

A short note on some Arabic inscriptions recording seismic effects in the Mediterranean area

472 H./1079 A.D. – 703 H./1303-1304 A.D.

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Abstract

The research was carried out within the framework of the Istituto Nazionale di Geofisica projects aimed at investigating Mediterranean seismicity from 11th to 15th century. The screening of the epigraphical texts was performed on 8000 inscriptions of the Arab-Mediterranean area. The scant amount of inscriptions directly relating to seismic events, 5 in all, is due to the nature of the epigraphic genre itself: almost invariably, the commemorative texts in the inscriptions do not yield more precise information on seismic events, even recording collapses or restorations. In a further phase of research and analysis such information will be correlated with that contained in other written sources. The earthquakes explicitly mentioned in the inscriptions examined here are already known through other sources, but this special evidence more accurately pinpoints, destructive effects on both specific sites and particular buildings.

Key words *historical seismology – Arabic inscriptions – Syria – Egypt – Spain*

1. Introduction

Historical seismology research aimed at studying the earthquakes in the Mediterranean area from antiquity to the 15th century has been carried out for some years on written and epigraphic sources. The results of the first part of this research – from antiquity to the 10th century – have already been published (Guidoboni *et al.*, 1994). This research programme (coordinated by E. Guidoboni) is included among the studies devoted by the Istituto Nazionale di Geofisica to the Mediterranean area, in order to deepen knowledge of strong earthquakes in that region.

Research on Arabic epigraphic sources is therefore just one aspect of the work carried out or in progress concerning historical records and in many different languages. The attention given to that type of source is due to its particu-

larity: though direct, explicit evidence of an earthquake in epigraphic sources is scant, it has a remarkable value, since it allows a seismic effect for a precise building in a precise place to be assessed.

The epigraphic evidences are therefore valuable, thanks to their precision and reliability. Some authors have already used such evidence regarding seismic effects: Robert (1978) for the Greek epigraphs of Asia Minor, Burnand (1984) for Latin epigraphs. The list of Latin epigraphs was extended by Guidoboni (1989); the list of Greek epigraphs was extended by Guidoboni *et al.* (1994).

This study was systematically carried out on a very wide corpus of Arabic epigraphs to aid other research. In Islamic culture references to earthquakes can be traced as back as to the Koranic Revelation. Here, in a chapter entitled «The earthquake», the exceptional nature of seismic events assumes a dual aspect: first, that of the scale of their devastation; second, that of their «supernatural» character, heralding the advent of the day of Judgement. The allusions

to earthquakes which can be found in various *ahādīth* or «sayings» of the Prophet of Islam are similar. The study of so vast a geographical area as the Arab-Islamic world, with reference to Arabic epigraphic evidence, raises a series of problems which can only be tackled with the support of other non-epigraphic documentary sources (Johns, 1989). As regards the utilization of epigraphic sources for the location of seismic effects, or more generally for specific references to earthquakes in the Mediterranean area, the available contributions are still few and far-between (Burnand, 1984; *Catalogo epigrafī*, in Guidoboni, 1989 with bibliography).

As may be noted from the inscriptions discussed in the present paper, the Arab – or Arab-speaking – donors and literati used an almost unvarying scheme in the composition of their epitaphs (neither the course of the centuries nor the enormous geographic distances led to any appreciable differences): in the funerary stelae the cause of death is never mentioned, with the exception of death from martyrdom; a large portion of the epigraphic text is reserved for Koranic and prophetic quotations, and for more mundane eulogies in honour of eminent persons; the inscriptions of more peculiar concern to us here, *i.e.*, those commemorating construction or restoration, only on exceptional occasions do they testify to the causes which had produced the ruin of the building in question.

We may for instance think of the inscription commemorating a restoration RCEA [Centre d'épigraphie arabe de l'École Pratique des Hautes Etudes, IV^{ème} section, *Répertoire chronologique d'épigraphie arabe*, XII, Cairo, IFAO, 1944, p. 68 f.], no. 4898:

بِسْمِ اللَّهِ (Kor. IX 18) وَ لَمَّا سَقَطَ الْمَسْجِدَ الْمَعْلُقَ
المعروف بإنشاء الأمير المرحوم سيف الدين بلبان
/ المستغربي أنشئ كأنه هذا المسجد المبارك من
مال الوقف المبارك المعروف بالأمير سيف الدين
المذكور في شهر سنة سبع / و ثمانين و ستمئة
بنظر الأمير سعد الدين كوجا الناصري الوصي
أثابهما الله و أجرهما غفر لهما و لمن صلى و
ترحم عليهما و جميع المسلمين

[Translation] «(In the name of Allah the All-Merciful): When the suspended mosque, known

under the name of its founder, the late Emir Sayf ad-Dīn Balabān al-Mustaghribī, collapsed, it was reconstructed just as this blessed mosque was before, with the funds of the blessed *waqf*, and known under the name of the Sayyid Emir Sayf ad-Dīn in the months of the year 687 under the supervision of the emir Sa'd ad-Dīn Kūjā 'n-Nāsirī 'l-Wasī: may God reward them both and grant to them His forgiveness, as also to all those who pray and recite an invocation of mercy on their behalf, and to all Moslems».

There are two linguistic clues in this inscription that suggest the restoration to be the consequence of a seismic effect, or at least of a sudden and «natural» – rather than man-made – destruction of the mosque. In fact the verb *saqata* (سقط) precludes destruction by human agency (*e.g.*, as a result of warfare), and the temporal conjunction *lammā* (لَمَّا) seems to indicate that the reconstruction took place soon after the building collapsed.

The problem posed, therefore, concerns the numerous inscriptions attesting to reconstructions or restorations in periods immediately subsequent or slightly after to otherwise documented seismic events. In the absence of explicit references, can a direct correlation between these events and the epigraphic documentation be assumed? Not always, since the frequent dynastic struggles in the area, the assaults and sieges of various cities during the Crusades, and the less frequent but no less destructive popular uprisings, could have prompted such «catastrophic» results as to require large-scale restoration as well. In order to shed some light on these and other possible causes of reconstruction or restoration, interdisciplinary studies are essential. In this way alone can the interpretation of texts relevant to earthquakes known from other sources become less improbable.

2. The five inscriptions selected

Seismic activity in Arabic is expressed by the root of the verb زلزال *zalzala*, from which the two words for «earthquake» derive: زلزال *zilzāl* and زلزلة *zalzalah* (see, *e.g.*, the *Mu'jam al-'arabi al-asasi*, Paris, Larousse, 1989, p. 581, where it can also be ascertained that this term – a fairly rare one in Arabic – is substan-

tially devoid of synonyms). Out of the approximately 8000 inscriptions scrutinized, taken from the largest corpus of Arabic epigraphs (a series of minor collections also exists, in part listed in the bibliography) and ranging in date from 11th to 14th century only five in fact use the word *zilzāl* (زلزال) or *zalzalah* (زلزلة). The corpus in question is the already cited *Répertoire chronologique*, a work unique in scale, yet suffering from the limitations of the scholarly standard on which it was originally based (volumes I-XVI retain the characteristics of the first published, in 1931): in particular, there is no analytic index but only a thematic one, should one wish to check whether a certain term (e.g., «earthquake») is used, and how often it occurs, the only way of retrieving this information is by reading through all the 8000 inscriptions so far published. The geographic index, published in 1982 as volume 17, has but a relative value in so far as it permits a preliminary knowledge of the text to be sought. Moreover, the bibliography relating to the already published inscriptions has not been updated, and the supplementation of the corpus with new epigraphic texts is still awaited. We have tried to address this latter problem by offering a more recent bibliography, consulting by on-line computer link the libraries of both the School for Oriental and African Studies, University of London, and the University of Berkeley, California; unfortunately, it was not possible to do likewise for the major French libraries (the Bibliothèque Nationale and the Institut du Monde Arabe in Paris, which still represent the major research centres in Europe for Arab-Islamic studies).

The small number of Arabic inscriptions testifying to seismic effects is also due to the fact that the major epigraphic repertoires only record dated or definitely datable inscriptions.

- 1) *Church of El Salvador, Seville (Spain). Date*
1 *rabī' al-awwal* 472 = 1 September 1079
RCEA [VII (1936), p. 205 f], no. 2723

بِسْمِ اللَّهِ وَصَلَّى اللَّهُ عَلَى مُحَمَّدٍ / خَاتَمِ أَنْبِيَاءِهِ وَخَيْرِ
أَصْفِيَاءِهِ وَ عَلَى أَهْلِهِ الطَّيِّبِينَ / الْأَبْرَارِ وَ سَلَّمَ تَسْلِيمًا
أَمْرَ الْمُعْتَمَدِ عَلَى اللَّهِ / الْمُؤَيَّدِ بِنَصْرِ اللَّهِ أَبُو الْقَاسِمِ
مُحَمَّدُ بْنُ عَبْدِ / أَدَامَ اللَّهُ تَأْيِيدَ أَمْرِهِ وَ وَصَلَ
إِعْزَازَ نَصْرِهِ / بِنِيَانِ أَعْلَى هَذَا الْمَنَارِ لَا زَالَ

غزيرا بدعوة / الإسلام عند انهدامه لكثير الزلازل
/ الكائنة ليلة الأحد مستهل ربيع الأول / من سنة
اثنتين و سبعين و أربع مائة فتم / بحول الله و
تأييده في عقب الشهر المورخ / قبل الله فيه كريم
مشغلته و بنى له بكل حجر / بنى فيه قصرا في جناه
بمنه و لطفه / عمل أبي إبراهيم ابن أفلح الرخام على يدى
الأمين صاحب الأحباس القيم أبي عمر أحمد بن
طيب وفتح الله

[Translation] «(In the name of Allah the All-Merciful): May God bless and give Peace to Muhammad, seal of His prophets, best of His intimates, and to his good and virtuous family! al-Mu'tamid 'alā 'Llāh, al-Mu'ayyad bi 'n-Nasr Allah, Abū 'l-Qāsim Muhammad, b. 'Abbād – may God prolong his authority and continue the magnificence of his victory! He ordered the construction of this minaret – may it ever be full of the appeal to Islam – at the time of its destruction due to the many earthquakes that occurred on the night of Sunday first *rabī' al-awwal* of the year 472. It was completed, thanks to the aid and support of Allah, at the end of the aforesaid month. May Allah accept in this his generous works, and for every stone employed here build for him a castle in His Paradise, in His Grace and Goodness! Work of Abū Ibrāhīm, b. Aflah ar-Rukhkhām [‘the marble-worker’], in the presence of the trusted *sāhib al-ahbās* [‘administrator of mortmain’], the regent, Abū 'Umar Ahmad b. Tayyib – May God grant him success».

- 2) *Hasanayin Mosque, Hamāh (Syria). Date*
552/1157
RCEA [IX (1937), p. 13 f.], no. 3220

بِسْمِ اللَّهِ لَا إِلَهَ إِلَّا اللَّهُ / مُحَمَّدٌ رَسُولُ اللَّهِ صَلَّى
اللَّهُ عَلَيْهِ وَ آلِهِ وَ / وَ سَلَّمَ أَمْرَ بَعْمَارَةَ هَذَا الْمَسْجِدِ
الْمُبَارَكِ بَعْدَ / هَدْمِهِ فِي الزَّلْزَلَةِ الْحَادِثَةِ سَنَةِ
اِثْنَتَيْنِ وَ خَمْسِينَ / وَ خَمْسَ مِائَةَ مَوْلَانَا الْمَلِكِ
الْعَادِلِ الْمَجَاهِدِ / نُورِ الدِّينِ أَبُو الْقَاسِمِ مُحَمَّدُ
بْنُ زَنْكِي بْنِ / أَيْ سَنَقْرَا ...

[Translation] «(In the name of Allah the All-Merciful): There is no God but Allah, [Muhammad is the] Prophet [of God]. May Allah [bless] him and grant him Peace, as also his family. The construction of this blessed mosque, after its collapse in the earthquake

which occurred in the year 552, was ordered by our lord, the righteous sovereign and devout warrior Nūr ad-Dīn Abū 'l-Qāsim Mahmūd b. Zankī, b. [Āq Sunqur]».

3) *Madrasah of Qalāwun, Cairo. Date 703/1303-1304*
RCEA [XII (1944), p. 243], no. 5160

Although the word is not mentioned, the restoration inscription no. 5159, also dated 703, in the mosque of al-Hakim, is very probably to be associated with the same earthquake here remembered.

Question marks refer to uncertainties of reading, not to the interpretation of the text as published.

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ (36 XXIV Kor.) أَمْرٌ (؟) بِتَجْدِیدِ (؟) هَذِهِ
المأذنة مولانا السلطان الملك / الناصر ناصر الدنيا
و الدين محمد بن قلاون الصالحى عند ظهور
(؟) الزلزلة / و سقوط أعاليها في شهور سنة
ثلاث و سبعمائة من الهجرة النبوية

[Translation] «(In the name of Allah the All-Merciful): Our lord, the sultan, al-Malik an-Nāsir, victorious in the world and in religion, Muhammad b. Qalāwun as-Sālihī ordered (?) the reconstruction (?) of this minaret, at the time of the phenomenon (?) of the earthquake and the collapse (?) of its upper parts, in the months of the year 703 of the prophetic Hegira».

4) *Madrasah of Qalāwun, Cairo. Date 703/1303-1304*
RCEA [XII (1944), p. 243], no. 5161

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ هَذِهِ الْمَأْذَنَةُ / مَوْلَانَا السُّلْطَانَ
الملك الناصر ناصر الدنيا / و الدين محمد بن
قلاون الصالحى عند ظهور الزلزلة و سقوط /
أعاليها في شهور سنة ثلاث و سبعمائة من
الهجرة النبوية

[Translation] «(In the name of Allah the All-Merciful): Our lord, the sultan, al-Malik an-Nāsir, victorious in the world and in religion, Muhammad b. Qalāwun as-Sālihī ordered the reconstruction of this minaret, at the time of the

phenomenon of the earthquake and the collapse of its upper parts, in the months of the year 703 of the prophetic Hegira».

5) *Madrasah of Qalāwun, Cairo. Date 703/1303-1304*
RCEA [XII (1944), p. 243], no. 5162

بِسْمِ اللّٰهِ جَدِّدِ الرَّحْمَةَ وَ الرِّضْوَانَ عَلَى رُوحِ الْمَلِكِ
المنصور رحمه الله / أمر بتجديد هاذه المأذنة في
أيام ولده مولانا السلطان الملك الناصر أبى الفتح
محمد / و ذلك عند ظهور الآيات المنزلة و سقوط
أعاليها عند حدوث الزلزلة في شهور / سنة ثلاث
و سبعمائة من الهجرة النبوية على صاحبها الصلوة
و السلام

[Translation] «(In the name of Allah the All-Merciful): May God renew his mercy and satisfaction for the soul of the victorious king. May Allah take pity on him. The reconstruction of this minaret was ordered in the days of his son, our lord the sultan, the victorious king, Abū 'l-Fath Muhammad. This [was accomplished] at the time of the apparition of the signs that descended from heaven and of the collapse of its upper parts when the earthquake took place, in the months of the year 703 of the prophetic Hegira. Blessing and peace on his administrator».

3. Conclusions

Our research on the epigraphic corpus of 8 000 Arab inscriptions delivered exact information for only three seismic events. Many other inscriptions, hinting at reconstructions in more general terms, may in future be correlated with precise seismic events, but this depends upon further research on both local seismic conditions and other types of sources.

- 472/1079 Seville (Spain): inscription no. 1
(RCEA VII, 1936 p. 205 f., no. 2723)
- 552/1157 Hamāh (Syria): inscription no. 2
(RCEA IX, 1937 p. 13 f., no. 3220)
- 703/1303-1304 Cairo (Egypt): inscriptions nos. 3-4-5
(RCEA XII, 1944 p. 243, nos. 5160, 5161 and 5162).

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