

Ancient India, Modern Science, and Insecurities

Claims made at the Indian Science Congress distract from a genuine exploration of science and technology.

One more year and one more session of the Indian Science Congress (isc), where nonsensical claims of great achievements of our ancient rishis were presented as if they were factually correct. This has become a distressing trend in sessions of the isc for the past four years.

The isc is designed to showcase India's achievements in modern scientific research, including research in the history of science. However, when complete falsehood is given a platform at such sessions, it brings Indian science into contempt. And, this has happened with monotonous routine over the past four years.

Normally, such claims would be treated with the disdain they deserve and not be allowed time in the isc's sessions. But, when such nonsense is being regurgitated by the Prime Minister and other leaders of India's destiny, they need to be responded to.

We all like to understand the great landmarks of achievements of our ancestors, for within these lie the clues to who we are and why we are the way we are. Like all claims, such claims should be subjected to critical analysis for their truth or falsehood. Any significant claim about our past achievements—such as the invention of *vimanas*—have been subject to critical studies, including reconstructions, by reputed scientists and found wanting. This alone should be enough reason to not give space to people who would continue to make claims about their veracity.

In most cases, it does not require great understanding of science to evaluate such claims. Science grows fairly gradually, each generation building on the achievements of the past with occasional spectacular jumps. For example, to understand the nature of cells, it was necessary to have the microscope; to realise the genetic nature of life, it was necessary to have x-ray spectroscopy, which reveals the pattern of the double helix; and it was important to understand how objects heavier than air could be lifted into the air before aeroplanes could be made. The first aircrafts of the modern period were built with the internal combustion engine, an extremely complex construct derived from decades of experiments. To achieve interplanetary travel (as has been one of the claims), it is necessary to know that the solar system revolves around the sun and that the earth is only a small body in this system. None of these concepts existed in ancient India.

So, if one wants to claim that the Kauravas were born through test-tube technology, one has to demonstrate that the

entire infrastructure, including high-quality clean rooms, deep understanding of the dynamics of evolution of life in a womb, etc, existed at that time. We have no evidence that there was even electricity existing at the time, let alone clean rooms and molecular understanding of life. And, trans-animal transplants are not even considered feasible since everything from incompatibility of blood and fundamentally different designs of the neck and brain-body connections render such suggestions impossible.

It is not that India has not had great achievements. But, as is the case with much of science, the great ideas derived through inductive studies have since been taken over by more deductive methods of European science that have scaled even greater heights. Hence, there is really no need to invent false achievements of our ancestors. Equally interestingly, all such claims are *post facto* and none have predicted any future discovery.

Yet, some have hallucinations about a perfect glorious time that existed once and has since been undermined by others. Even in this second decade of the 21st century of the common era, we are not the only ones to harbour such delusions. Normally, such delusions would be treated with simple questions like demanding evidence of the claim and demonstration of the existence of the necessary infrastructure needed for arriving at the claimed achievements. But, at a time when such claims are receiving respectability from the rulers of the nation, they can do severe harm to the nation in many ways. They will invite ridicule and discredit even genuine studies of the work of our ancestors. They distract India from its path forward, exploring science and technology using its limited resources. They set bad precedents for our coming generations by giving respectability to irrational claims. When subscription to such claims is considered a test of one's loyalty to the nation, they become seriously poisonous and disruptive.

Such nonsensical claims have to be removed from the mainstream Indian discourse. If India is serious about a proper study of its past, we need objective studies of ancient sciences, like the Needham Research Institute is doing for ancient Chinese sciences. Let it produce studies that are then challenged and the evidence evaluated by other scholars with no ideological undercurrents.

While, by and large, academics have been very vociferous in opposing these retrograde movements, we do need more scientists at the highest echelons to also speak up.