JANUARY 2025 MONTHLY BLOG/ 169

GREAT CLOCKS OF THE WORLD

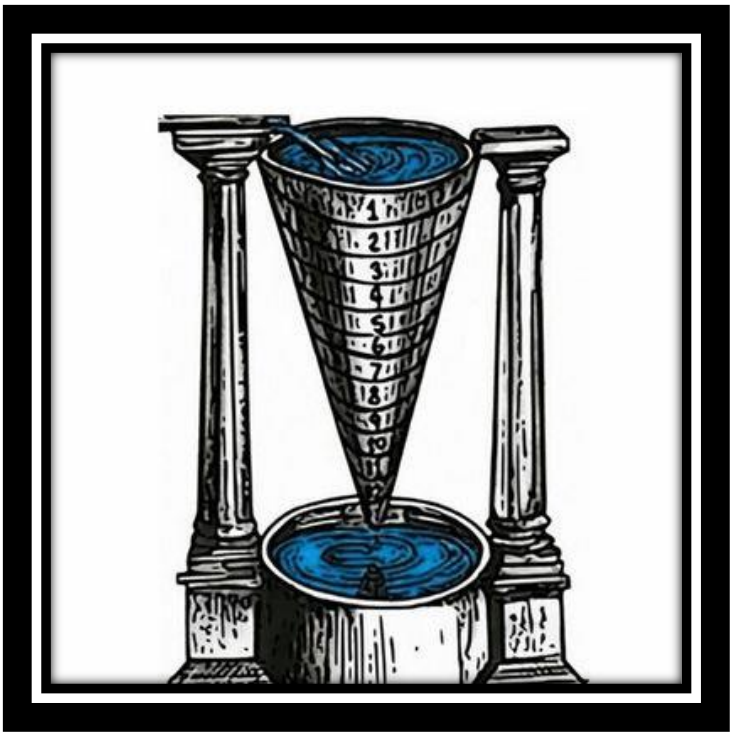

Fig.1 Image of Water Clock
from Classical Greece -
in which the passing of Time is measured by a regulated flow of water.

My theme for 2025 is Time - the universal subject.[1] So to kick-start the year, here are seven great clocks of the world - my personal selection out of the myriad of possible candidates.[2] These are all on public display (there are countless more in museums) - and drawn from all quarters of the globe.

The first is located in the Republic of Honduras, Central America. It adorns the Cathedral of Comayagua; it is also known as the Arab clock, since it was designed by Moorish clock-smiths in c.1100; and presented, later in the seventeenth century, by the King of Spain to the city of Comayagua in New Spain (present-day Honduras); and in 1711 relocated once more onto the newly completed-Cathedral of the Immaculate Conception, where it remains. It is

reportedly the world's oldest continually functioning gear-clock. Its face [Fig.2] has a beautiful simplicity, whilst its gearing retains a wondrous complexity.

Fig.2 The Arab Clock (built c. 1100AD in Moorish Spain), now adorning Comayagua Cathedral in Honduras - said to be the world's oldest continually operating gear clock.

The second one comes from North America. It was designed by Thomas Jefferson and built in 1792 for his mansion on his plantation at Monticello, Virginia.[3] Known as the Great Clock, it has two faces, the exterior one is visible to the wider world, while the elegant indoor face [see Fig.3] presides over the Great Hall. The clock is powered by the regular movement of two sets of cannonball weights, which descend below the clock into the cellar. These sinking weights drive the clock's ticking - and the striking of a large time-keeping gong on the roof. Once a week, the weights have to be rewound with a special crank key, fitting into the winding mechanisms on the interior clock face: a task requiring a strong grip - and good balance to scale a special ladder.

Fig.3 The Elegant Interior Face of Thomas Jefferson's Great Clock on his Virginia estate at Monticello: the central dial shows the hours and minutes, while the small whirling dial marks the passing seconds. Also visible are the two slots for the weekly rewinding of the cannonball weights, whose steady and slow descent regulates the clock's time-keeping.

Circling around the world onto the massive Eurasian continent, the third great clock is to be found in Moscow. It's a majestic beacon, devised to be seen from afar. Accordingly, the Kremlin Clock (also known as the Kremlin Chimes) is huge, its four faces displayed on the Spasskaya Tower within Moscow's fortified Kremlin complex [see Fig.4]. Clocks were located there in the sixteenth century; and many updatings have followed. The current Kremlin Clock was designed in 1851; repaired in 1917-18, when a giant gold-plated lead pendulum was installed; restored again in 1932, when the Clock's hands and numerals were gilded; and majorly restored again in 1974. Historically, the Clock was associated with regular chimes, though there have been periods when the bells were silent. Currently, the bells chime before the quarters and hours are struck - and play a tune, every three hours, on the hour. Compelling!

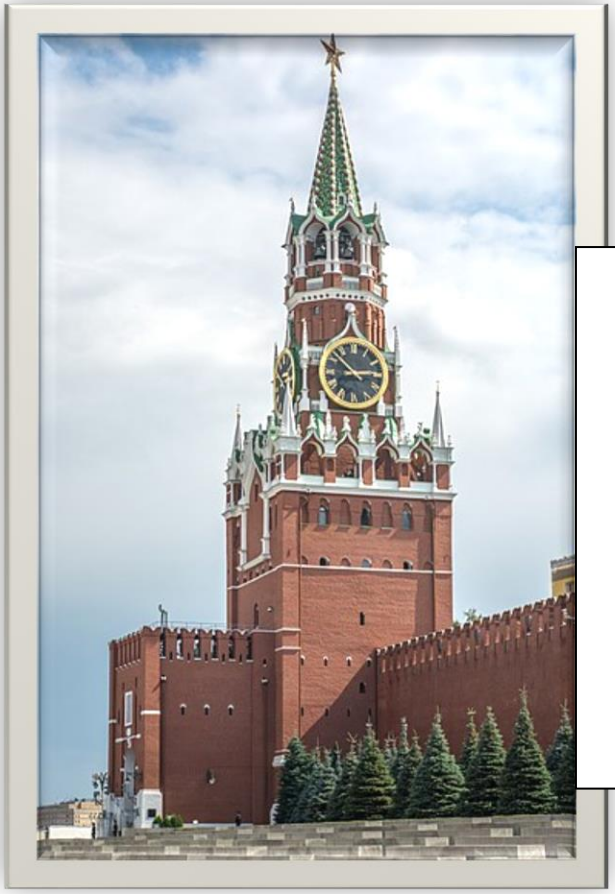

Fig.4 The majestic Kremlin Clock, also known as the Kremlin Chimes, adorns the imposingly decorated Spasskaya Tower (first built in 1491; restored 2015) on the east wall of the Kremlin complex, overlooking Red Square in central Moscow. Not only can the Clock be seen from afar but the 23 bells in the uppermost belfry serenade the city with specified tunes every three hours.

Swooping southwards and slightly westwards after that, the fourth great timepiece has its home in Cape Town. It's also a beacon clock, located on the waterfront. The Clock Tower was built in 1882, and used initially as the Port Captain's Office. The Victorian-Gothic edifice had a tidal gauge on the ground floor; and it also included a reading room, where ships' captains could gather to catch up with the latest maritime news. The Clock itself was built in Edinburgh and installed high on the Waterfront Tower [see Fig.5], which had begun to lean ominously to one side - but has recently been righted. Scintillating!

Fig.5: Cape Town's Waterfront Clock Tower was constructed in 1882, when its clock, built in Edinburgh, was first installed. The Victorian- Gothic edifice (adopted as a National Monument in 1978) was treated to a thorough restoration in the 1990s, when the outer walls were repainted in the original bright red.

The next move, to find my fifth great clock, travels significantly north-eastwards, across the Indian Ocean, to Lucknow in Uttar Pradesh, northern India. There stands the utterly imposing Husainabad Tower, which is India's tallest clock tower [see Fig.6[. It was constructed in steel and stone in 1881, to a design by the visionary architect Richard Roskell Bayne[4] - his architectural style fusing both Victorian and Mughal features. The great Clock is regulated by a gigantic pendulum; it has a sweet chime; and its clock-face, with the usual numerals and hands pointing to the hours and minutes, also has a floral outer frame, which removes any severity from the timepiece. Enchanting!

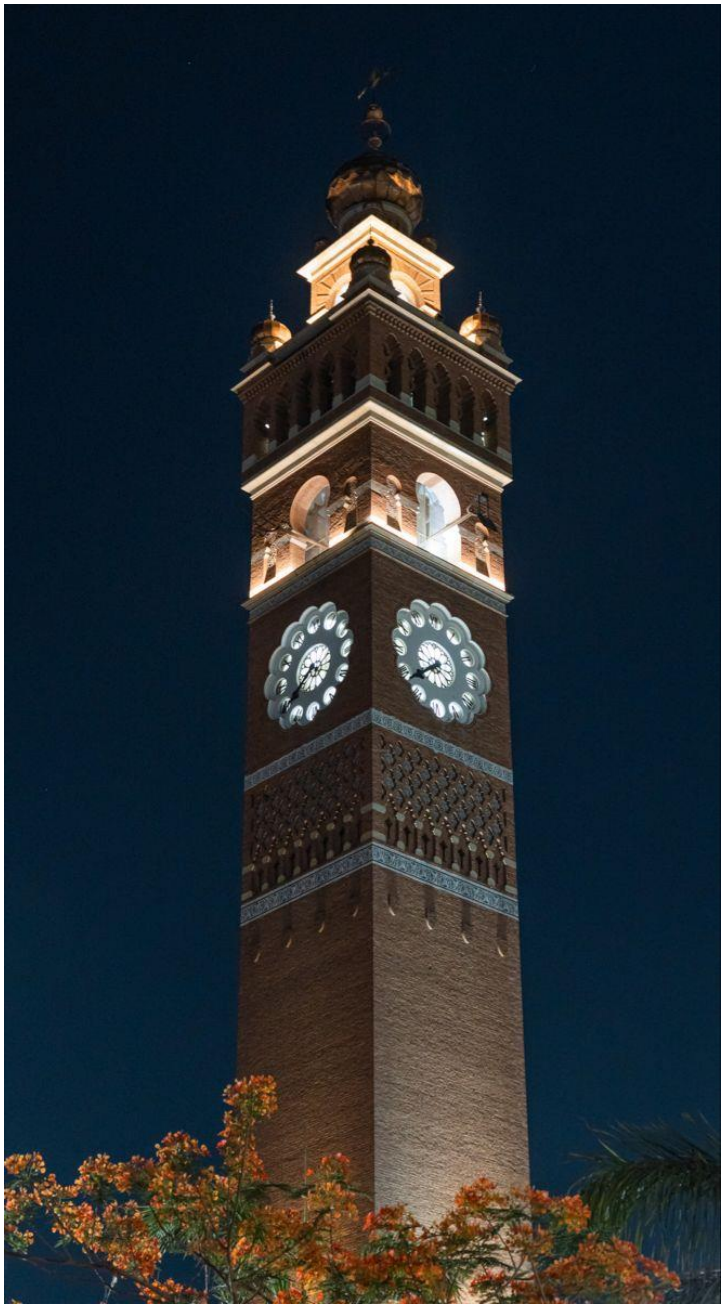

Fig.6 The towering splendour of the Husainabad Clock Tower at Lucknow, Uttar Pradesh, India - the superb night-time illuminations showcasing the Tower's eclectic architectural styling and its floral-framed Clock.

Journeying ever eastwards (and slightly northwards), the search then brings us to the sixth great clock - this time in the Chinese city of Tianjin, on the coast south-east of Beijing. This is the Century Clock (built 2000). It is situated in the centre of a traffic roundabout near to the central station. This clock also represents fusion - between standard global Time - and traditional astronomical Time. Around the clock face, are the carved representations of twelve signs of the Zodiac. At the top is set Aries, as it brings good luck according to historic

Chinese convention. The sculpture is visually stunning, with two massive metal-frame arms flung akimbo - one holding the Sun, the other the Moon - with the giant clock in the middle, and a huge swinging pendulum below [see Fig.7]. Its impact is equally stunning in daylight and when floodlit at night, Wham!

Fig.7 The stunning Century Clock (built 2000) in Tianjin, northwest China, showing the giant clock, with a standard clock face, encircled by carved signs of the Zodiac, plus below the working machinery, and, out-stretched, two giant arms, one holding the Sun the other the Moon.

And finally, returning westwards, across the extended continental landmass of Eurasia, the journey ends in Berlin, Germany. My final choice is my personal favourite. It is not strictly out-of-doors. But it is located in a public space - not in a museum. It's the Clock of Flowing Time (1982),[5] standing three floors high, within the open atrium at Berlin's Europa Center [see Fig.8]. As its name implies, it is a water clock; and its mechanisms are regulated by the circulating flow of brightly-coloured water within its spheres and tubes. There is

no standard clock-face. But onlookers can learn to gauge the time according to the number of spheres filled at any given moment. The whole system operates on a twelve-hour cycle, the spheres all emptying together at noon and midnight, before the sequence resumes once more. Non-Stop, Ever-Flowing Time! Poetic!

So many ways to tell the time.

So universal the quest ... More next month!

Fig.8 The Clock of Flowing Time
in Berlin's Europa Center -
hard to explain,
hard to photograph effectively
but intensely evocative of the non-stop flow of Time.

ENDNOTES:

1 P.J. Corfield, *Time-Space: We Are All in It Together* (forthcoming February 2025).

2 C. Jagger, *The Great Clocks and Watches of the World* (London, 1977; and later edns).

3 For Monticello, now a UNESCO-listed World Heritage site, see S.R. Stein, *The World of Thomas Jefferson at Monticello* (New York, 1993); and, for sober context, L. Stanton, *'Those Who Labor for my Happiness': Slavery at Thomas Jefferson's Monticello* (Charlottesville, VA., 2012).

4 R.R. Bayne (1836-1901), who was born in Warwickshire and died in British Columbia, had a prolific building career in India, designing not only workday railway stations but also numerous monumental buildings. A significant collection of his architectural designs and plans is held by the University of Victoria (B.C.) and this material may one day provide the basis for a good biography. See A Welch and others, 'Building for the Raj: Richard Roskell Bayne', RACAR, 34/2 (2009). pp. 74-86: https://www.racar-racar.com/uploads/5/7/7/4/57749791/_racar_34_2_06_welchseggerdecaro.pdf.

5 The clock was constructed to a design by the French physicist and artist, Bernard Gitton (b.1935), who has created numerous artistic and ingenious water-clocks. For context, see R. Lamb, 'How Water-Powered Clocks Work' (c.2009-10), in 2024 website: https://science.howstuffworks.com/environmental/green-tech/sustainable/water-powered-clock2.htm.