

# Science and Superstition



## **Science**

- Science has evidence to support its claims which are based on years of experiment and research
- General public are aware of the foundations

## **Superstition**

- Superstitions evolve mainly from cultural beliefs.
- Its main foundation is of unseen forces taking activity in our lives(negative/positive)

Superstitions are linked with traditions and many a times with good and bad omens.

However not all traditions are superstitions.

Many a times superstition induces a man to behave irrationally.

For e.g.

- Because of the superstition of the day goes bad when a cat crosses one's road, many people get petrified when such incidence happens and lose all confidence.
- Some people avoid taking new work or things on certain days of the week because they believe these days are unlucky, and sometimes they miss out on good opportunities in life.
- The belief of a son is needed to carry legacy of family has resulted in female infanticide in the society. Animal and human sacrifice is carried in the name of bringing wealth, prosperity and many a times rains.

## **Science plays a very important role in the eradication of superstition.**

Science requires proof and empirical data for coming to conclusions.

Superstitions are challenged by scientific method in which they have failed completely. A spirit of inquiry can provide answers to many unexplained phenomena and clear out fears related to it.

**EX - The superstition of bad omen due to the sight of an owl and many banned activities like not cooking on eclipse days are proved to be baseless through scientific experiments.**

In a country of beliefs like India, complete eradication of superstitions is still not achieved. However with the greater spread of scientific knowledge it will not be distant dream

## **Role of Science in Exploding Myth**

Myths are stories which may or may not be true. (i.e. they don't necessarily record a true event)

**They are based on tradition or legend** and have a deep symbolic meaning.

They are often used to explain universal and local beginnings and involve supernatural beings.

It is believed that myths were formed to explain some natural phenomena while attaching them to the culture.

Myths often convey misleading or wrong knowledge.

**There is an opposite relationship between myth and science. Science is progressive, while myths are incorrect knowledge disguised as truths.**

Therefore scientists work towards proving these myths wrong with various experiments and theories

**Myth: The Earth is the center of the solar system**

- **Reality:** The Sun is at the center of the solar system and the other planets, asteroids, moon and comets orbit the Sun

**Myth: The Sun is not a star because doesn't shine at night**

- **Reality:** Earth turns on its axis once every day.
- When we experience darkness, we are facing away from the sun.

### Myth: The Sun is a burning ball of fire

- Reality: The Sun glows because its temperature is about 5,500 degrees Celsius.
- The heat is produced by fusion that takes place deep in the Sun's core at a temperature of about 15 million degrees.

### Myth: The Sun revolves around the earth

- **Reality:** Copernicus proved that the earth revolves around the sun.
- The earth revolves around at a speed of about 30 km/ps.

**Myth:** According to religious belief, God created man

**Reality:** Charles Darwin provided scientific evidence that all species of life have evolved over time from common ancestors through the process of natural selection.

Scientists have conducted experiments to prove that Big Bang created living organisms including man.

**Myth:** If humans came from apes, why aren't apes evolving into humans?

**Reality:** Humans, apes and monkeys are only distant evolutionary cousins.

We come not from apes but from a common ancestor that was neither ape nor human that lived millions of years in the past.

**Myth: Heavier bodies fall at a faster speed than the lighter ones**

- **Reality:** Galileo proved that the speed of falling bodies is in proportion to their density and not to their weight.
- Galileo demonstrated that two objects of different weights reach the distance at the same time.

**Myth: Earth is Flat**

- A practical demonstration that the earth is round was achieved by Ferdinand Magellan and Juan Sebastian Elcano's expedition's circumnavigation (1519-1521)

# Blind Beliefs and Prejudices

**Blind belief** is when someone accepts ideas because they like the sound of it. It is the mental act, condition or habit of placing blind faith, trust or confidence in someone or something.

- Crow is an important bird in **India** in the sense of **blind beliefs**. If a crow crows in front of a home, it is considered as an intimation of coming of relatives or guests.
- Owl is considered as an inauspicious bird.
- If a lizard falls on one's head or body, he is going to die soon.



[www.wildfilmsindia.com](http://www.wildfilmsindia.com)

**Prejudices** are unfavorable or negative opinions held by people without any knowledge or examination of facts. Prejudices are created in minds of people because of certain stereotypes associated with religion, caste, region, sexuality or nationality of a person.

There might be some negative experiences behind development of such attitudes. Such attitudes also pass from one generation to another.

- There is general prejudice among urban people that rural people are uneducated, backward minded and poor.
- Minority communities especially suffer inequality and injustice due to prejudices.



**The blind beliefs and prejudices may have adverse effects on social and economic development of the society such as:**

- Increase in caste and communal violence
- Lack of tolerance in the society
- Favoritism based on caste, religion, etc.
- Lawlessness and disorder in the society
- Looting and arson by anti-social elements during civil riots
- Molestation of women and massacre of innocent people including women and children
- Disruption of economic activities in offices, factories, and other establishments during violence
- Waste of time , money and effort on certain unwanted rituals.

5

[www.wildfilmsindia.com](http://www.wildfilmsindia.com)

## **SCIENTIFIC TEMPER**

The attitude which enables man to apply logic and arrive at decisions based on reliable and practical knowledge is said to be scientific temper.

It implies application of reasoning and avoidance of preconceived notions as beliefs.

Scientific temper demands scrutiny of a certain idea before believing it.

Discussions over it, arguing to prove or disprove its validity are methods used to arrive at scientific knowledge with the application of scientific temper.

- Scientific temper may help overcome the problem of blind beliefs and prejudices.
- Since science and technology have become an inseparable part of our lives,  
creation of scientific awareness
- And the inculcation of scientific temper have become the need of the hour.
- This is because society often progresses by challenging and changing earlier  
ideas, beliefs theories and laws.
- Thus the spread of Scientific temper is more pervasive than the spread of science  
and technology in order to get rid of blind beliefs and prejudices.

## **Need of Scientific Temper**

- Helps to dismiss superstitions and blind beliefs
- Encourages an open mind
- Progress of a society
- Avoid imposition of unjust rules and dogmatic ideas on the people
- Necessary for the establishment of a politically, socially and intellectually strong society

# **Role of Science and Scientific temper in promoting tolerance and harmony**

- The developments in the field of science and the inculcation of scientific temper especially in the educated class can go a long way in promoting tolerance and harmony.
- Scientific temper enables the individuals and groups to have a broad minded approach rather than fundamentalist ideas.
- This enables them to develop the virtues of tolerance and harmony.
- Scientific temper is of universal applicability and has to reach throughout our society as the dominant value system that influences the way we think and the way we approach our problems.
- The spirit of enquiry and acceptance of the right to question and to be questioned are fundamental to scientific temper.
- It considers knowledge as open ended and ever evolving.

# Tolerance

**Samuel Goldwyn** – “Ninety percent of the art of living consists of getting on with people , one cannot stand.”

**Tolerance** can be defined as a fair and objective attitude towards those whose lifestyle differs from yours. The level of tolerance in your life can be attributed to levels of happiness and contentment, as many researchers have pointed out; however, the same researchers appear to struggle when examining paradoxical questions such as, 'are tolerant people more happy, or are happy people more tolerant?'

- Tolerance is closely related to Justice.
- Tolerance is needed whenever differences arise.

**Joshua L. Liebman** – “Tolerance is the positive and cordial effort to understand another’s beliefs, practices, and habits without necessarily sharing and accepting them.”

# Importance of tolerance

## ➤ **Peace and Harmony**

- Tolerance gives importance to Justice equality, peace and harmony.
- Tolerance expects people of various caste, color, creed, faith and religion to co –exist and live in peace and harmony.
- Startling rise in intolerance in the society due to religious and political fundamentalists.
- Media can protect the interest of our society by condemning these anti social elements.

## ➤ **Facilitates Cooperation**

- Tolerance helps gain cooperation from others.
- It is required at all places i.e. home, neighborhood, social gatherings, office and so on.
- Tolerance breeds cooperation that in turn brings prosperity to individuals, groups, community and nation as a whole

## ➤ **Develops relations**

- When one accepts and respects the viewpoints of others then the others do the same in return.
- Tolerance, is vital in developing a sense of good fellowship among people.

# Harmony

**Harmony** means living in agreement with others. People living in harmony can overcome the problem of social conflicts arising out of communalism, casteism, linguism, regionalism, etc.

**Scientific temper** makes people develop a positive attitude towards each other.

**Harmony can be developed through the following ways.**

- ✓ **Law and Order Administration**
- ✓ **Education**
- ✓ **Role of Media**
- ✓ **Role of Religious Leaders**
- ✓ **Role of Youth**

## **Law and Order Administration :**

- Must conduct their duties with complete responsibility
- The police should be positively active to combat riots or violence arising out of communalism or casteism
- The time intervention of the police can help control violence and riots before situation worsens or goes out of control.

## **Education:**

- Education the educational curriculum should give equal importance to all religions.
- It should create an atmosphere of trust and cooperation among the followers of different religions.
- For this purpose, teachers should be trained to develop harmony among the students.
- The students should be motivated to influence parents neighbours community leaders and others towards communal harmony.

## **Role of Media:**

- Should play an important role to develop a feeling of fellowship among the various sections of the society.
- They should expose the ulterior motives of certain selfish leaders who sow the evil seeds of communalism and casteism.

## **Role of Religious leaders:**

- The religious leaders of all faiths can play a leading role to develop communal harmony.
- They should meet regularly to discuss ways and means to ensure communal harmony.
- They should preach the merits of communal harmony.

## **Role of Youth:**

The youth can play a leading role in developing harmony in the following ways –

- ✓ Organising and participating in youth festivals and events.
- ✓ Publishing media articles and participating in media discussions on TV and radio.
- ✓ Participating in youth meets organised by Government and Non Government organisations.
- ✓ Becoming members of Non governmental organisations to promote harmony.
- ✓ Participating in street plays to create awareness on national integration and harmony.

# Scientific Temper as Fundamental duty of Indian Citizen

## Scientific Temper is

- The mental attitude behind the method of acquiring reliable and practical knowledge.
- It involves the application of logic and the avoidance of bias and preconceived notions.
- The attitude of not accepting answers without scrutiny.
- General tendency to accept views and opinions because they were said by important people, religious books and traditional acceptance through generations .

The Constitution of India encourages the citizens of India to have a sense of scientific temper. According to the Fundamental Duties under **Article 51 A(h)**

**“It shall be the duty of every citizen of India To develop scientific temper, humanism and the spirit of inquiry and reform.”**

**It makes it a duty of every citizen to abide by the constitution and respect its ideals.**

## Scientific Temper Involves

- The mental attitude which is behind the method of acquiring reliable and practical knowledge.
  - Not accepting answers without tests and trials.
  - Requiring solid information and then suitable analysis before accepting anything.
  - Not accepting views and opinions simply because traditionally they have accepted these views.
  - Not observing obscurantist and superstitious practices.
  - Openness of mind and absence of dogmatism.
- 
- Scientific temper has to be fostered in the citizens of the country with absolute capacity for critical evaluation in order to achieve progress.
  - Lack of scientific temper leads to weakened ability to take rational decisions.

- ✓ **Secularism , humanism and spirit of enquiry and reform are directly related to secularism.**
- ✓ Scientific temper helps in **developing** secularism, humanism , and spirit of enquiry and reform
- ✓ **Scientific temper** allows us –
  - To Understand and solve our problems with less difficulty.
  - To be reasonable in our decisions
  - To be creative in our activities
- ✓ Our constitution wants us to possess Scientific temper so that we can **be better citizens.**
- ✓ Although advancements in several fields, yet the progress of scientific temper among the public has been undesirable.
- ✓ School and College education have failed to generate the critical spirit of scientific temper.
- ✓ Scientific temper has to be an inherent quality in the minds of the people. It has to also be a societal responsibility.
- ✓ These qualities are missing in the modern educated Indians.
- ✓ This failure to understand and perform fundamental duties is expected from the less educated because they imitate the highly educated.