

## **Enhancing Public Scientific Literacy Could Raise Political Discourse Too**

Over the past many years, politicians have been known to utter the most disgraceful scientific statements. A former US President once said, trees cause more pollution than automobiles do. Yet another Senate nominee said, “American scientific companies are cross-breeding humans and animals and coming up with mice with fully functioning human brains.”

Closer home, in India, politicians are on record claiming that cows exhale oxygen, the potency of seeds can be enhanced by exposing them to rays of divine power, and that evolution is wrong because nobody ever saw apes turning into humans. A politician of yesteryears is even claimed to have told his followers that the government-built dam had extracted all the power from the water, which had become powerless and would now do no good to their crops.

Why do politicians say the most blatantly unscientific things? Are they a reflection of the level of scientific literacy of our society? Do their unscientific utterances negatively impact the scientific literacy of the society they claim to represent? Can the unscientific attitude and ignorance of science of our politicians have a bearing on the kind of policies that are enacted? Unfortunately, all of these may be true.

Although, primarily, such unscientific statements given by politicians stem from their own ignorance of science and the scientific method, quite often such irrational and unscientific utterances are motivated – motivated by the desire to be in the news, or motivated by the desire to be seen as voicing the beliefs of the larger constituency they represent. Sometimes, however, guided by certain interests politicians even deliberately ignore or undermine scientific research. They will also cite dubious sources under the assumption that the audience will not bother to check the facts. However, in every such instance they inflict

more harm on the society and also undermine the respect and trust that science deserves.

While ignorance can be tackled with education and information, sinister and political motivations cannot. Politicians get elected from amongst our midst. If the society and the general public predominantly remains anti-intellectual and science-ignorant, that is the kind of representatives we will eventually get. And so while it may be difficult to rein in the politicians, driven as they are by their own considerations, it is the scientific literacy of the country's citizens that needs to be enhanced to really bring about a change in the political discourse too.

Scientific literacy is an important prerequisite for the progress of a technologically and scientifically driven society, and also for effective and sane policy-making. In simple terms, scientific literacy implies that a person should be able to ask questions, or determine answers to questions derived from everyday experiences. People should have the ability to seek explanations to natural phenomena rather than merely accepting passed down judgments and understand scientific issues based on evidence.

So, what is the status of scientific literacy of the citizens of India? We do not have the numbers. While countries like the US, China and the UK have conducted surveys to gauge the level of scientific literacy of their citizens, in India there have hardly been any nationwide efforts in this direction. In fact, China has been conducting public scientific literacy surveys for the past 20 years.

In India, too, regular and nationwide scientific literacy surveys are a must to gauge the level of scientific understanding of different segments of the country's populace so that science popularisation programmes could be specially targeted to enhance the level of scientific literacy and insure the country's populace from unscientific political discourse.

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