

# The Scientific Foundations of Jainism

Shamil Chandaria reviews a unique book by Professor Kanti Mardia

PROFESSOR MARDIA HAS TAKEN ON A FORMIDABLE TASK IN HIS BOOK, *The Scientific Foundations of Jainism*, explaining Jain science and metaphysics to a modern audience using the nomenclature and terminology of modern science. This is no small feat given that the ancient Jain texts were written in an obscure and technical language making them almost impenetrable to our modern eyes and ears. Furthermore, Mardia links these Jain metaphysical foundations to Jain ethics and the path of personal liberation and self-conquest. By doing so, he has written a synoptic account of the complete Jain philosophical system: metaphysics being the roots, science the trunk, and Jain ethics and principles of living a life of self-conquest and liberation being the branches and leaves.

Mardia has constructed four axioms which encapsulate the entire Jain belief system and form the basis of his book.

**Axiom 1)** *The soul exists in contamination with karmic matter and it longs to be purified.*

**Axiom 2)** *Living beings differ due to the varying density and types of karmic matter.*

**Axiom 3)** *Karmic bondage leads the soul through the states of existence (cycles).*

**Axiom 4a)** *Karmic fusion is due to perverted views, non-restraint, carelessness, passions and activities.*

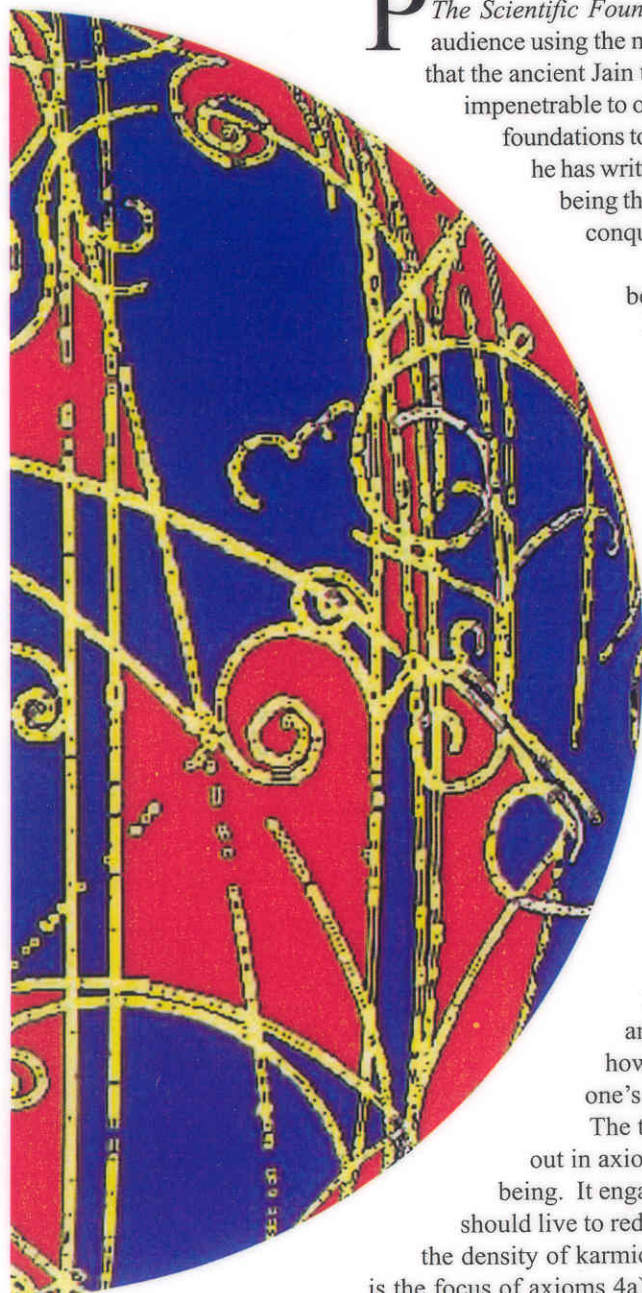
**Axiom 4b)** *Violence to oneself and to others results in the formation of the heaviest new karmic matter, whereas helping others with moksha, with positive non-violence results in the lightest new karmic matter.*

**Axiom 4c)** *Austerity forms the karmic shield against new karmons as well as setting the decaying process in the old karmic matter.*

Mardia devotes a chapter to each of these axioms. In axioms 1-3 he gives us the Jain 'scientific' foundations of the theory of the soul and the human condition. Here he develops terms such as karmons (subatomic particles of karmic matter), karmic force fields, karmic fusion and the like, recreating a language that is reminiscent of particle physics, electromagnetism and other areas of physics. He uses scientific analogies to illustrate the principles of the Jain theory. The soul absorbs negative karmons from negative activity and is polluted so as to obscure and obstruct knowledge, perception, bliss and energy of the soul. The soul, however, has an innate tendency to be pure. The karmic matter determines one's position in life and the cycles of reincarnation.

The three parts of axiom 4 are the Jain applications of the science of the soul set out in axioms 1-3. The application is to foster the purity of the soul and ultimate well being. It engages with the ancient philosophical question of 'How should one live?' One should live to reduce the density of karmic matter in one's soul. Before seeing how to reduce the density of karmic matter, we should see what causes karmic matter density to increase: this is the focus of axioms 4a) and b). The culprits are called the karmic agents:

- **Perverted views** – a misunderstanding of the true nature of our soul,
- **Non-restraint** – lack of self control which leads us to do wrong when we know better,



- **Carelessness** – sloth in following a spiritual path,
- **Passions** – anger, pride, deceit, gluttony and covetousness,
- **Activities** – especially violence.

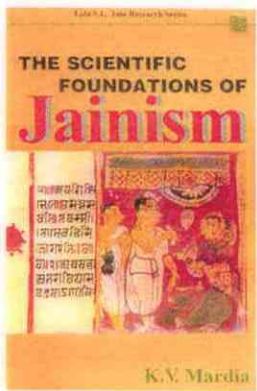
The path to purification, and thus self-conquest, is austerity. The practice of austerity not only prevents or slows down the inflow of new karmons into the soul but also causes the existing karmic matter to decay over time. The practice of austerity involves:

- **Restraint** – self control,
- **Watchfulness** – mindfulness in living well and not activating the karmic agents,
- **Righteousness** – rules of morality and disposition of character,
- **Reflections** - reflecting on philosophical truths,
- **Afflictions mastery** – mental mastery over hardships.

Near the end of the book, Mardia analyses Jain logic, especially the Jain holistic principle of knowledge (i.e. for true knowledge one has to take all the relative perspectives or points of view) and the principle of conditional predication (i.e. nothing is absolutely known unless the soul is 'perfect').

The final part of the book considers parallels between Jain ideas and modern physics, especially particle physics. He draws several suggestive analogies, but thankfully Mardia resists the temptation to make them more than analogies. This brings us to a critical point in the understanding of the entire book. How are we to interpret the axioms? To help answer this question more specifically, we could ask: how are we to interpret these enigmatic particles called karmons? Are they objectively a part of the fabric of the universe and composed of matter or energy? Or are they non-material? Or, perhaps, are they simply rhetorical devices that Jain teachers and texts of antiquity developed to explain why one should live a life of Right Conduct? These are very deep issues in the interpretation of Jain philosophy itself. However, Mardia has highlighted them by styling his book in a 'scientific' way. On the whole, Mardia does not explicitly specify his view. The thrust of the book does seem to imply his belief that the 'karmons' are literally material objects in the material world. At one point (page 10) he makes a perhaps flippant remark that 'presumably the gravitational force [of karmons] is small', which illustrates his materialist position. In taking this position, Mardia is undoubtedly in agreement with the orthodox Jain interpretation. To my mind, though, one should take care in the interpretation of the texts, and a less literal reading of them may be warranted. We could take a more humanistic view of Jainism being about Right Conduct to foster well being and flourish in human beings. The pollution of the soul by bliss obscuring karmic particles is a very useful allegory or even analogy, but to interpret it as literal truth is to confuse the spiritual with the material.

That being said, Professor Mardia's book has done a great service to the Jain tradition for two reasons. It is an extremely accessible book on Jainism for young and inquiring readers who have a scientific approach. Only few books on Jainism engage so directly with the subject matter. The second, and perhaps the greater reason is that in formulating the axiomatic approach to Jainism, he has encapsulated Jain philosophy into a self-contained, ordered logical set of principles which start at the foundations and proceed to the practice. This is very powerful, and is reminiscent of the four noble truths of Buddha, the axiomatic encapsulation of his philosophy. 🙏



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