

## NEEDED – MORE SCIENCE AND LESS RELIGION

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**M**eghnad Saha, a world class physicist from India in the last century, was the head of a committee constituted to bring about calendar reform in India. The aim was to prepare an accurate calendar based on science, and one that could be adopted uniformly across the country to replace the thirty-odd religious calendars that were prevalent. Fortunately, he found a sympathetic ear in Jawharalal Nehru, the first PM of India. Nehru realized that building scientific temper in the society was important to get rid of mindless rituals and superstitions.

Despite this, the government declares official holidays where all but two of them – Independence day August 15, and Republic day January 26 – are religious. More unscientifically, Muslim holidays are based on a lunar calendar, and can change if the head priest (*Mullah*) sees the moon on a different day. Although the idea is to appease all religions, it does a great disservice to the work ethic in the country. A quick solution would be to have a few personal holidays which an employee can take for religious reasons. Thus, a Muslim would be present on a Hindu holiday and *vice versa*, and both would be present on a Christian holiday.

After working as a scientist for many years, I feel it is the duty of scientists to dispel myths that continue in society despite science knowing better. A case in point is the phenomenon of **total solar eclipse**. Science has taught us that the eclipse is caused by the moon coming between the earth and the sun, thus preventing the sun being seen. Despite this knowledge, there are many myths about it

floating around. One such is that there are harmful UV rays coming from the sun during the eclipse, hence pregnant women should not go out to prevent damage to the unborn foetus. It is illogical to think that additional rays are produced when something is blocked. The only reason you are asked not to look at the sun directly during an eclipse is that normally the bright sun causes the pupil to contract, but during an eclipse the sun is so dark that your pupil will dilate and allow UV rays to damage your retina. There are no other harmful effects, because otherwise animals out in the open would not have survived till today.

It is ironic that a recent edition of the Indian Science Congress had a session in which “scientists” claimed that ancient Vedic *rishis* knew about plastic surgery because Ganesha’s head is that of an elephant, and had interplanetary flights because of flying chariots being mentioned in the epics. Flying chariots are a product of an imagination run wild and designed to show that gods had supernatural powers, but they violate every law of physics that I know.

The history of heavier-than-air objects that can fly is only about 100 years old. The first aircraft was painstakingly designed by the Wright brothers using an aerodynamic wing design based on Bernoulli’s principle. Today’s aircrafts are still based on an aerodynamic design, just that the mode of propulsion is no longer propellers but a jet engine.

It is natural to feel proud about one’s past, but “Vedic science” is not one of them. □

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