

Modern Science and the Four Noble Truths of Jains

By K. V. Mardia

At the outset of my exposition, I cite the motivating quotation of Albert Einstein (*Nature* 1940, the topmost scientific journal) that

“Science without religion is lame,
Religion without science is blind.”

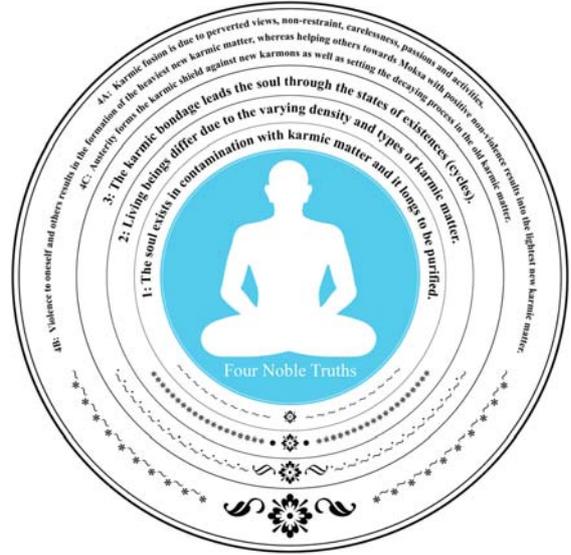
Jain *Dharma* has developed through many centuries and has provided a rich inheritance of universal thinking/philosophy on a scientific basis, which means many Jain concepts have more relevance now than ever before. However, the ancient Jain texts are written in an obscure technical language that makes them almost impenetrable to modern times. Some of the concepts are very deep and to us now it is surprising that these could have been propounded in a non-scientific era. To interpret in a concise way what is written in Sanskrit and Prakrit needs a quantum leap. However, the need to re-interpret the concept is extremely urgent so as to make it palatable to the present generation and the generations to come. An attempt to synthesise and summarise Jain *Dharma* would be worthwhile to clear the confusion caused by rituals and obscure interpretations.

With this in mind, after research work for many years, I composed **Four Noble Truths** (*Chatvari Arya Satya*) of Jain *Dharma* with help of many prominent Gurus and Scholars. These were published in my book (Mardia, 1990) which has attempted to explain Jain science, logic, and philosophy in terms of modern concepts and ideas. The axioms (Truths) are formulated from various old scriptures and translated into English here, but for the original source see the book. Here we make a new attempt to explain these very briefly in terms of the basic modern science.

The Four Noble Truths are given in the diagram here as concentric circles that show the gradual evolution to the central aim to become a *siddha*, that is, to achieve *moksha*. These are:

THE FOUR NOBLE TRUTHS OF JAIN DHARMA

- Truth 1:** ‘The soul exists in contamination with karmic matter and it longs to be purified.’
- Truth 2:** ‘Living beings differ due to the varying density and types of karmic matter.’
- Truth 3:** ‘The karmic bondage leads the soul through the states of existences (cycles).’
- Truth 4A:** ‘Karmic fusion is due to perverted views, non-restraint, carelessness, passions and activities.’
- Truth 4B:** ‘Violence to oneself and others results in the formation of the heaviest new karmic matter, whereas helping others towards Moksha with positive non-violence results into the lightest new karmic matter.’
- Truth 4C:** ‘Austerity forms the karmic shield against new karmons as well as setting the decaying process in the old karmic matter.’



“The Four Noble Truths of Jain Dharma”

These Noble Truths respectively represent:

- Truth 1. Interaction between Soul and Karmic Matter
Truth 2. Hierarchy of Life
Truth 3. Cycles of Birth and Death
Truth 4A. Karmic Fusion in Practice
Truth 4B. Activities and Absorption of Karmons
Truth 4C. The Path to Self-conquest.

Truths 1-3 set out the science of the soul, and the three parts of Truth 4 give their Jain applications. The foundation of Jainism starts from the first Noble Truth that believes in the existence of karmic particles or *karmons*; these are unusual elementary particles in the sense that they interact with the soul. That is, Jainism explains life through the interaction of such small invisible atomic particles and the soul. Invisible particles such as photons which give light became known only at the beginning of the last century. So it is surprising that *Tirthankaras* could propound such a concept of ‘spiritual photons’ so many centuries ago. If they are physical particles then it is still a challenge for science to hunt their existence. These particles form what is called karmic matter, which is embedded in the soul, and this matter obscures inherent key properties of soul such as infinite bliss.

The second Noble Truth implies that this karmic matter is responsible for different species. So in some sense karmic particles are far more subtle than DNA. It has only now become clear through genomics that there is hardly any difference between DNA / genes in human beings and chimpanzees and many others. There are also questions that prompt a further look into Jain belief and cloning. The Jain belief is that all souls are separate entities, that is individuals, whereas one feels that cloning would imply a new life can be born. But this is a misunderstanding

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because cloning only provides a surrogate mother, so the fundamental Jain principle is still valid.

This concept in turn leads to an explanation of the cycle of birth and rebirth through the karmic matter (Truth 3). We keep on absorbing these karmons through activity, and throw some out after their effect has taken place. Thus the soul has a *Karmic Computer* attached to it. This personal karmic computer keeps all the records – it also dictates some tasks from previous records, i.e. past lives. The fundamental aim in life is of removing this old karmic matter as well as stopping the inflow of the new *karmons* which results in new karmic matter. So this karmic process can be stopped and rehabilitated through *Jainness*. One of the key negatives responsible for (heavy) karmic matter (Truth 4A, 4B) is *kashaya* (destructive emotions); *kashaya* is composed of Anger (A), Greed (G), Ego (E), and Deceit (D) which has an apt acronym AGED (introduced by Gurudev Chitrabhanu). Indeed, the term *Jain* stands for the one who has conquered these inner enemies. Surprisingly, Albert Einstein's idea of a true religion is as follows (in *Nature*, 146, 1940):

"... a person who is religiously enlightened appears to me to be one who has, to the best of his ability, liberated himself from the fetters of his selfish desires"

There has been considerable work on understanding these emotions in the present time, including the rise of interest in emotional intelligence or EQ (Emotional Quotient) versus the old Intelligence Quotient (IQ). One of the key factors in EQ is to achieve emotional intelligence (this is similar to *samvayaktva* or first awakening, the fourth purification stage in Jain *gunasthana*). One of the key qualities in EQ is empathy, that is, the ability to sense how other people feel. It is the ability to accept another person's feelings. We may call it the ability to listen to others without getting carried away by personal emotions, to be able to distinguish between what others do or say, and one's own personal judgments. This is the definition of a *shravak* (term used to name a Jain layman and meaning 'a great listener').

The question arises whether there have been previous attempts to synthesise Jain principles. Indeed, these noble truths are connected to the three Jewels of Jains. Noble Truths 1, 2 and 3 deal with Right Knowledge; Noble Truth 4 deals with Right Conduct; belief in these four Truths taken together represents Right Faith. In *deva-puja* (temple-worship) a composite Swastika is used where the cycle of birth and rebirth, and the four different states of existence is the first layer (Truth 3), the second layer (depicted as three dots) is the representation of the three Jewels (four truths as a whole) and the last (shown as a crescent with a dot) is Moksha (Truths 1, 4). Note that there are other symbolic summaries. For example, *Siddha Chakra* (Circles of Jinās) which has the nine dignitaries (*Navapada*); five supreme beings of Jains, and the four

essentials (the three Jewels plus Right Austerity). These four essentials are analogous to the eightfold path of Buddhism. Thus the aim to provide a symbolic representation of key ideas for focus is very traditional. Further these four noble truths of Jain Dharma are reminiscent of the Four Noble Truths of Buddhism (Suffering exists, suffering arises from attachment to desires, suffering ceases when attachment to desire ceases, freedom from suffering is possible by practicing the Eightfold Path).

I have given here only a few insights but there is also a whole field of Jain logic. For example, Jainism believes in the principle of conditional predication (*Syaadvaada*) so that everything is conditioned by our knowledge at a particular time - and there is nothing absolute. Non-absolutism principles in science have been propounded by one of the greatest logicians of the last century -Karl Popper. Also Jain logic recommends relativity in thinking on the holistic principle called *Anekaantavaada*. In fact, relativity in thinking and open-mindedness is needed for a true Jain and thus the label Jainism is a misnomer for what is *Jainness*/ Jain Spirit. It is extremely important to reinterpret the foundations of Jainism with new scientific findings. This correlation is very vital between old works and new since some of the answers that we seek now were given many centuries ago but it can only be made once we understand the basics of Jain science as well as understanding basics of modern science. All this can only be achieved by young beautiful minds! ■

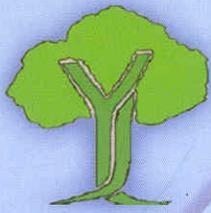
Further reading:

- Chandaria S. (2003). Review of The Scientific Foundations of Jainism by K.V. Mardia. *Jain Spirit*, Issue 1, March-May 2003, pp56-57. [<http://www.maths.leeds.ac.uk/~sta6kvm/Jainism.htm>]
- Einstein, A. (1940). Science and Religion. *Nature*, 146, pp605-7.
- Mardia, K.V. (1990). The Scientific Foundations of Jainism. Motilal Banarsidass, New Delhi (several editions, latest reprint 2007), ISBN: 81-208-0659-1. (Hindi Translation: *Jain Dharma ki Vigyanik Adharshila*. 2004. Parsvanath Vidhyapitha, Varanasi. ISBN 81-86715-71-1).

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