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Harbourside North

December 2023

Welcome to the U3A Harbourside North Bulletin and the final for 2023.

We look forward to your suggestions for topics and contributions for inclusion in next year's editions. paulacastileu3a@gmail.com

The Editors

Ursula Schappi and Paula Castile

Time – a historical perspective

It is November and the festive season is upon us... It feels as if we have only just celebrated last year's Christmas. But here we are, its time, again to organise family get-togethers, get the house in order, buy presents, send cards, fill stockings, catching up with neighbours and friends.

Dates for Christmas festivities are fixed in our yearly calendar. We may complain that 'time flies' or, that 'I'm running behind time', that it is difficult to 'catch up', but it is not possible to turn back time as Sci-Fi movies and *Dr Who* manage to do. It's just that, science fiction, and for many, Christmas day is on 25th December. Coptic Christians celebrate their Christmas based on a different calendar.

Adults may feel pressured to get it 'all done in time'. It is much simpler for small children. For them Christmas is either 'now' or 'not now'. Older children, with a better understanding of time, may complain that it takes a long time for Santa to arrive. They'll count the days (eg Advent calendars) not only for Father Christmas to come but for the school holidays to start.

The passage of time is probably the most basic facet of human perception. We feel time slipping by. Through the flow of time, we distinguish what happened in the past, live in the present and guess the future. Yet, our sense that time flows may be an illusion. According to an article in the Scientific American: '*Nothing in known physics corresponds to the passage of time .... it merely is*'. (Ref 1)

From time immemorial humans have looked to the sky to observe the movement of stars and sun with an attempt to measure time. For example, the rock formation, Stonehenge, in England, was arranged to

align and capture the sun rays on the summer and winter solstices. (Ref 2)

Stonehenge (Ref 2)

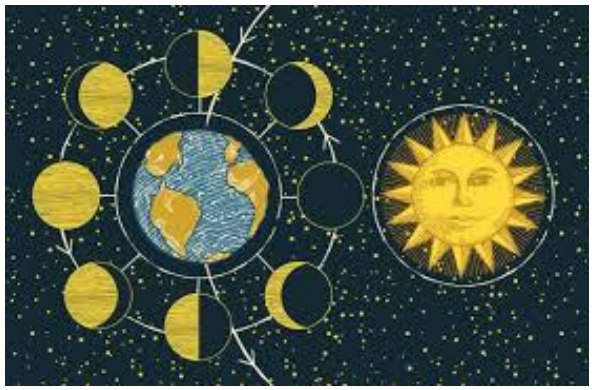
In Germany they recently found the Nebra Sky-Disc dating back to around 3 to 4000 years. The disk features 32 stars (including the Pleiades cluster) the sun, the moon, a sickle and other objects. (Ref 3)

Nebra Sky-Disk (Ref 3)

The Pleiades was an important constellation for many ancient civilisations, including those of Mesopotamia, Greece and Australian First Nations People. The constellation would have appeared in the northern skies in autumn, showing that it was time to start the harvest, and disappeared in the spring, indicating the time for planting crops (Ref 3). The depiction of the Pleiades on the disc in conjunction with a crescent moon has been interpreted as representing a calendar rule for synchronising solar and lunar calendars (Ref 3).

Moon cycles were used to measure time and develop a yearly calendar. These lunar measurements were not very accurate so that in 46 BC, it prompted Julius Caesar to introduce the **solar** calendar of 365 days. It took another 500 plus years for Pope Gregory, in 1582 to have the Julian calendar refined. Since then, we use the Gregorian calendar.

Problems remained with calculating when Easter would occur each year. Easter is based on the Jewish calendar, a ‘luni-solar’ calendar that incorporates not only the relative position of the sun but also the phase of the moon. Thus, Easter does not occur on the same date every year. It is celebrated on the first Sunday following the first full moon, and the March equinox (Ref 4).



It was important to the Pope to get the exact date of this religious event and set it in the yearly calendar. In 1702 Pope Clement XI expressed his concern to the astronomer, Francesco Bianchini. They concluded that to refine calculations they would need a giant sundial. They would trace the sunrays along a 45 meter meridian line. The floor of the Basilica of St Mary of the Angels and of the Martyrs in Rome was considered the most suitable site for this purpose. They needed to establish where to cut a small hole into the wall of the basilica to enable the sunrays to hit the floor along the meridian line.

Bianchini built a 45 meter meridian line which allowed them to trace the sunrays over a long period of time. This increased the accuracy of their calculations. It provided a reference point of the March equinox and from there they could work out the exact constellation for Easter to occur (Ref 5).

Basilica St Maria degli Angeli e dei Martiri, Rome (Ref 5)

Fortunately, we no longer need giant sundials to mark out time. In 1714 John Harrison gave us the chronometer which allows for accurate time keeping despite the ship's movement in rough seas, and in 1801 Abraham Louis Breguet patented John Arnold's 'tourbillon'. It is a device that cuts out the influence of gravity so that we can wear this timekeeper in the shape of a pocket or wristwatch.

Today's most accurate timekeeping device is the atomic clock. It is incorporated into the Network Time Protocol and the Global Positioning System (GPS). Not only does it give us accurate time, it gives us an instant point in time to allow our GPS device to monitor our position and guide us through the Sydney traffic. Very important during the festive season.

Wishing you a wonderful festive season.

References

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2. https://en.wikipedia.org/wiki/Stonehenge
3. https://www.worldhistory.org/article/235/the-nebra-sky-disk---ancient-map-of-the-stars/
4. https://www.museumofthebible.org/magazine/history/the-history-of-easter
5. https://en.wikipedia.org/wiki/Santa_Maria_degli_Angeli_e_dei_Martiri
6. https://en.wikipedia.org/wiki/Tourbillon

Ursula and Paula

President's Message

December 2023

Dear members

On behalf of all our members who enjoy this Bulletin every two months, many thanks to Ursula Schappi and Paula Castile for their work in preparing interesting articles for us to read. If you would like to contribute an article, please contact Ursula at ursulasch@bigpond.com

End of the year

Can you believe that another year is rapidly nearing its end? This has been another successful year for Harbourside North with excellent presentations at our many venues. Thank you to our wonderful speakers, our venue coordinators and the other volunteers who work tirelessly to ensure u3a runs smoothly to benefit us all.

The Course Book for the first semester 2024 is ready for its final edit and delivery to the printers, so only one more check for us to do (I hope!). Another sterling effort from our volunteers who have developed another

fascinating semester to keep us educated and entertained.

Mosman Art Gallery

I am sad to report that Eve Klein is retiring as venue coordinator of u3a at the Mosman Art Gallery after 18 years of outstanding service. Annika Tults, is taking over from Eve, and four of our outstanding speakers will give us a sneak preview of their talks for next year.

Art Teacher wanted: Members are keen to have an art class in the Mosman area. If you or anyone you know might be interested in leading a class, please contact Rosemarie on email: einstein@starmer.net.au

Greetings of the Season

It only remains for me to wish each and every one of you and your families a peaceful and enjoyable Christmas and may 2024 bring you many blessings.

CALL OR EMAIL ME NOW:

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