

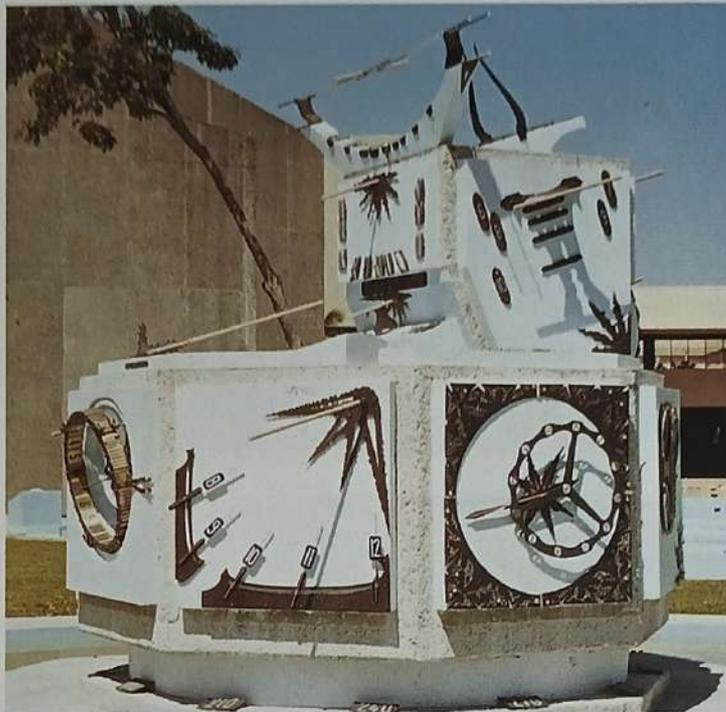
ARTISTIC AND TECHNICAL MASTERPIECES:

SOLAR CLOCKS BY LOTHAR M. LOSKE

For several decades now, solar clocks and astronomical clocks have been amongst the historical and artistic treasures found in museums and private collections in many countries. However, it may seem surprising that these venerable witnesses of long-gone eras have a role to play in modern art and even in 20th century abstract art.

From a strictly astronomical point of view, these instruments have no connection with any previously known stylistic or artistic form and this enables them to attract attention to the decorative arts and contemporary forms of expression.

Professor Loske's creations are not replicas or imitations of old solar clocks, but genuine original creations that combine both art and science. They have modern systems for measuring the time and make use of astronomical facts that have only been discovered in the 20th century. Each solar clock provides an answer to a question of fundamental concern by establishing harmony between the required scientific functions and the proportions of the forms. This is a precondition of its beauty. They are therefore neither dumb steles that glorify the measurement of time nor simple apparatus-



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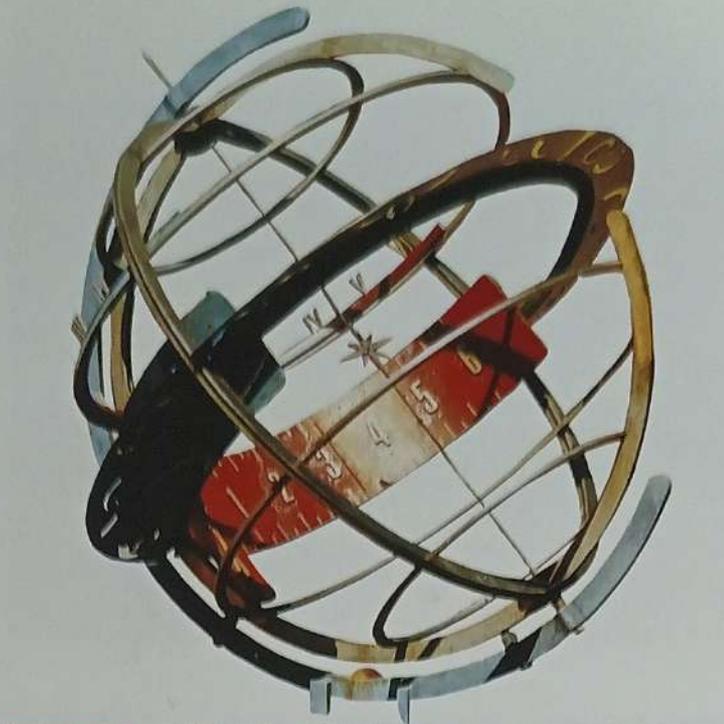
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es but real living sculptures. Even the simplest and most abstract models establish the astronomical midday of the position they are placed in. The largest didactic clock produced so far was set up in 1988 in the park of the "Planetarium 2000" at Villahermosa, on the Gulf of Mexico, where the Maya civilization was particularly flourishing. The Gnomicum (see illustrations 1 and 2) provides up to 22 different pieces of information, ie. all the possible types of solar clock with horizontal, vertical, polar, divergent, equatorial and spherical dials, a solar calendar, universal time with turning dial, astrolabe, demonstration tablets for the principles of the different units of time such as solar "true" or "average" time, the equation of time, the equinoxes, the date line, the signs of the zodiac and the planets. It is interesting to look at the hands, which are all parallel despite differences in the levels of the dials, and merge, in keeping with the theory of solar clocks, with a parallel of the earth, in this case 18° northern latitude.

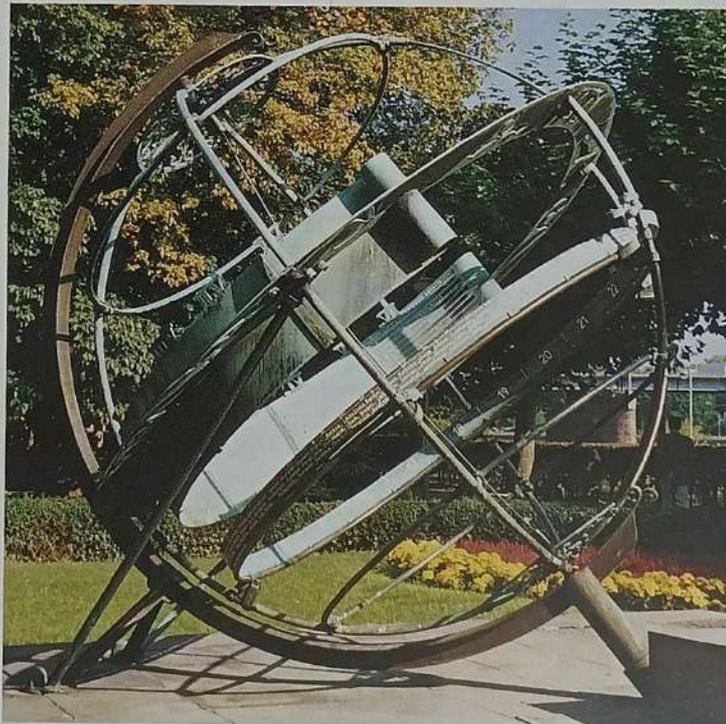
The different parts of the dials, decorations and figures were made of copper and brass. The octagonal stone and cement base is about 6 meters wide and its total height is 4.2

meters. In order to make it possible to see and read the upper dials, the Gnomicum was set up facing a tribune. One of Lothar Loske's first solar clocks was the "equatorial solar clock" in Frankfurt-am-Main (ill. 4 and 5). It was unveiled 40 years ago and is still working today. A thousand kilos of copper were needed to make this clock, measuring 3.6 meters in diameter. In accordance with the equation of time, the dial has a division for each month, with Arabic numerals for the hours and the average solar time for the meridian of the Central European time zone. The Roman numerals refer to true solar time and to the astronomical midday at the position of the sundial. A device which no other solar clock had been equipped with until then makes it possible to read the legal time in all time zones using a turning ring divided on the inside into 24 hours and containing all the meridians as well as 300 names of towns on its rim. The observer adjusts it by positioning the meridian required on a scale provided with an indication of the date. Similar sundials were set up on the esplanade of the Basel Fair in 1956 and on the lakeside in Zurich in 1957 (ill. 6 and 3).



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▽5



One of the most valuable models in the Loske collection is the "equatorial sundial" (ill. 7). In addition to giving universal time, it also has equation curves inside three time zones, a solar calendar and a pierced gnomon for very precise readings. It measures 65 cm in diameter and 90 kg of copper were needed to make it. It does not have to be in one particular place to work but can be set up anywhere in the northern hemisphere, and adjusted.

It is important to note that a solar clock is better in one respect than any other kind of time-keeper, whether a precision or electronic clock. Watches and clocks can go on giving the time for which they are adjusted, with a greater or lesser degree of accuracy depending on their design. But they cannot measure the time by themselves, still less communicate it, which the solar clock can do. When the solar clock seems to have "stopped" because the sun is not shining, it nevertheless continues to work and will communicate its readings from any new temporal point in the universe. LUCEM DEMONSTRAT UMBRA: it is the shade which reveals the light.

Between 1950 and 1990 Mr. Lothar M. Loske made a great many public solar clocks in Europe, the United States and Mexico.

In Europe the best known of Prof. Loske's solar clocks are in Frankfurt, Zurich and Basel. Since then other models have been made with up to 22 dials. They range from public solar clocks to very abstract sculptures which nevertheless invariably give the astronomical midday at the place where they are set up. All these models testify to great artistic and technical skill.

Smaller examples, about sixty in number, make up a collection which will probably be shown for the first time in Europe at the Universal Exhibition in Seville in 1992.

These are unique models made of marble, onyx, silver, copper, lead and stainless steel.

As transporting a collection like this weighing three tons in all is both difficult and expensive, Mr. Loske is planning to put on an exhibition of about 120 large size color

photos in museums, art galleries, universities, schools and luxury hotels. These photos will be accompanied by information and documentation in English, French, German and Spanish. Mr. Loske is also willing to give lectures on this subject.

For further information, anyone interested in organizing a photographic exhibition of this kind in their city or town is requested to get in touch direct with Professor Lothar M. Loske, Apdo postal 19-611, 03901 Mexico D.F., Mexico.

