

EDITORIAL

The Magic of Christmas

The theme of the XIth ESSSAT conference on sustaining diversity incited me to consider a subject on the multiple aspects presenting the ecological diversity in the King David's Psalms – my favourite book. I think the Psalm 104 is entirely representative for this idea. You rarely find such a religious and also poetic description of the structured and sustained diversity existing in nature.

The beginning contains elements of the Earth's genesis and also points out the developing frame of the future interlocking systems.

“You fixed the earth on its foundation, never to be moved.

The ocean covered it like a garment; above the mountains stood the waters.

At your roar they took flight; at the sound of your thunder they fled.

They rushed up the mountains, down the valleys to the place you had fixed for them.

You set a limit they cannot pass; never again will they cover the earth.”
(Psalm 104. 5-9)

The continuation presents such systems that finally form a ‘Great Ecosystem’, on its top, but part of it, being the man. Among all these, there is a subtle ecological equilibrium, with its own rhythms, clearly observed by King David thousands of years ago!

“They give drink to every beast of the field; here wild asses quench their thirst.

Beside them the birds of heaven nest; among the branches they sing.

You water the mountains from your palace; by your labour the earth abounds.

You raise grass for the cattle and plants for our beasts of burden. You bring bread from the earth, and wine to gladden our hearts;

Oil to make our faces gleam, food to build our strength.

The trees of the LORD drink their fill, the cedars of Lebanon, which you planted.

There the birds build their nests; junipers are the home of the stork.

The high mountains are for wild goats; the rocky cliffs, a refuge for badgers.

You made the moon to mark the seasons, the sun that knows the hour of its setting.

You bring darkness and night falls, then all the beasts of the forest roam abroad.

Young lions roar for prey; they seek their food from God.

When the sun rises, they steal away and rest in their dens.

People go forth to their work, to their labour till evening falls.” (Psalm 104. 11-23)

Whenever I read this psalm, I realise that my words are too poor to comment the plenitude and completion of the world we live in and everything is concentrated in the following verse of the same psalm: “How varied are your works, LORD! In wisdom you have wrought them all; the earth is full of your creatures.” (Psalm 104.24)

The environmental scientists are doing now their best in order to preserve and to repair what other scientists and/or technologists have done by their limited and very often mercantile work to the environment. Despite the fact that I am not an eco-activist, I have doubts about whether Science has real answers to the many environmental problems. This may be due, as I was told by one of my colleagues in England, because in every scientific research is something for the good and something for the evil.

From one point of view, our days Science tends to return to its origins becoming more and more magic. As we know, it's the astrology that has turned into astronomy and alchemy into chemistry. There are also voices claiming that even the ancient Egyptian religion, which has influenced the Christian theology – particularly the Coptic one [1], is better related with the Science of Nature and Universe than to the heterogeneous mixture of dubious practices of sorcery and witchcraft we know today [2]. On the other hand, the image of the scientist as someone who is able to perform miracles with an incomprehensible theory has stuck ever since Arthur Eddington observed in his famous 1919 expedition that the position of the stars changes during a solar eclipse, in accordance with Einstein's then new general relativity. Indeed, any sufficiently advanced technology is indistinguishable from magic for an ignorant person and the things are pushed over the margins in nowadays. A recent example is given by two teams of researchers from United Kingdom who have devised a way to make objects invisible, this magical feat combining two of the greatest theories in physics: Einstein's general theory of relativity and Maxwell's electromagnetism [3, 4]. The military applications are obvious...

The 'magic' term has always two main meanings. The first sense concerns the primitive form of religion, consisting of an ensemble of superstitious practices destined to imprint the phenomena a miraculous way, against the laws of the nature, and to force the supernatural forces to action in the favour of somebody [5]. The second meaning is charming, delightful, fairy. I do think that Science has both possibilities depending on applications.

In the last years I had the opportunity to travel around the Baltic Sea in Germany, Poland, Denmark and Sweden. During these visits I become aware about the existence of some astronomical cloaks in this region made somewhere around the 14th century (Figure 1). It seems that the origin of these 'cosmic engines' is in the Orient since the Science Museum in London has a scale model of such a mechanism constructed by Su Sung in China in 1092 [6]. Their complex dials show the time and date, phases of the moon, the position of the Moon and Sun in relation to the zodiac signs, and the calendar of

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saints. For an unadvised onlooker they seem to give any information but the winning numbers at the lottery. I am pretty sure that these clocks have looked at least magic in the eyes of the inhabitants of the cities when they firstly saw them functioning. Legends are saying that such clocks will beat every second until the end of the World and despite the fact they had been in storage for very long periods or destroyed in the second World War now are back in use due to the joint effort of theologians and scientists, representing good examples where Science meets Theology of a wise magic manner.

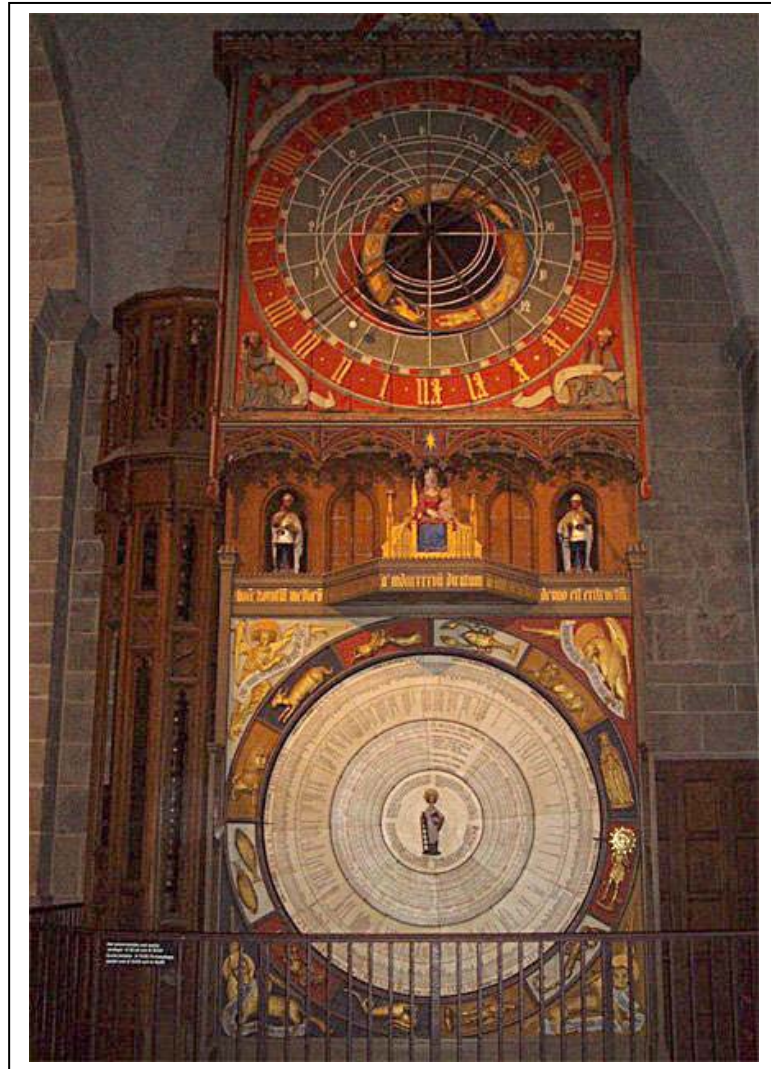


Figure 1. Horologium mirabile Lundense

Furthermore, at noon, the clocks from Lund, in Sweden, and Gdansk, in Poland, show moving wooden figures that depict the Adoration of the three Magi passing by Saint Mary and Jesus Christ. The term Magus (plural Magi) comes from Latin, via Greek μάγος and from Old Persian *maguš*, and indicates a member of the Magi tribe from ancient Media (inhabitants of Persia) who were responsible for the religious practices. They became the guardians of religion under three Persian empires and the three 'Wise Men from the East' from the Adoration scene, in the Bible, are the best known Magi and Marco Polo wrote that he had seen their graves in what is today the district of Saveh, in Tehran, Iran [7]. The three magi surely had astronomy notions, the decision to travel following the star in order to find the One who was born having both religious and primitive scientific reasons, and proving once again the wise confluence between Science and Theology.

In order to conclude the answer to the dilemma facing the trend of our days Science I remind you the verse of the psalm: "How varied are your works, LORD! In wisdom you have wrought them all." (Psalm 104.24) Sofia, God's wisdom, is the way out of the labyrinth and the example given by the three Magi is illustrative, at least during this Advent period.

I take this opportunity in order to thank all those who have supported in any way our work at the European Journal of Science and Theology: sponsors, editors, referees, contributors, subscribers and readers. We wish you all to enjoy the magic of Christmas together with your families and a Happy New Year!

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