



The moon shone brightly on the east Slovakian town of Kosice as scientists from several countries gathered under the aegis of Bratislava's Professor M Mikulecky to discuss the moon's effects on man and other living matter. They were reminded that the

moon is very big and quite near—and that between it and earth exist strong geomagnetic forces. They heard about the moon in culture and science; learned about the hormone melatonin; and saw advanced computer programs for analysing statistical data and mechanical models for demonstrating the movement of tidal waves.

Myths about the moon abound in primitive societies and tell about creation, fertility, menstruation, and reproduction. Moon and may be lovers, brothers, or brother and sister. Bears or other beasts may swallow the moon, causing terrifying eclipses. The moon may be a hunter cooking his prey; a beautiful woman naked out in the sky; or the vengeful

severed head of an executed incestuous young man afflicting his sister with the curse of menstruation. During the late bronze age, before the patriarchal revolution, men were ruled by women priestesses and worshipped a confusing interlocking array of moon goddesses, some dangerous and associated with the serpent or the dark phase of the moon and later destroyed or cast out by valiant male heroes.

The moon is celebrated in folklore, nursery rhymes, ancient science fiction, literature, and poetry. Its effects on human behaviour are less clear. It has been blamed for causing lunacy, epilepsy, crimes, and lycanthropy (people changing into wolves), or credited with curing warts, shingles, and ringworm. In Naples women standing naked by moonlight believed that this would increase the size of their breasts. In 1898 Nobel prize winner Svante Arrhenius wrote that the occurrence of menstruation (12 000 cases) and epilepsy exhibited 25.9 to 27.9 day periodicity, suggesting a lunar influence. In 1985, however, Rotton and Kelly concluded from a meta-analysis of existing publications that the moon had no influence on human behaviour. Yet continuing work, presented at this meeting and elsewhere, suggests various periodicities in the occurrence of certain illnesses and events, notably func-

tional tachyarrhythmias, epilepsy, migraine, suicide, accidents, premature births, and abortions. Such cyclical events are well known to occur in lower forms of life such as marine organisms. Moon cycles affect the behaviour or reproductive activity of mites and firebugs, also the chemical composition of the haemolymph of the honey bee and the blood of mice. In some primitive societies women have been reported to menstruate all at the same time, perhaps because darkness stimulates the secretion of melatonin.

In addition to the two principal periodic events in our lives—the 24 hour day and the year's cycle—other periodic cosmic phenomena undoubtedly also exist, though in human diseases with multifactorial aetiologies their influence is difficult to disentangle. Yet the pursuit of cosmobiological research, it was concluded, may provide valuable information about meteorology, agriculture, human behaviour, or diseases. It may kindle further interest in melatonin and in possible therapeutic applications such as in sleep disorders or jet lag. Research on this, it was suggested, could be carried out at a fraction of what the public now spends on unscientific endeavours such as astrology.—
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