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SOME DESCRIPTIONS OF EARTHQUAKES
IN XVII-XIX CENTURY PERSIAN HISTORICAL SOURCES

1. The Merātoʾl-Qāsān

When, in July 1870, Mirzā ‘Abdoʾr-Rahim b. Moḥammad Ebrāhim al-Qāsānī began to write his Merātoʾl-Qāsān («The Mirror of Kāshān»), 1 he conceived it as a description («mirror») of the city of Kāšān; he devoted a small part of the work to a seismic history of the city in the previous hundred years. Mirzā ‘Abdoʾr-Rahim puts his brief survey of the main earthquakes in Kāšān at the beginning of the seventh Paragraph (fašt) of Chapter (bāb) Two of his «Mirror», which deals with the different kinds of natural calamities affecting the region. It is also the last fašt devoted to the natural features of the city and of its surroundings (mountains, rivers, population, gardens, climate, etc.). The next bābs deal mainly with the political, social, and economic history of Kāšān from the Afghan invasion in 1722 onwards. 2

Mirzā ‘Abdoʾr-Rahim composed the Merātoʾl-Qāsān as an answer to a questionnaire about the province of Kāšān sent by the then reigning monarch, Nāṣeroʾd-din Šāh Qājār (1848-1896), to the local governor. His official task didn’t prevent him from being somewhat inaccurate about dates and maybe even about the number of casualties, as we will see below; however, his work provides data that scholars interested in seismology cannot easily find in those Persian sources which adopt a more traditional approach towards this kind of phenomena. It is interesting to note the difference between Mirzā ‘Abdoʾr-Rahim’s descriptions of seismic phenomenon and the way in which other writers of an earlier period approached the subject. Earthquakes and their fateful consequences are quite often referred to in Persian historical sources, though usually only briefly, buried

2 Calmard 1990, pp. 694-695.
3 For a detailed summary of the contents of the work, cf. Rieu 1895, p. 67.
in a great amount of political, dynastic, and literary information. Descriptions of natural events are usually vague, since in most cases they are only a pretext to speak about omens, marvellous events, and prophecies which were more apt to meet the approval of the public (not to mention the patrons of the authors) than bare descriptions of natural phenomena. Furthermore, the selection of the events the author chooses to describe is haphazard. Of course, such an approach makes the task of scholars dealing with Persian sources quite difficult.  

I will try to illustrate the difference in Mirzā ‘Abdor-Rahim’s approach by translating appropriate passages taken from both the Merāto‘l-Qāsān and earlier texts.

As far as the Merāto‘l-Qāsān is concerned, in the translation I tried to remain as faithful as possible to the original language even at the cost of a certain bareness of speech, in order to give the reader a clear image of the original text and to avoid the risk of ascribing to Mirzā ‘Abdor-Rahim words he could not have written. On this matter, one may note that Mirzā ‘Abdor-Rahim states that the earth «quakes» or «moves», never using, for instance, the expressions harekat-e ofoqi and harekat-e ‘amudi, that in Modern Persian mean «undulatory movement» and «sussultatory movement» respectively, nor making use of any other technical terms (say, foreshock, aftershock and so on) current in seismology.

Since the printed edition of the Merāto‘l-Qāsān is based solely on the manuscript of the Majles Library, the oldest of the two known manuscripts, for the purposes of this translation I chose to make use of the manuscript in the British Library Or Ms 3603. It is interesting to note that in this manuscript the word faṣl is used where in the former bāb is employed.

The excerpt begins with Nāsero’d-din Šah’s question, followed by Mirzā ‘Abdor-Rahim’s answer.

On the calamities of the earth, such as earthquakes, famines, floods and fires, on what kind of destruction they have caused, and to what extent. Answer: earthquakes in these districts were not usual at all. About one hundred years ago, after rain had been falling for three or four days in

4 In Persian historical sources the desire to entertain often seems to take precedence over the intention to inform.


6 Žabrābī, panj.

7 This earthquake took place on December 15th, 1778/Zi-qāde 25th, 1192: cf. Ambraseys and Melville 1982, pp. 53-54, nn. 210-211 p. 185.
succession and had reduced roofs and streets to mud, at midnight, when everyone was asleep, the earth began to quake, cracking the clay [walls] of the houses and ruining them, and nearly half the inhabitants perished. For about one month the earth didn’t rest and moved twice or thrice a day; those who escaped this disaster settled in the cemeteries and in the middle of ruins, until they buried the dead [after washing them] with lotus and camphor, according to the precepts of the Holy Law of the Seal of the Prophets. In the city of Kāšān and in its district, a thirty thousand people were numbered [among casualties], while [the number of] those who were wrapped in the veil of the earth and were found maybe some years later, remained unknown: so no more than about one third of the population of Kāšān saved itself, since at about that time it numbered forty-five thousand to fifty thousand people and no more. Since that time until about twenty-eight years ago no other earthquake occurred. Suddenly, it was two hours until sunset, the earth began to move causing a great deal of ruin. For three or four days the earth went on quaking, moving strongly day and night. People [after leaving] their dwellings took shelter in the ruins and in the cemeteries, but since this misfortune had taken place during the day [when] everybody was either in the countryside, in the streets or in the markets, and at first [the earth] had moved in a moderate way, people went away from buildings [looking for shelter] in the open air. In that moment [the earthquake] grew stronger and [the earth] moved for at least one minute. There were anyway a lot of casualties: nearly 1,500 people in the city [fol. 90a] and in the district of Kāšān, because of that ruinous event, packed their things and set off for the world of everlasting life. Afterwards, up to the present time, in which I am writing, in the year 1287 of the Hijra, the earth has moved once or twice a year, but not to the extent of ruining things and causing casualties amongst the people. [...] [fol. 90b].

The second earthquake occurred in 1260/May 12th, 1844, killing about 1,500 people. A European source contemporary with the Merātöl-Qāsān estimates the inhabitants of the city of Kāšān at nearly 30,000 people. Curiously enough, the same source doesn’t record the earthquake of 1844, yet it briefly mentions the one which occurred in 1778: the city was in a great measure destroyed by an earthquake in the reign of Kereem Khan, that is Karim Xān Zand (d. 1779).  

8 AMBRASEYS and MELVILLE 1982, figure 3.15. p. 35.  
10 April 3rd, 1870-March 22nd, 1871.  
11 AMBRASEYS and MELVILLE 1982, p. 61, nr. 270-275 p. 188: it is not completely clear from which source – among those quoted in the notes – this figure is taken, probably from Zarrūbi himself.  
12 WATSON 1866, p. 131.  
13 Ibidem.
2. Two 17th century sources: the Xolāṣato's-siyār and the Xold-e
barīn

To better illustrate the kind of information usually provided by
traditional Persian historical literature, we can look at two descrip-
tions of the same earthquake taken from different sources both
dating from the 17th century. The first is from the Xolāṣato's-siyār
by Muḥammad Ma'sūm b. Xājegī Esfahānī (composed between
1048/1638-39 and the first years of the reign of Shāh 'Abbās II,
1052-1077/1642-1666), 14 and the second from the Xold-e barīn
by Muḥammad Yusof «Vāleh» Esfahānī (composed in 1078/1667-68). 15

Concerning a strong earthquake which ravaged the city of
Tabriz, a contemporary chronicle such as Mirzā Muḥammad
Ma'sūm writes:

On Friday, the 4th of the said month [Zi'-qā'de 1050], 16 the news
about the earthquake which had occurred in the Imperial City of Tabriz
and in its surroundings 17 was communicated to those admitted in the
Paradise-like assembly. Truly, nobody had ever witnessed such a disaster.

The writer of the present book has read in Aḥmad b. Fāzī'ollāh
Tattavi's Tārīx-e alfī, 18 which is now preserved in the Imperial Treasury,
the account of an earthquake, according to which an earthquake took
place in Syria – the narrator is responsible for the truth of what he
says. A school master reported that: "About 150 children were studying
in my school, when this terrible disaster occurred. I had left the mosque
because of some important business when, out of fear of the earthquake,
the foundations of the building fell down, and all the children perished.
However long I waited for a relative of these unfortunate victims to
come and inquire after their condition, no one appeared. [Only] after
ten days one person came and asked about them". Really, this tale is not
a little strange!

But the earthquake of Tabriz itself was extraordinary. A detailed re-
port written by the sepahsālar Rostam Xān 19 on the material damages
and the human losses in the city and its region was submitted to the
alchemical sight of the Imperial Lord: according to this report, 14,900
houses had been destroyed and 12,600 people – men and women, old
and young – had been killed. To sum up, His Majesty, the Shadow of

16 February 15th, 1641.
17 Ambaseys and Melville 1982, figure 3.11, p. 51.
18 Mollā Aḥmad b. Naṣr'ollāh Tattavi was only one of the authors of the Tārīx-
e alfī, composed in India between 993/1583 and 997/1588-89 following an order
19 Rostam Xān was at that time both sepahsālar (that is, Commander-in-chief
of the Safavīd armies) and governor of Azarbāyjān; he was, then, in excellent
position to give the court an exact assessment of the consequences of the earth-
quake.
God, after hearing this news sent messages to comfort the population of that region, to the effect that the ruined areas should be rebuilt. He put balm on the wounds of the people of that province, and exalted them with his endless favour.\footnote{20}

Not many years later, Moḥammad Yūsof ʿVāleh Esfahāni expressed himself more or less in the same way. From the 
\textit{Xold-e barin}:

\begin{quote}
Still, this year, in that joy-inspiring place, the Imperial City of Tabriz, and in the village of Dehčārqān, because of a calamitous earthquake and the overthrowing of the foundations of houses and palaces, 12,000 people, men and women, great and little, old and young, went to their graves in the deepness of the earth, while the others survived that dreadful disaster. The ruin of the buildings of many villages and of the sown fields of that country was such, that houses and fine mansions became heaps of dust, and not a single person from amongst the inhabitants survived.

Among the wonderful events which occurred in one of the villages of that region before the earthquake, the following was repeatedly reported. One of the inhabitants of that place saw, outside the village, a fox fleeing and a hare running on the latter’s tracks. He led all the people there to watch the two fugitive animals, because it was an uncommon fact. When nobody was left in the village, the calamitous earthquake spoke the Holy Verse «and we turned the city upside down»\footnote{21} on that place, and accordingly the whole village was razed to the ground: however, [in that way] the inhabitants didn’t suffer any loss or injury.

Likewise, through the reports of wayfarers, it was ascertained that, in another village, two little boys were quarrelling with each other. Their relatives and friends became aware of this, and to defend the two children they kindled among themselves the fire of battle, and out of affection for one of the two parties all the inhabitants of the village began to fight one against the other. Since they didn’t have enough room, still fighting they left the village. In the meantime, the calamitous earthquake tord down the village, destroying everything, but the inhabitants safely escaped from any harm.\footnote{22}

Ambraseys and Melville, relying on data supplied by other sources, don’t agree with the date given by Moḥammad Maʿṣum Esfahāni: according to them, the earthquake occurred on February 5th, 1641. Furthermore, the two scholars estimate the number of casualties to be 1,200 rather than 12,000.\footnote{23}
\end{quote}

\footnote{20}Esfahāni, pp. 286-287.
\footnote{21}Coran, XI, 82.
\footnote{22}Vāleh Esfahāni, pp. 245-246.
\footnote{23}On this earthquake cf. Ambraseys and Melville 1982, pp. 49-50, nn. 174-178 p. 183. According to Mollā Kāmāl, p. 96, who is a contemporary of Mohammad Maʿṣum Esfahāni, the earthquake occurred on that same Ḳaʿa’d 4th, 1050/Febuary 15th, 1641. As far as the casualties are concerned, Persian histo-
Although the above mentioned Persian chroniclers provide some details about the effects of the seism (actually, the number of the casualties and, in the case of the Xolāšato’s-siyar, the date of the event), it is clear that the main interest of both authors lies elsewhere, namely, in the amazing anecdotes with which they try to make an impression on their readers. In spite of the fact that, as a high court official, he had access to an official report on the earthquake (a reliable one, since its author was the governor of Azarbāyjān himself), and despite its having been a major disaster, affecting one of Persia’s most important cities, the former capital Tabriz, Mohammad Ma’ṣum Esfahānī prefers to relate a story about an earthquake which previously occurred in Syria — a story which he himself finds hard to believe.

Their interests and tastes are clearly shared by a later historian, Abu’l-Ḥasan Qazvini, the author of the Favāyedo’s-ṣafaviye (composed in 1211/1796-97). 29

3. Two 18th century sources: the Favāyedo’s-ṣafaviye and the Golšan-e morād

The first part of Abu’l-Ḥasan Qazvini’s work is an abridgement of the earlier Safavid history, but what is more noteworthy for us now is that he deems it necessary, and interesting for the reader, to include an account of the earthquake of Tabriz which is a shorter version of that in the Xold-e barin.

From the Favāyedo’s-ṣafaviye:

Again, this year, 26 in the Imperial City of Tabriz and in the village of Dehxargān, 12,000 people, men and women, concealed themselves in the depths of the earth. Amongst the other wonderful events [I recount the following]: a man from another village went off on the tracks of a fox and a hare, and all the people of that place, informed of this, marched off following the two fleeing animals. When all of them were far from the built-up area, all the buildings of that village were levelled to the ground by a ruinous earthquake. In another village, two boys were quarrelling with each other. The relatives of the two arguers left the village but, as the quarrel continued, they moved out into the open plain, where they engaged in a fierce brawl. In that moment, all the buildings of the

rians give slightly different figures: for Mollā Kamāl, ibidem, 12,982 people were killed; according to Ṣamii, p. 256, 12,982 houses were destroyed and 2,602 inhabitants killed; while Bijan’s figures are 14,700 and 12,600 respectively (fol. 76b). It is interesting to note that, in discussing this earthquake, the two British scholars don’t quote any Persian source whatsoever.

24 Mohammad «Vāleh» Esfahānī’s account might, if it is not completely invented, be of some interest to ethologists.

25 QAZVINI, p. pāndab.

26 1043/July 8th, 1633-June 26th, 1634. The date is wrong: cf. above, n. 23.
village were razed to the ground, and it is in these two ways that the inhabitants of the two villages escaped the danger of the earthquake.\footnote{27 QAZVINI, pp. 59-60.}

In other words – for reasons that we don’t know – Abu’l-Hasan Qazvini must have been struck by the report of the \textit{Xold-e barin}, and he apparently decided to offer his own readers the pleasure of this anecdote.

Abu’l-Hasan Gaffārī Kāšānī, who was a contemporary of Abu’l-Hasan Qazvini, wrote his \textit{Golšān-e morād} in 1210/1796.\footnote{28 GAFFĀRĪ KĀSHĀNĪ, pp. 1-3.} In this work, he deals with the first of the two earthquakes also described by Mīrzā ‘Abdūr-Rahīm.

From the \textit{Golšān-e morād}:

The great earthquake in Kāšān, Esfahān, Qom and Rey. Amongst the [noteworthy] events that took place at the end of this year,\footnote{29 1192/January 30th, 1778-January 18th, 1779.} there is the earthquake which hit Kāšān and some [other] cities in [Persian] Iraq. It happened that on the night of Tuesday, 25th of the holy month of \textit{Zi-ga’d},\footnote{30 December 15th, 1778: on this earthquake, cf. AMBRAEYs and MELVILLE 1982, pp. 53-54, nn. 210-211 p. 183.} [that is,] at the end of the \textit{jalālī} month of Azar, half an hour before dawn, a major earthquake occurred in Kāšān, Esfahān, Qom and in the region of Rey. Since in Kāšān the seism was more severe than in the other places cited above, casualties in this city and in the [neighbouring] villages numbered 8,000 people. Hājī Lutf’-Ali Beyg Bigdeli Šāmlu, known by the pen-name of Azar, one of the great men of Persia, who enjoyed world-wide renown in the field of poetry, and who in the arena of eloquence would have stripped Sahbān and Ḥassān of their pre-eminence, at that time lived in Kāšān. While some of his relatives and kinsmen, together with Kāzem Beyg – his brother’s son –, were buried [under the debris] and had farewell to life, the flame of this quatrains burst out from the innermost fire of that noble man, who recited extemporaneous verses:

\begin{center}
Such an earthquake occurred that destroyed life on earth \\
How many graceful cypresses were bound in the earth! \\
The violence of Heaven made men cry \\
I scatter my head with dust, because of the fault of the earth,
\end{center}

and in the same way some eloquent men endowed with eloquent language, such as Hātīf Esfahānī and Sahbāhī Kāšānī composed, on the earthquake of Kāšān in particular, wonderful \textit{gazīdes} and \textit{qet’ēs}\footnote{31 PAGLIARO and BAOSSANI 1968, p. 176; RYPKA 1968, pp. 94-96.} free from every suspicion of defect. The inhabitants of Kāšān, since the fortress and buildings had been destroyed, decided to leave the province. When the news of this [decision] was brought to the attention of those who...
reside at the Threshold of the Imperial Glory, words of comfort were expressed to the people of Kašān through an august message and, in order to rebuild that region, [the ruler] sent orders to most parts of the God-protected Royal provinces to transfer masons and workers [to that place]. The governors obeyed the order, and under the supervision of Mohammad Žähêr Beyg Zand - son of Zaki Xān's sister - and Manučehr Beyg Zand as nasaqēzī\textsuperscript{32} of the Royal Household, in a short time, thanks to the blessing of the Royal attention, the province, with its towers and walls, was restored to its earlier appearance and full splendour.\textsuperscript{33}

It can be noted that Abu’l-Hasan Gaffārī Kašānī’s description of the earthquake is only slightly more detailed than Mohammad Ma’ṣum Eṣfahānī’s, and that his estimate of the casualties doesn’t agree with Mirzā ‘Abdo’r-Rahim’s, but it is endorsed by Ambraseys and Melville.\textsuperscript{34}

From the point of view of this article, however, it is more important to observe that, here too, the author is less concerned with the earthquake itself than with some of its «side effects»: in this case, the pièce de résistance of Abu’l-Hasan Gaffārī Kašānī’s account are the literary achievements of some poets of his time, one of which, at least, was an eyewitness of the disaster.

4. Some conclusions

We have already seen the circumstances in which the Merātō’l-Qāsān was composed, and the royal order may account for the author’s careful approach to the subject matter. He was not always precise, however, as in the case of the estimate of the loss of life caused by the Kašān earthquake of 1778 (he puts human casualties at 30,000 in the city and in its district, while according to Ambraseys and Melville more than 8,000 people were killed\textsuperscript{35}). Mirzā ‘Abdo’r-Rahim confines himself to a bare description of the two ruinous events and of their consequences. Not only does he not pay any attention to what we called the «side effects» of the earthquakes, but he supplies us with some additional information: for instance, he remarks that earthquakes were unusual in the area of Kašān and that, according to him, no earthquake occurred there between the two he describes, while after 1844 one or two shocks a year were felt, without harming either the population or buildings.

Unlike Mirzā ‘Abdo’r-Rahim, the other authors we have dis-

\textsuperscript{32} In the text, nasaqēzī. At that time, the nasaqēzī formed a sort of police corps at the orders of the nasaqēzhābī: cf. Perry 1979, p. 280; also MINORSKY 1943, p. 130 for the analogous term šāheb-nasag.

\textsuperscript{33} Gaffārī Kašānī, pp. 373-374.

\textsuperscript{34} AMBRASEYS and MELVILLE 1982, p. 53, n. 210 p. 185.

\textsuperscript{35} Ibusen.
discussed merely use the earthquake as a pretext to speak of something else. Abu’l-Hasan Qazvini, for instance, stresses the miraculous events that saved the inhabitants of two villages from a catastrophic earthquake, and it is noteworthy that his Favâyed’s-safaviye, like the Xolašâto’s-siyar and the Xold-e barin, have not been quoted at all by Ambraseys and Melville when dealing with the earthquake of Tabriz of 1641, maybe because of the «miraculous» character of some of the references in these sources. As for Abu’l-Hasan Gaffari Kašâni, who composed the Golšan-e morâd less than twenty years later than the earthquake he describes, he seems to be interested mainly in the literary implications of the seism. He mentions the poems composed on its effects by two famous poets of his time, Seyyed Ahmad «Hâtef» Eṣfahâni (d. 1198/1783-84) and Hâji Soleyman «Sabâhi» Kašâni (d. 1218/1803-04). In his description of the «great earthquake» we also find the traditional rhetorical device of comparing a contemporary figure with great figures of the past who were a byword for excellence in their field: in this case, Hâji Lotf-‘Ali Beyg «Azar» (d. 1195/1780-81) is compared with famous classical Arabic poets such as Hassan b. Tābit (d. circa 659), the «poet laureate» of the Prophet, and Sahban Wa’il (d. after 706).

Comparing the reports translated above, one may say that the interest of Mirzâ ‘Abdo’r-Rahim’s account doesn’t lie so much in its would-be more scholarly descriptions, nor in its length – in fact, it is in all only 15 lines, out of 17, of fol. 90a and the first three lines of the following fol. 90b of BL Or Ms 3603 –, but in the attention it pays to earthquakes as an independent subject deserving attention as such, and not simply as the background to facts of a different nature.

36 Ambraseys and Melville 1982, nn. 174-175, p. 183.
37 Some verses of Sabâhi, who in the earthquake lost some relatives and his own house, are quoted in Zarrâbî, pp. 497-498, n. 1 p. 497; cf. also Ambraseys and Melville 1982, n. 211 p. 185.
38 Rypka 1968, pp. 308, 323-326.
40 Arafat 1986, pp. 271-273; Fehid 1995, p. 830. Finally, I would like to thank Jason Danziger, who carefully revised the English translation of an earlier draft of this article.
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EARTHQUAKES IN PERSIAN HISTORICAL SOURCES
