My Dear M. Michel,

I know you will be very busy now with plans and arrangements for the Brussels Fair. Please however give me leave to ask you two questions urgently needed in current research.

1) In your "Un service de l'heure millenaire" you give a photo of the water clock relics at the 'Carillon' of the medersa in Fez. Can you provide me with a good photo of this suitable for reproduction? I also would like to know anything you can tell about just what the bells look like and whether there is any trace of the workings.

2) I am compiling a reasonably complete corpus of greek and roman sundials and other scientific objects, and finding out in detail how they work. Do you know any such antique dials in not so obvious places? If so I would be glad of any note.

All sincere regards,

[Signature]

Derek J Price
Dr. Derek J. Price  
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My dear Price,

Although so busy with the Brussels Fair, I am glad to be able to
give you some informations on both the Fes waterclock and on greek
or roman dials.

1) Fes-Waterclock. My photo was a Kodachrome after which a bad prin-
ting block was made. I can send you this printing block if you want it.
My kodachrome itself is too small. I think that the best thing would be
to write to "Ed. La Cigogne, 1, Rd-Pt Lapérouse, Casablanca" who
have good photographs from this clock, especially n°834 "Détail de
l'Horloge de Bou Anamia, Fès el-Bali".

The working parts of the clock seem to have fully disappeared.
The building itself is in very bad condition, and as visible on my
photo, some windows have been roughly reconstructed or even stopped.
The bells, on the contrary, seem to be complete. They consist in 12
bronze bowls, on brackets or consoles. I was not allowed to go in the
building, as this belongs to a mosque where foreigners are not admi-
ted.

Mr. W. Groubé, of the Travaux Publics in Taourirt (Morocco) has
sent me five years ago an extract of a book which might be interesting
It is the ZAHIRAT EL-A5 (The Myrtle Flower) of Abu'l-Hasan 'Ali el-Djazn-
âlî, translated by A. Bel (Ed. Jules Carbonel, Alger, 1923). I cannot
copy the whole extract, which is somewhat long, but can give you a
resume: Initially, there were marble plates on the minaret of the
Quarofiyn Mosque, with a kind of sundial indicating the times for
prayers. About 1507 AD (or 1286AD) a clepsydra was built in the same
minaret. In AD 1517 this clock was rebuilt in the present room. A
large recipient in cedar-wood held two earthenware vessels, the one
higher than the other, with a calibrated pipe between them. On the
side was a basin on which were marked the hours, the minutes and the
time for the prayers... This machinery was neglected and restored in
AD 1346. Abu Abdallah placed then an astrolabe-dial on the south-east
side, with rotating cursors ....

In the year AD 1348x 1357, Abu'l Hassan 'Ali et-Tilimsânî made a Mâgâna with cups and bowls (i.e. bells) opposite
the northern door of the new Medersa (This is our clock H.M.) Every
hour, a stone fell in one of the cups, and a window opened.

From this all, you can infer that the Fes-clock is not older than
many European clocks, although its general design seems to proceed from
the roman monumental clocks, notably that in Petra, etc.

2) Greek and roman sundials. Of course you know the Tower of the
Winds in Athens (although I am inclined to believe that its dials are
not as old as the monument itself. I have not seen any portable dial
either roman or greek. There is a scaphe (a hollow half-sphere) in
the museum gardens in Split, as far as I can remember. I believe to
have seen an other scaphe in the Pergame-Museum in Syria. I have no
photos. Please find enclosed a Kodachrome which I took under very bad
circumstances in Volubilis near Meknès (Morocco)(Roman Empire)It is
interesting because of unusual model (vertical hollow cylinder). Sci-
entific objects of this period are practically nil.

Glad if I can be of some help  
yours very truly