The Planetarium has capabilities to project not only the most interesting and colourful shows on Astronomy alone, but also on space science, cosmology, celestial mechanics, celestial geometry and movement of the heavenly bodies in the sky, life in the Universe, chemistry in the Universe, history of science, history of the Universe, archaeology, evolution of life in the Universe, architecture and fabrics of the Universe and other disciplines of science.

A modern Planetarium fulfils a wide spectrum of social needs of our time. Its tasks are no longer restricted to propagating knowledge in basic astronomy. There are new dimensions to the wide spectrum of themes that a modern Planetarium may handle such as, its shows may touch the philosophical and scientific questions about the origin and the structure of the Universe, the position of human race in the Universe, the world in the 21st century, life on the earth, the problems that the Earth faces and their probable solutions, the music under the stars, astro-poetry, astro-painting and so on.

Thus, the role of a modern Planetarium is of a forum where people confront together the meanings, materials as well as metaphysical, of the universe we are just beginning to understand. A modern Planetarium is an important social phenomenon, not just a set up to provide mundane entertainment. This is an education with entertainment. An hour in a Planetarium is worth 30 class-room lectures. It is the meeting place of humans and the universe.

Therefore, having provided glimpses into the mind-boggling wonders and dimensions of the

Nehru Planetarium, Nehru Science Centre, Mumbai
Universe, the Planetarium has the onus to make us introspective. It makes us conscious of the Earth – a place of blue nitrogen skies, ocean of liquid water, cool forests and soft meadows, a world bubbling with life. Juxtaposed this to the cosmic perspective, the Earth would be rediscovered as poignantly beautiful and unique.

Till date, it is the only world we know that harbours evolved life. There may be many such worlds scattered throughout infinite space, but our search for them has just begun. The modern Planetarium makes people conscious that we are born of the stars, currently inhabit a world called Earth and have just begun our very long voyage back to the stars.

**Multidisciplinary Ambience of Planetariums**

The present epoch is a major crossroad for our civilization and perhaps for our species. It is essential for our survival to understand how important it is to care for the Earth, preserve its ecosystem and bid farewell to arms.

A modern Planetarium activates our minds in a lasting way on such aspects by appealing simultaneously to our emotions and reasons. It employs the powerful method of deploying art, script writing, science journalism, and skill for audio-visual display, scientific and astronomical exhibition as a vehicle to convey scientific truths and discoveries. It is a unique institution where both science and art of various kinds combine to make socially relevant impacts on our minds.

This is why a modern Planetarium has emerged as a scientific-cultural medium to convey both scientific and artistic interpretation of reality and generates the concepts of knowledge, purity, vastness, depth, aestheticity, beauty and enlightenment in our mind. It is a School, it is a College and it is also a University, all combined in one.

The diversity of thematic contents of shows of a modern Planetarium could well be interdisciplinary, not only between the various sciences, but also between science, culture, engineering and art. Thus, although Astronomy may be the thematic core of most of its shows, there is hardly any domain of human thinking that may be excluded from its purview.

While conveying the joy and the spirit of Astronomy in myriad ways, a modern Planetarium unfolds its connection with a wide range of disciplines like physics, space science, chemistry, biology, archaeology, psychology, mathematics, geography, history, literature and art and at the same time it does not ignore the entertainment aspects of its shows. It makes conscious use of the knowledge that lasting-learning occurs only when the experiences are enjoyed.

**Astronomy and Culture**

It was observations of skies that made possible the division of time, the establishment of calendar and, hence, the planning of agricultural activities. Does it not, therefore, establish the links between Astronomy and the evolution of the human civilization?

Similarly, astronomy, of all sciences, confirmed that the natural laws discovered on Earth are generally applicable throughout the Universe. This demonstrates the relationship between Astronomy, Physics, Astrophysics and the fast developing science of Space.
People of every land and continent have connected their lives to the sky, stars and planets to immortalize their feelings and faiths in monuments and myths. Rings of stones point sunward in many lands. Ancient buildings of stones align with the sky worldwide. The ancient people embraced the sky in legends and myths. Africans saw the Milky Way as the backbone of the night and to the Incas, it was a river of light and life.

A modern Planetarium can preserve the cultural heritage unique to every society and recall the ancient stories alongside the truths revealed by modern science. In cultures having strong beliefs in mythological explanations of natural phenomena, a Planetarium of today has the task to show how science proves or disproves them.

Planetarium in Changing Times
Today the Planetarium has the obligation to propagate an understanding of the cosmos so that the people become better-informed citizens of the Space Age. Through the Planetarium people study the solar system, explore the galaxies and learn about the vast and fundamental forces of creation at work throughout the Universe. A modern Planetarium represents the endless frontiers of nature and knowledge.

We are all citizens of a single planet. We live on the shores of a tiny world, the third planet of nine, circling a minor star, the Sun. This star is just one among billions in a galaxy of stars, the Milky Way, which is again just one among billions of other galaxies moving away from each other in the vast expanse of the Universe. The Universe is immensely vast than our imaginations, filled with far more wonders than we can ever dream, and is a heritage of all mankind.

A modern Planetarium brings the awe and the wonder of the supremely grand universe to which we all belong. It tells us that our future depends on how well we know the cosmos in which we float like a mote of dust in the morning sky.

Thus, the shows of the modern Planetarium though oriented towards Astronomy and space, have very broad human perspective. They are aimed at people of all age groups, are visually and musically stunning and, thus, engage the heart as well as the mind.

Science is a delight. Evolution has arranged that we take pleasure in understanding that those who understand are better adapted to survive. A modern Planetarium is the most ideal institution to communicate non-formally some of the ideas, methods and joys of science. The reason behind the efficacy of a modern Planetarium in the context is a part of the cultural dimension of astronomy.

Astronomy and space related events and objects are perceived as new, futuristic and high-tech to such an extent that contemporary commercial advertising regularly uses Astronomy to sell products. Also, films and television have raised the expectations of the viewers about visuals to a level, which an older day Planetarium cannot meet. But now a modern Planetarium can more than effectively meet this requirement. A Planetarium can successfully promote non-formal science education in the most entertaining manner.
The quality of human resources of a society depends on the extent and the nature of both formal and non-formal education that are imparted to its members. It is, therefore, important that the education system and environment should be able to produce individuals with such quality of education, curiosity, scientific attitude, and values that would enable them to participate meaningfully in the progress of the society.

These qualities, however, cannot be attained only through formal education imparted by educational institutions. Education from these institutions needs to be supplemented with non-formal education from other institutions like science museums and the modern Planetarium.

**Planetarium and Future of Public Education**

We are living in a unique age when phenomenal advances have been made in astronomy, astrophysics and the science of space. Man is no longer bound to Earth. He has walked several times on Moon, flies regularly out into space, continuously searches the galaxies and contemplates over the edge of the Universe.

In our unique age of space exploration and space consciousness, a modern Planetarium has evolved to be the most suitable institution to provide the masses with insights into the fathomless Universe. A complex and magnificently versatile modern Planetarium can enable institutions to present aesthetically satisfying, immensely colourful and gorgeous celestial extravaganzas of dimensions and qualities unimaginable in the past.

A Planetarium is not just a forum of public entertainment, but is an integral adjunct to contemporary living to provide non-formal learning through science education to people of all age groups and to release their minds from the shackles of medieval thoughts and from the geocentric and self-centred view of themselves vis-à-vis the boundless cosmos.

At the advent of the twenty-first century, even the common man needs the perspective of the mind-boggling endlessness of the cosmos as being revealed by continuous discoveries in the field of science. A modern Planetarium, thus, has the task to present to the masses the idea of the immensity, the diversity, the order and the wonder of the Universe. A modern Planetarium is no longer a pedantic lecture hall which is excessively concerned with minor details or rules.

It is truly a theatre of the countless stars and myriad heavenly objects, a place for minds to soar far above the traffic of everyday life. It is because of the inherent versatility, flexibility and uniqueness of a modern Planetarium that the impact of its diverse shows on spectators will be far more. Today, a modern Planetarium has an extremely important role to play – of preparing the society to live in the 21st century with the right quality and dimension of mind.

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