* type of support (paper or parchment),*[21] type of script,* place and date of composition,* name of copyist,* place of copy,* date of copy,* marks of ownership, author's authorization(s) of transmission (*ijaza*), ornaments (*al-hilyat*), illuminations or paintings (*al-rusum*), tables (*al-jadawil*), binding (*al-tajlid*),* preservation conditions,* microfilm number, microfilm type, author's biographical references, manuscript bibliography, name of library holding manuscript, and other additional information* such as *waqf* details. One important field unavailable for searching through the CD-ROM interface is the microfilm number. Most researchers will need this information since the manuscript collections are accessible only in microform, and users are not allowed to handle originals. Other information that cannot be searched through the CD-ROM interface regards manuscript ornamentation, illumination and marks of ownership. To access this type of information, users will have to circumvent the main interface and search a Microsoft Access database stored on the CD-ROM.

In addition to the digital catalog of the entire manuscript collections in Fez, Meknès and Marrakech, the project produced the first complete digital version (in image mode and scanned two pages per frame) of nine manuscripts chosen for their unique historical, cultural and aesthetic value; these are: *Tuhfat al-Nazir wa Ghunyat al-Dhakir fi Hifz al-Sha'a'ir wa Taghyir al-Manakir* by Ahmad Ibn Qasim al-'Uqbani (d. 1466-67);[22] *Al-Uns al-Jalil bi Tarikh al-Quds wa al-Khalil*, by Mujir al-Din al-'Ulaymi 'Abd al-Rahman Ibn Muhammad al-Hanbali (d.

1522);[23] *Al-Futuhat al-Ilahiyya fi Ahadith Khayr al-Bariyya Tushfa minha al-Qulub al-Sadiyya*, by Muhammad Ibn ‘Abd Allah (Alawite Sultan of Morocco, d. 1789)[24], *Sharh al-Urjurza fi Tibbi Ibn Sina*, by Abu al-Walid Muhammad Ibn Rushd (d. 1198);[25] *Lubb al-Azhar fi Sharh al-Anwar*, by ‘Ali Ibn Muhammad al-Qalsadi al-Gharnati (d. 1482);[26] *al-Wadiha fi al-Sunan wa al-Fiqh*, by Ibn Habib Abu Marwan ‘Abd al-Malik Ibn Habib al-Sullami al-Andalusi (d. 852);[27] *Ihya’ ‘Ulum al-Din*, by Abu Hamid al-Ghazali (d. 1111);[28] *Kitab fi Tibb al-Ajinna*, by an anonymous author from Cordova (10th century C.E.);[29] and *Mushaf Shatiba*.[30]

Since it was not possible to digitize entirely a larger collection, a sample of 206 manuscripts (144 from Fez, 22 from Meknès and 40 from Marrakech) were partially digitized making it possible for users to view more than 1500 pages (in image mode and scanned one page per frame). These partially-digitized manuscripts present distinctive features in relation to their authorship (e.g., they are autographed), their origin, their content, their rarity or uniqueness, their aesthetic value, their endower (*waqif*), the support on which they were written and their age. The digitized pages are accessible from a list that shows the subject matter, the author’s name, the manuscript title, the date of composition and the library catalog number. A graphic user interface allows the viewer to zoom in and out of individual pages and provides a concise description of each manuscript, listing author, title, date of composition, subject matter, catalog number, number of folios, ruling (*al-mistara*) and dimensions.

The sample covers a wide range of disciplines including Qur’ānic texts and exegesis, Prophetic Traditions, jurisprudence, biblical texts, Arabic grammar and lexicography, hagiography, Islamic theology and mysticism, philosophy and logic, historiography, medicine, astronomy, logic, mathematics and biographical dictionaries.

The digitization of the manuscript collections in Fez, Meknès and Marrakech was conducted using a conventional "off-the-shelf" scanner,[31] which explains the low quality of some of the images especially in the case of tightly bound or damaged manuscripts. In similar situations, proper digitization would require more sophisticated equipment to allow "face-up scanning" or, in the case of extremely rare or fragile manuscripts, "contact-free scanning." Some of the scanned pages from the Qarawiyyin Library collection show traces of lamination (*plastification*), or the applicatyion of a layer of plastic or tracing paper. This was done during the colonial period, the intention being to halt the course of degradation of some 54 rare manuscripts.[32] Ironically today, because of the chemicals used in lamination, these manuscripts are in a more advanced state of disintegration than many of those that were not laminated.

Simultaneously with digitization, some of the most treasured manuscripts in Morocco are being reproduced using high-quality facsimile technology. In 2003, the Moroccan Ministry of Endowments and Islamic Affairs produced a limited series of very high-quality facsimiles of two treasured Moroccan manuscripts, the *Dala'il al-Khayrat wa Shawariq al-Anwar fi as-Salat 'ala an-Nabiyy al-Mukhtar* and other Texts of Panegyrics and Praise, by Muhammad al-Jazuli (d. 1465 C.E.)[33] (Figure 2), and the *al-Shifa bi Ta'rif Huquq al-Mustafa*, by al-Qadi 'Iyad (d. 1149 C.E.).[34] The *Dala'il al-Khayrat* also includes an introductory chapter by Ahmed Toufiq that places the text and its author in their cultural-historical and religious context, and a commentary on the material and aesthetic aspects of the manuscript (e.g., paper format, calligraphy, illumination and binding) by Marie-Geneviève Guesdon. In 2006, the same ministry produced another facsimile of a two-volume *mushaf* transcribed by the hand of the Marinid sultan Abu al-Hasan (731 A.H./1331 C.E.). Reproducing manuscripts by means of high-quality facsimiles is undoubtedly a commendable way of preserving and promoting cultural heritage, but the

exorbitant cost of such initiatives tends to make these materials largely inaccessible to scholars and the general public.[35]

To our knowledge, no other ICT initiative in Morocco has reached the scale of The Manuscript Treasures in the Kingdom of Morocco Project. In 2006, the BNRM produced a CD-ROM (*Mukhtarat min Makhtutat al-Maktaba al-Wataniyya lil al-Mamlaka al-Maghribiyya*) showcasing a selection from a hundred of its most treasured manuscripts (about 5-10 pages per manuscript).[36] This is essentially a "large panorama photographique" of digital images with a simple interface and no zooming or searching capabilities. The digital reproductions were accompanied by a short note with the manuscript's title, author's name, date of copy, subject matter, script, dimensions and catalog number.

Conclusion

While some progress has been made in using ICT for the preservation and valorization of manuscript collection in Morocco, there is still a long road ahead. Manuscript collections at several heritage libraries are literally disintegrating because of poor conditions of preservation and direct handling of originals; many rare manuscripts are smuggled outside the country for a clientele of Western antiquarians and collectors. There is an urgent need for a national e-heritage initiative with specific strategic goals and operational objectives. Digitization represents the best solution today to preserve manuscripts collections and to make them available to researchers and institutions (both on CD-ROM and through on-line access). An important added value for a national e-heritage initiative is to assist under-funded public libraries and private repositories of manuscript collections to become self-sustained by generating financial resources through fees from institutional subscriptions, services to individuals and proceeds from CD-ROM sales.

Another strategic goal of this initiative is to build a National Digital Library for Manuscript Collections in Morocco in charge of all ICT aspects related to manuscript preservation, valorization and dissemination to avoid duplication of services among content holders. All e-services (on-line access, downloads, etc.) provided by content holders will eventually merge in one portal. This initiative should ultimately integrate future national e-strategies and ongoing regional initiatives such as the Digitization of the Arab World Memory Project launched in 2005 by the Center for the Documentation of Cultural and Natural Heritage in Cairo and UNESCO. At a global level, it will contribute to carve out a place for Morocco in the information society by integrating the UNESCO Memory of the World Initiative launched in 1992 and defined as "the documented, collective memory of the peoples of the world—their documentary heritage—which in turn represents a large proportion of the world's cultural heritage." The UNESCO Memory of the World has also established an open-access register of manuscript collections of world significance linked to existing programs such as the UNESCO World Heritage List. Most important of all, this international program recognizes the importance of ICT (e.g., CD-ROMs, DVDs and on-line resources) as effective means of preservation, valorization and access to manuscript collections of national, regional, and global significance.

AUTHOR'S NOTE

For a more detailed version of this paper, see the author's previous work:
Information and Communication Technologies for the Preservation and Valorization of Manuscript Collections in Morocco. In *The Trans-Saharan Book Trade: Manuscript Culture, Arabic Literacy and Intellectual History in Muslim Africa*, Editors: Graziano Krätli and Ghislaine Lydon, *Library of The Written Word*, Vol. 8, *The Manuscript World*, Vol. 3, pp. 265-289, Brill, Leiden-Boston, 2011.

BIBLIOGRAPHY

Afa, ‘Umar. “Malamih min tatawwur al-khatt al-maghribi min khilal al-kitaba ‘ala al-nuqud.” *Majallat Kulliyat al-Adab* 18 (1993).

Amahan, Ali. “Notes bibliographiques sur les manuscrits en langue tamazight écrits en caractères arabes.” In *Le manuscrit arabe et la codicologie*, edited by Ahmed-Chouqui Binebine, 99-104. Rabat: Faculté des lettres et des sciences humaines: Colloques et seminaires, vol. 33, 1994.

Ameur, Abderrahim “Eléments d'une stratégie pour la numérisation du patrimoine culturel marocain: cas des fonds manuscrits de la bibliothèque nationale du royaume du Maroc.” Unpublished B.A. thesis, Ecole des Sciences de l'Information, Rabat, 2004.

Ataer, Esra, and Pinar Duygulu. “Retrieval of Ottoman documents.” In *Proceedings of the 8th ACM international Workshop on Multimedia information Retrieval*. Santa Barbara, California, USA, October 26 - 27, 2006 (New York: ACM, 2006), 155-62.

Ataer, E., and P. Duygulu. “Matching Ottoman Words: An Image Retrieval Approach to Historical Document Indexing.” *Proceedings of ACM International Conference on Image and Video Retrieval (CIVR),* 2007.

al-Barrak, Abd al-Salam. *Fihris al-Makhtutat al-Mahfuza fi Khizanat al-Jami‘ al-Kabir bi Maknas*. Rabat: Wizarat al-Thaqafa, 2004.

Basset, René. “Catalogue des manuscrits arabes de deux bibliothèques de Fès.” *Bulletin de Correspondance Africaine* IV (1883), 366-93.

Benjelloun-Laroui, Latifa. *Les Bibliothèques au Maroc*. Paris: Maisonneuve et Larose, 1990.

Binebine, Ahmed-Chouqui. *Histoire des bibliothèques au Maroc*. Rabat: Faculté des lettres et des sciences humaines, 1992.

Blair, Sheila. *Islamic Calligraphy*. Edinburg: Edinburg University Press, 2006.

Bloom, Jonathan. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven, CT: Yale University Press, 2001.

Boussellaa, Wafa, Abderrazak Zahour, and Adel Alimi. “A Methodology for the Separation of Foreground/Background in Arabic Historical Manuscripts Using Hybrid Methods.” *Proceedings of the 2007 ACM Symposium on Applied Computing.* New York: ACM, 2007, 605-09.

Déroche, François. “O. Houdas et les écritures maghrébines.” In *Le manuscrit arabe et la codicologie,* edited by Ahmed-Chouqui Binebine, 75-81. Rabat: Faculté des lettres et des sciences humaines, 1994.

_____. “Tradition et innovation dans la pratique de l'écriture au Maghreb pendant les IVe-Xe et Ve-XIe siècles.” *Afrique du Nord antique et médiévale: Numismatique, langues, écritures et arts du livre, spécificité des arts figurés*. Proceedings of the VIIe Colloque international sur l'Histoire et l'archéologie de l'Afrique du Nord, Nice, 21-31 October 1996. Edited by Serge Lancel, 239-41. Paris: Editions du comité des travaux historiques et scientifiques, 1999.

Deverdun, Gaston. *Marrakech, des Origines à 1912*. 2 vols. Rabat: Editions Techniques Nord-Africaines, 1959.

Edmondson, Ray. *Memory of the World: General Guidelines* (Revised edition), Paris: UNESCO, 2002.

Ennahid, Said. *Political Economy and Settlement Systems of Medieval Northern Morocco: An Archaeological-Historical Approach*. British Archaeological Reports, International Series, No. S1059. Oxford: Archaeopress, 2002.

Eustache, Daniel. *Corpus des dirhams Idrissites et contemporains: Etudes sur la numismatique et l’histoire monétaire du Maroc I*. Rabat: Banque du Maroc, 1970-71.

Houdas, Octave. “Essai sur l'écriture maghrébine.” *Nouveaux mélanges orientaux* (Publications de l’Ecole des langues vivantes orientales, IIe série, vol. XIX.), 85-112. Paris: Imprimerie nationale, 1886.

Ibn Khaldūn. *Discours sur l'histoire universelle (al-Muqaddima)*. Translated by Vincent Monteil, 3 vols. Beirut: UNESCO, 1967.

Ibn Khaldūn, *The Muqaddimah: An Introduction to History*. Translated by Franz Rosenthal, 3 vols. 2nd ed. Princeton, NJ: Princeton University Press, 1980.

al-Jazuli, Muhammad. *Dala’il al-Khayrat wa Shawariq al-Anwar fi as-Salat ‘ala an-Nabiyy al-Mukhtar* and other Texts of Panegyrics and Praise. Introduction and commentary by Ahmed Toufiq and Marie Geneviève Guesdon, Rabat: Ministry of Endowments and Islamic Affairs, Kingdom of Morocco, 2003.

Leo Africanus (al-Hasan ibn Muhammad al-Wazzan al-Fasi). *Description de l'Afrique*. Translated by Alexis Epaulard and annotated by Théodore Monod, Henri Lhote and Raymond Mauny, 2 vols. Paris: Maisonneuve, 1981.

Leydier, Yann, Frank LeBourgeois, and Hubert Emptoz. “Textual Indexation of Ancient Documents.” In *Proceedings of the 2005 ACM Symposium on Document Engineering, Bristol, UK, November 2-4, 2005*, ed. Anthony Wiley and Peter R. King, 111-7. New York: ACM Press, 2005.

al-Manuni, Muhammad. *Dalil Makhtutat Dar al-Kutub al-Nasiriyya bi Tamgrut*. Rabat: Wizarat al-Awqaf wa al-Shu‘un al-Islamiyya, 1985.

_____. *Tarikh al-Wiraqa al-Maghribiyya: Sina'at al-Makhtut al-Maghribi min al-'Asr al-Wasit ila al-Fatra al-Mu'asira*. Vol. 2. Rabat: Kulliyat al-Adab wal 'Ulum al-Insaniyya, Silsilat Buhut wa Dirasat, 1991.

Shahab, S.A., W.G. Al-Khatib, and S.A. Mahmoud. "Computer Aided Indexing of Historical Manuscripts." In *Proceedings of the International Conference on Computer Graphics, Imaging and Visualisation (CGIV-06) Held in Sydney, Australia, 25-28 July 2006*, 287-95.

Skounti, Ahmed, Abdelkhalek Lemjidi, and El Mustapha Nami. *Tirra: aux origines de l'écriture au Maroc*. Rabat: Institut royal de la culture amazighe, 2003.

Srihari, Sargur, Harish Srinivasan, Pavithra Babu, and Chetan Bhole. "Handwritten Arabic Word Spotting using the CEDARABIC Document Analysis System." In *Proceedings of the Symposium on Document Image Understanding Technology (SDIUT-05) Held in College Park, MD, 2-4 November 2005*, 123-32.

NOTES

1. Based on official figures provided by the BNRM.

2. For example, the libraries of the Zawiyya of Tamgrut and the Zawiyya of Sidi Hamza in south-eastern Morocco, both administered by the Ministry of Endowments and Islamic Affairs. For further details, see Latifa Benjelloun-Laroui, *Les Bibliothèques au Maroc* (Paris: Maisonneuve et Larose, 1990), 280-5; 288-95.

3. Benjelloun-Laroui, *Bibliothèques au Maroc*, 150, 232 (note 166).

4. Ahmed-Chouqui Binebine, *Histoire des bibliothèques au Maroc* (Rabat: Faculté des lettres et des sciences humaines, 1992), 155-77.

5. *Mukhtarat min Makhtutat al-Maktaba al-Wataniyya lil al-Mamlaka al-Maghribiyya* (Selection of Manuscripts at BNRM), 1 Pilot CD-ROM, BNRM, Rabat, 2006.

6. For Amazigh manuscripts in Arabic script, see Ali Amahan, "Notes bibliographiques sur les manuscrits en langue tamazight écrits en caractères arabes," in *Le manuscrit arabe et la codicologie*, ed. Ahmed-Chouqui Binebine (Rabat: Faculté des lettres et des sciences humaines: Colloques et seminaires, vol. 33, 1994).

7. For example, *Fihris al-Mukhtutat al-'Arabiyya al-Mahfuza fi al-Khizana al-'Amma bi al-Ribat* (Catalogue of Arabic Manuscripts Preserved at the General Library in Rabat), 6 vols. (Rabat: BNRM, 1997-2001); see also Abd al-Salam al-Barraq, *Fihris al-Makhtutat al-Mahfuza fi Khizanat al-Jami' al-Kabir bi Maknas* (Rabat: Wizarat al-Thaqafa, 2004), and Muhammad al-Manuni, *Dalil Makhtutat Dar al-Kutub al-Nasiriyya bi Tamgrut* (Rabat: Wizarat al-Awqaf wa al-Shu'un al-Islamiyya, 1985). For earlier catalogs and indexes, see Benjelloun-Laroui, *Bibliothèques au Maroc,* 411-3, and Binebine, *Histoire des bibliothèques au Maroc,* 250-2.

8. Chiefly from Xàtiva (formerly Jativa, from the Arabic *Shatiba*), in the province of Valencia, eastern Spain, which was a major paper manufacturing center since the twelfth century C.E.

9. Cf. Bloom (quoting the fourteenth-century writer Ibn Abi Zar): "by the end of the twelfth century … the city of Fez, in Morocco, had 472 papermills." Jonathan Bloom, *Paper before Print: The History and Impact of Paper in the Islamic World* (New Haven, CT: Yale University Press, 2001), 86.

10. Leo Africanus, *Description de l'Afrique* (Paris: Maisonneuve, 1981), 1:101-2.

11. Gaston Deverdun, *Marrakech, des origines à 1912*, vol. 1 (Rabat: Editions Techniques Nord-Africaines, 1959), 178.

12. Leo Africanus, *Description de l'Afrique*, 1:468-9.

13. Bakr ibn Ibrahim al-Ishbili, *al-Taysir fi Sina'at al-Tasfir*, ed. A. Gannun (Madrid, 1959).

14. al-Sufyānī, Ahmad bin Muhammad. *Kitab Sinā'at Tasfīr al-Kutub wa hall al-dhahab (Art de la reliure et de la dorure)*, ed. P. Ricard. 2nd ed. (Paris: Paul Geuthner, 1925).

15. See al-Manuni, *Tarikh al-Wiraqa al-Maghribiyya: Sina'at al-Makhtut al-Maghribi min al-'Asr al-Wasit ila al-Fatra al-Mu'asira* (Rabat: Kulliyat al-Adab wal 'Ulum al-Insaniyya, Silsilat Buhut wa Dirasat, 1991), 2:21, 33-4, 232; Binebine, *Histoire des bibliothèques au Maroc*, 188-91.

16. *The Manuscript Treasures in the Kingdom of Morocco* (*Dhakha'ir al-Makhtutat bi al-Mamlaka al-Maghribiyya*), 3 CD-ROM (Rabat: Ministry of Cultural Affairs of Morocco, 2000). Produced by Artlight Multimédia; the scientific content supervision of the project was conducted by Ahmed Toufiq, Mohamed Ibn Abdelaziz al-Dabbagh, Mohammed Hijji and Abd al-Salam al-Barrak.

17. This excluding *khurum* or loose sheets.

18. See, for example, al-Barraq, *Fihris al-Makhtutat*.

19. Compare to 1,450 volumes (Benjelloun-Laroui, *Les Bibliothèques au Maroc*,195) and 1,840 volumes (Ministry of Cultural Affairs Web site, http://www.minculture.gov.ma [accessed 31 January 2009]).

20. Of a total of 34 fields showing for each entry, only 23 (indicated with an asterisk) are actually searchable.

21. In the case of paper (especially if imported from Europe), the inclusion of watermark information would have been very useful to trace the production place, since watermarks are visible only when the original document (i.e., as opposed to a digital copy) is held against a light source.

22. Qarawiyyin Library, catalog number: 1584; number of folios: 134; date of copy 1877.

23. Qarawiyyin Library, catalog number: 556; number of folios: 179; most likely an autograph composed in 1497.

24. Qarawiyyin Library, catalog number: 745; number of folios: 163; date of composition 1784.

25. Qarawiyyin Library, catalog number: 1979bis? (1970 in the library MS Access database); number of folios: 95; date of copy?

26. Library of the Great Mosque of Meknès, catalog number: 470; number of folios: 29; date of copy: 1472.

27. Library of the Great Mosque of Meknès, catalog number: 218? (110 in the library MS Access database); number of folios: 38; date of copy?

28. Ibn Yusuf Library of Marrakech, catalog number: 262/1 see also 262/2; number of folios? Date of copy?

29. Ibn Yusuf Library of Marrakech, catalog number: 604; number of folios? Date of copy?

30. Ibn Yusuf Library of Marrakech, catalog number: 431/5, see also 430, 431/5-8, 432/1-2; probably the handwriting of the Almohad Caliph ‘Umar al-Murtada (d. 1266); number of folios? Date of copy: 1223?

31. Hassan Harnan, current curator of the Qarawiyyin Library in Fez (personal communication, 2007).

32. Of these manuscripts, 32 were laminated with plastic and 22 with tracing paper.

33. Manuscript penned in Fez in mid-15th century C.E.; facsimile of manuscript No. G. 356 of the BNRM, printed by ADEVA, Graz-Austria, see Muhammad al-Jazuli, *Dala’il al-Khayrat wa Shawariq al-Anwar fi as-Salat ‘ala an-Nabiyy al-Mukhtar* (Rabat: Ministry of Endowments and Islamic Affairs, Kingdom of Morocco, 2003).

34. Manuscript penned in Fez in 1868-69; facsimile of manuscript No. G. 636 of the BNRM.

35. The listed price of the complete color facsimile edition of *Dala’il al-Khayrat* (318 folios in the original size 114 x 114 mm; Maghribi script) is 1.500 euros. For further details, visit the Web site of the Akademische Druck- u. Verlagsanstalt (ADEVA) Graz, available from http://www.adeva.com (accessed 31 January 2009).

36. *Selection of Manuscripts at the BNRM* (*Mukhtarat min Makhtutat al-Maktaba al-Wataniyya lil al-Mamlaka al-Maghribiyya*, 1 Pilot CD-ROM (Rabat: BNRM, 2006). Available in French only and sponsored by the UNESCO-Rabat Office.