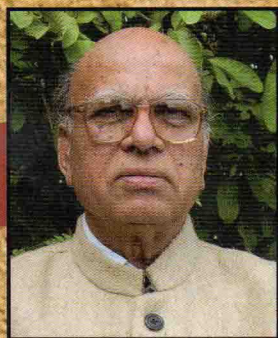


# The Two Innings of My Life

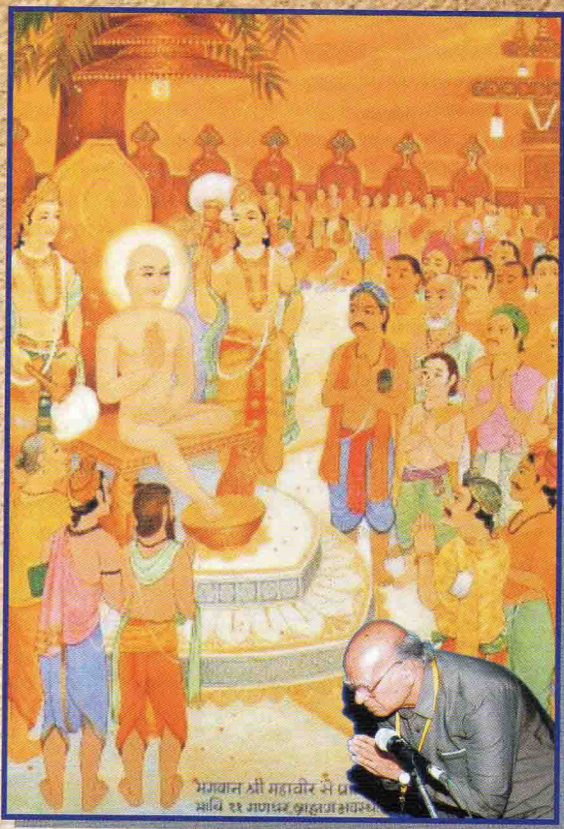


*Narayan Lal Kachhara*

**2012**



I bow with full reverence to  
*Bhagwan Mahavira*



He practiced to perfection  
Conquered the Self, attained omniscience  
and Lighted the path of truth-seekers  
May his teachings inspire and guide me to purity  
His teachings are savior of mankind of all times.  
Let his message illuminate every heart.

# The Two Innings of My Life

**Narayan Lal Kachhara**

**2012**

# The Two Innings of My Life

Narayan Lal Kachhara

A self evaluation biographical note published on passage of 75 years  
of this *paryaya*

October, 2012.

Editing and cover page design by Leena and Vinay.

***Samavasaran***  
55, Ravindra Nagar  
Udaipur 313003  
Rajasthan



Dedicated to :  
My affectionate and beloved mother  
*Smt. Manohar Devi*



**Abode of wisdom;**  
Her thoughts and teachings and her religious activities left an  
indelible impression on me.

My respected father  
*Shri Punam Chand ji*



A kind hearted gentleman.  
His helping and friendly attitude earned him a respectable  
position in society.



## Preface

Life is an open ended system; we are required to take new decisions at its every step. A common person just lives life treading a path, and faces whatever comes along the way. The person comes across many moments of choices and tries to take the best possible decision. However, the path a person proceeds on may not be entirely of his or her liking, as it is the result of circumstances that are beyond control. The progress made is subjective and guided by factors like karma, will, and efforts.

Objective planning that is based on certain well defined rules is rarely possible in real life. Life, in a way, is driven by the forces of push and pull in different directions, some of which are faced boldly while some make you helplessly drift along like a piece of straw. The destiny is therefore far from determined. Nevertheless, the point where one reaches at the far end of life represents the overall position of the journey that we tend to evaluate in terms of success. No one can claim what he or she has achieved is the best that could happen. It is whatever good the person has done that must become a source of satisfaction, and that is the way to be happy.

At what stage should one evaluate himself or herself? Periodic evaluation provides a person the chance for course correction, and to avoid regrets later. An evaluation towards the end of life may also be an example for others to learn from. It is with this view that I decided to write this book and share my experiences. It is difficult to draw a parallel between the lives of two different individuals, but we do learn from others and the learning affects the way we make our choices. My sole intention of writing this book is to make self-evaluation, but if it inspires any reader to take good decisions in life, it shall be a bonus for me.

*Michhami Dukkadam.*

Narayan Lal Kachhara

Udaipur

September 25, 2012

## धर्म – दर्शन – विज्ञान का समन्वयात्मक व्यक्तित्वः मेरे आध्यात्मिक वैज्ञानिक शिष्य डॉ. कछारा

समाप्तिं यत्र विज्ञानं, दृष्टिः प्रारम्भ्यते ततः।  
दर्शनस्य फलं धर्मः, सर्व धर्म प्रतिष्ठतम्॥

(आ. कनकनन्दी)

जहाँ विज्ञान समाप्त होता है, वहाँ से दर्शन प्रारम्भ होता है, दर्शन का फल धर्म है, सर्व धर्म के आधार पर आधारित है।

विज्ञान का क्षेत्र इन्द्रिय, यन्त्र तथा भौतिक होने से विज्ञान का परिसर सीमित है। दर्शन का विषय मानसिक, भौतिक-अभौतिक होने से इसका परिसर विज्ञान से भी अधिक है। धर्म का विषय आध्यात्मिक, भौतिक-अभौतिक, इहलोक-परलोक, सार्वदेशिक-सार्वकालिक एवं सार्वभौम होने से इसका क्षेत्र आकाश के समान सर्वव्यापी है।

जहाँ विज्ञान की सीमा समाप्त होती है, वहाँ दर्शन प्रारम्भ होता है, जहाँ दर्शन समाप्त होता है, वहाँ धर्म प्रारम्भ होता है।

आहारेण समं ज्ञानं, दर्शनं स्याज्जलोपमम्।  
धर्मः प्राणाश्च वायुश्च, त्रीणि तत्त्वानि जीवितुम्॥

(आ. कनकनन्दी)

विज्ञान आहार के सदृश है, दर्शन पानी के सदृश है, सद् धर्म प्राणवायु के सदृश है। तीनों जीवन यापन के तीन तत्व हैं।

देश-विदेश के धर्म-दर्शन-विज्ञान-राजनीति आदि के प्राचीन एवं आधुनिक साहित्यों के अध्ययन के बाद मुझे ज्ञात हुआ कि भारतीय संस्कृति तथा विशेषतः जैन धर्म दर्शन परम सत्य, विश्व कल्याणकारी, वैज्ञानिक, गणितीय है। अतः इसका प्रचार-प्रसार-स्थापना जन-जन में विश्वविद्यालय से लेकर विश्व में हो ऐसी जो मेरी भावना एवं कार्य योजना है उसे कार्यान्वित करने हेतु लेख, साहित्य, शिविर, संगोष्ठी, वेबसाइट, विश्वविद्यालयों में आचार्य कनकनन्दी साहित्य कक्ष की स्थापना, जैन-अजैन शोधार्थियों के द्वारा मेरे साहित्यों के उपर पी.एच.डी करना, विदेशों में धर्म का प्रचार आदि के माध्यम से हो रहा है। यह सब कार्य देश-विदेश के अनेक उदारमना जैन-अजैन श्रीमान्-धीमानों के द्वारा हो रहा है। उनमें से एक महामना है, डॉ. नारायणलाल कछारा जी, आपने १९७३ में सेलफोर्ड विश्वविद्यालय से इंजीनियरिंग में पी.एच.डी. के बाद देश विदेश के अनेक विश्वविद्यालयों में अध्यापन, निदेशक, विशेषज्ञ और सलाहकार के रूप में सेवायें प्रदान कीं। सन् १९६७ में सेवा निवृत्ति के बाद मेरे पास जैन धर्म के वैज्ञानिक-दार्शनिक एवं आध्यात्मिक एवं नैतिक पक्षों का अध्ययन कर रहे हैं।

धर्म-दर्शन-विज्ञान शोध संस्थान के परमशिरोमणि संरक्षक रमेशचन्द्र के भाई तथा धर्म-दर्शन सेवा संस्थान के परमशिरोमणि संरक्षक प्रद्युम्न झवेरी (अमेरिका



प्रवासी) के अनुरोध से तथा मेरी बहुकाल से भावित भावना के अनुसार जैना (JAINA) के निमंत्रण के कारण सन् २००५ को डॉ. नारायणलाल कछारा जी अमेरिका जाकर ५ सप्ताह तक विभिन्न (६) शहर में अयोजित कॉन्फ्रेंस में जैन धर्म के वैज्ञानिक पक्ष को अंग्रेजी भाषा में प्रतिपादन किया। इससे प्रभावित होकर पुनः २००७ को जैना (अमेरिका) वालों ने निमन्त्रण दिया। चीतरी ग्राम में मेरा आशीर्वाद एवं मार्ग दर्शन प्राप्त करने के लिए आये। चीतरी वालों ने उनका सम्मान किया और मैंने उन्हें पूर्ववत् आशीर्वाद सहित प्रतिज्ञाबद्ध किया कि आप विदेश में भी किसी भी पंथ-मत-पूजा-पाठ आदि के बारे में कुछ भी नहीं बोलना, केवल भारतीय आध्यात्मिक संस्कृति एवं जैन धर्म के वैज्ञानिक पक्ष का ही प्रतिपादन करना, निमन्त्रण एवं आवश्यकतानुसार किसी भी धर्म-पंथ के कार्यक्रम में, विश्वविद्यालय आदि में जाना, भाग लेना और वैज्ञानिक आध्यात्मिक धर्म, विश्व प्रेम-विश्व शान्ति के बारे में ही बोलना। इसके साथ-साथ धन की याचना नहीं करना, यदि कोई स्वेच्छा से सहयोग करता है तो अवश्य स्वीकार करना। इस बार इंग्लैण्ड में भी विभिन्न स्थान में ७ दिन तक धर्म प्रचार करके अमेरिका में प्रायः १ महीना तथा विभिन्न कॉन्फ्रेंस, धार्मिक स्थल आदि में अंग्रेजी में भाषण, प्रश्नोत्तर, प्रोजेक्टर के माध्यम से प्रशिक्षण दिया।

मेरी विश्वकल्याण की भावना के अनुसार आधुनिक विवेकानन्द रूप में तथा राष्ट्रदूत रूप में सन् २००६ को मेलबर्न (ऑस्ट्रेलिया) में आयोजित **“विश्व धर्म सभा”** में आपने भाग लेकर **“कर्म सिद्धान्त और विश्वशान्ति”** सम्बन्धी विषय को प्रस्तुत करने की महान् उपलब्धि के उपलक्ष्य में मेरे आशीर्वाद से कार्यरत (१) धर्म-दर्शन-विज्ञान शोध संस्थान (२) धर्म दर्शन सेवा संस्थान की तरफ से आपको **“जैन ज्ञान विज्ञान तत्त्वज्ञ”** उपाधि से अलंकृत किया गया। ऐसा ही मेरे आशीर्वाद से एवं दोनों संस्थानों के कार्यकर्ता तथा समाज के सहयोग से आयोजित अनेक संगोष्ठी में आपने श्रेष्ठ शोध पत्र प्रस्तुत करके प्रशंसा के पात्र बनने के साथ-साथ ससम्मान उपाधि-प्रशस्ति पत्रादि प्राप्त किये। आपने अनेक संगोष्ठियों का सफल आयोजन भी किया। आप प्रायः हमारे हर **“धर्म-दर्शन-विज्ञान प्रशिक्षण शिविर”** धर्मिक आयोजनों में भाग लेकर सभा को सम्बोधन करते हैं। प्रस्तुत कृति में इन सब विषयों का वर्णन विस्तृत रूप में है।

आप धर्म-दर्शन- विज्ञान के समन्वयक, गम्भीर, शान्त, निस्पृह, कर्तव्य परायण, विनम्र, जिज्ञासु, हित-मित-प्रिय भाषी, संकीर्ण पंथ-मत-परम्परा-जाति-राष्ट्र से परे उदार वैश्विक चिन्तन करने वाले, सत्य गवेषक, वैज्ञानिक दृष्टि सम्पन्न आध्यात्म प्रेमी हैं। आप इन महान् उदार-उद्दात गुणों का विकास करते हुए स्व-पर-विश्व शान्ति के कार्य करते हुए दीर्घ जीवी बनकर परम्परा से मोक्ष प्राप्त करें ऐसा मेरा शुभाशीर्वाद सहित शुभकामनाएँ हैं। इनके व्यक्तित्व एवं कृतित्व से विश्वमानव लाभान्वित हो, ऐसी मेरी शुभाशायें हैं।

आचार्य कनकनन्दी

विजयनगर (गुज):

दिनांक : ११/६/२०१२, रात्रि १०.४५



23 सितम्बर 2012

अहम

वह आदमी अपने जीवन को सार्थक और सफल बना सकता है, जो अपने जीवन में संयम की साधना और पवित्र सेवा करता है।

श्री नारायणलाल जी कछारा पिछले कुछ वर्षों से हमारे संपर्क में आ रहे हैं। उनका वैदुष्य और उनका जीवनवृत्त पाठकों को आध्यात्मिक प्रेरणा देने वाला बने।

शुभाशंसा।

जसोल (राजस्थान)

आचार्य महाश्रमण



## **Jain Samaj Needs Many More Jain Scholars Like Dr. N.L. Kachhara**

**Prof Muni Mahendra Kumar**

What is needed today is to produce many more scholars like Dr. N.L. Kachhara, who has rendered immemorial services to Jain Dharma through his remarkable contribution in the field of Jain studies in general and comparative studies of Jain Philosophy and Modern Science in particular. Being himself well versed both in the themes of the modern science and the Jain metaphysics, he is able to comprehend the subtleties of both and thus find out the actual correlation between them. From the very brief biographical sketch, one can easily understand how eager he is to propagate the message of Bhagwan Mahavira for the benefit of the whole mankind.

Here, the whole Jain Samaj needs to ponder over the little attention paid to the world wide propagation of Jainism, which is the most competent religion to save the world from the great catastrophe it is facing today. Had there been a few more N.L. Kachhara in Jain Samaj, they would be able to create a new history by solving the global problems of the world through a proper presentation of both the Jain theories and their application in human life! I wish that N.L. Kachhara, through his scholarship and wisdom, would succeed in producing many replicas of him and thus would fill up the vacuum in the world of scholarship.

In the present age of IT what is needed is to provide N.L. Kachhara the modern facilities of on-line propagation of Jainism, specially its scientific aspects, so that this cherished dream could be actually realized. Will the Jain Samaj pay heed to this need?

On the eve of completion of his glorious inning of 75 years, let us all congratulate this great scholar and assist him in all ways to fulfill the cherished dream.



जैन विश्व भारती

द्वारा

प्रो. नारायणलाल कच्छारा

को सादर समर्पित

**प्रशस्ति-पत्र**

**उत्कृष्ट व्यक्तित्व :**

उत्कृष्ट व्यक्तित्व के धनी प्रो. नारायणलाल कच्छारा अनेकानेक विशिष्टताओं के धारक हैं। आपने अध्ययन के लिए इंजीनियरिंग के क्षेत्र को चुना और उसी में आपने स्नातक, स्नातकोत्तर और डॉक्टरेट की उपाधि को प्राप्त किया। आपने अपने गहन अध्ययन का प्रमाण, कानपुर, जयपुर, जोधपुर एवं अन्य विदेशी संस्थानों में अध्यापन करवाकर दिया। विभिन्न महाविद्यालयों, शैक्षणिक संस्थानों एवं संगठनों में प्रशासक के रूप में कार्य कर आपने बेजोड़ प्रशासक के व्यक्तित्व को उल्लेखित किया है। आपकी व्यक्तित्व का वैशिष्ट्य आपकी कार्य पद्धति से स्पष्टतः परिलक्षित होता है।

**धर्म-विज्ञान समन्वयक :**

आपने समाज सेवा के क्षेत्र में रेखांकनीय कार्य कर एक उदाहरण प्रस्तुत किया है। धर्म और विज्ञान का समन्वय कर उसे समग्र रूप में प्रस्तुत करना आपकी विशिष्ट कार्यशैली रही है। तैरापंथ धर्मसंघ एवं संघपति में आपकी अद्वैत श्रद्धा एवं निष्ठाभावा है। धर्म के गूढ़ रहस्यों को आम जन की भाषा में प्रस्तुत करके एवं उन्हें वैज्ञानिकता का आधार प्रदान कर आपने अपने समन्वित व्यक्तित्व की छाप छोड़ी है।

**जैन अध्येता :**

जैन वाङ्मय एवं जैन दर्शन के प्रखर अध्येता के रूप में अपनी-अपनी पहचान बनाई है। 2009 में मेलबर्न (ऑस्ट्रेलिया) में वर्ल्ड रिलिजियन पारलियामेंट द्वारा आपको जैन दर्शन पर प्रस्तुति देने का आमंत्रण इसका जीवंत प्रमाण है। आपने अपनी गहन अध्ययनशीलता, कुशाग्र बुद्धि, सही समझ एवं तीव्रधारक क्षमता के कारण जैन दर्शन के तलस्पर्शी चिंतन को जनसम्मुख रखा है। जैन दर्शन के प्रति अनुराग आपकी विभिन्न भूमिकाओं यथा - धर्म दर्शन सेवा संस्थान के सचिव, जैन फिलोसॉफी एण्ड साइन्स स्टडी सेंटर के संयोजक, अर्हत् वचन पुरस्कार से सम्मान आदि से मुखरित होते हैं। आपकी विद्वता जैन दर्शन के अनेक राष्ट्रीय एवं अन्तरराष्ट्रीय सेमिनार एवं संगोष्ठियों में भी अभिव्यक्त हुई है। जैन विद्या के बहुआयामी स्वरूप पर आपका प्रखर लेखन आपको जैन साहित्यकार के रूप में प्रस्तुत करता है। कर्मवाद, जैन तत्त्व नीमांसा एवं जैन विज्ञान के क्षेत्र में आपका उच्च कोटि का साहित्य जैन साहित्य में श्रीवृद्धि का हेतु बना है।

ऐसे गुणगण समन्वित, जैनागम अध्येता, जैन विद्याधारक, जैन दर्शन प्रवेता व्यक्तित्व को परम श्रद्धेय आचार्यश्री महाश्रमणजी के सान्निध्य में जैन आगम मनीषी सम्मान - 2008 से सम्मानित करते हुए जैन विश्व भारती एवं एम.जी.सरावगी फाउण्डेशन हर्ष एवं गौरव की अनुभूति कर रहे हैं।

गोविन्दलाल सरावगी

ट्रस्टी

एम.जी. सरावगी फाउण्डेशन

08.10.2011

कैलवा

सुरेन्द्र चोरडिया

अध्यक्ष

जैन विश्व भारती

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## The Two Innings of My Life

"Being an engineer, how did you enter the world of religion?" asked a lady at Melbourne during the fifth parliament of world's religions in 2009.

"This is the second inning of my life," I said.

Looking back I see my life divided in two parts, distinct from each other, but linked in a conspicuous way. The second part looking apparently different but heavily grounded on the life experiences of the first part. The two parts portray two different aspects of life, which are complimentary and not contradictory. Being satisfying and gratifying, both the aspects represent our approach to achieve something superior in life that takes us nearer to the ultimate objective of perfection, peace, and happiness.

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# The First Inning

## Education

I was born on the dark night of the month *Margshirsh*, *Vikram Samvat* 1994 (1937 CE) in a small village named Nai near Udaipur, in an ordinary family. My parents, father Punamchand Ji and mother Manohar Devi Ji, had only elementary formal education but were full of wisdom and possessed foresighted outlook towards life. I had my primary education in a Nai School, which was housed in five *kachha* rooms made of bamboo roof. By the time I reached the 8th standard some *pucca* rooms were added.

I used to study squatting on the ground as there were no chairs and tables in our house; we had only one small room for the whole family, besides a kitchen. We did not even have a lantern in the house. Since electricity had not yet reached the village, so I used to study in the light of a kerosene lamp. Our family domesticated cows and buffalos and my duty was to take the cattle to the river or a well on the outskirts of the village, so that they could drink water.

Being good at studies I was the favourite of my teachers. I moved to Udaipur for my high school education, where in a rented room I cooked my food and managed all other things, living a self-dependent life. I had to walk to and from the school that was about 5 km away. Because of my good performance in high school I was allowed to join college, where I completed the bachelor in science (B.Sc.) programme.

Besides studies my other interest was participating in drama, particularly in school days, and the village population used to applaud my performance in the plays. Another thing that attracted me was the idea of social service, so my friends and I founded a society in my leadership. As there was no play ground in the school, we selected a piece of land on the outskirts of the village, cleaned and levelled it to make a football field. We also made a volley ball ground.

One particular incident of early school days that I remember is the pilgrimage to Jain *Tirth* Rishabhadev, about 60 km from our village. We travelled in a bullock-cart; it was a convoy of three carts

belonging to three families. My parents, my elder brother, myself, and a driver were riding in our cart. We had two night halts each on both to and fro ways, and carried with us all the things to cook food. I did not like sitting in the cart all the time, so I walked quite often along with the cart, which I found was more enjoyable.

After my graduation I got admission in the Birla Engineering College at Pilani, which was an institution of national repute. I continued my drama interest and was elected as the secretary of Hindi section of the Histrionics club there. The college was owned by the famous Birla industrial group, and they used to invite national and international dignitaries to visit the institution every year. We had visits from Pt. Jawahar Lal Nehru, the then Prime Minister, Dr. K.L. Shrimali, Central Education Minister, Shri M.A. Ayyangar, Speaker of Loka Sabha, Shri Vinoba Bhawe and Mr. J.K. Galbraith, the American Ambassador among many others.

It was a cosmopolitan college; we had students from all states and parts of the country. During the cultural festivals and activities, folk songs and folk dances were staged in almost all regional languages. The campus, away from the city, was beautiful. The hostel had single seated rooms, and its mess was purely vegetarian. We had four meals a day; breakfast, lunch, tiffin, and dinner. The total expenditure for four years at Pilani was less than ten thousand rupees, which was quite an amount that time. We had good teachers and our principal, Mr. V. Laxminarayanan, was a renowned educationist and a good administrator. I passed B.E. (Mech.) in 1961 with Honours and was among the top ten percent of students in the results of the final examination.

I was married to Sushila just after completing my first year at Pilani. Six months later my father passed away and my elder brother (we were two brothers with no sister) continued to support my education for the rest of the time at Pilani.

I had a desire for further education, particularly in the USA. During my service at Jodhpur, twice I was offered teaching assistantship from American universities, but my mother, who was more attached to me, refused to let me go and leave the country at e

any cost. I therefore joined part-time M.E. (Mech) course that had just started at Jodhpur, and passed with Honours in the minimum time period of three years.

## Abroad

Being in the teaching discipline, the next aim was to do Ph.D. While working at Jaipur, I received an offer of scholarship from the University of Safford in UK. The scholarship was about twice the amount of what other scholarships generally offered. I was directly admitted to the Ph.D. programme as against the normal practice for all foreign students to be admitted to a M.Sc. course before the Ph.D. programme. This time I could convince my mother and received her green signal to go out of the country. Of course, I could see her hesitation and so I assured her that I would return to India after completing the study. To further allay her fears, I pledged not touch meat, wine and woman, as Gandhi Ji did to his mother.

Sushila and I had four children; Sanjeev and Manju were studying in school, Raju was mentally challenged, and Vinay had just born. I left for UK with the idea that I would later call my wife, Raju and Vinay there, while Sanjeev and Manju would stay back with their Nana (maternal grandfather) in India for schooling. It happened just as planned.

I had a strange feeling of achievement on landing in London in the end of Sept 1971. It was my first visit to any foreign country. I travelled by bus from London to Manchester and reported to Prof. J.L. Livesey, the Chairman of Mechanical Engineering Department, University of Safford and also my Ph.D. Supervisor. He arranged my stay in a Student Home, where I was given a one room apartment with cooking facility. In the institute, I was seated in the faculty room of the department unlike the other Ph.D. students, who had to sit in the scholar's common room. I was provided this unusual facility perhaps because of my senior position of Reader back home.

Prof. Livesey asked me to take a week off to acclimatize myself but I approached him the very next day saying that I had nothing to do and so I would like to start working immediately. He ed by its progress.



He briefed me on the proposed research work; it envisaged more of practical work including fabrication of a new experimental rig and the supporting theoretical work using a computer. Computers were new at the time. He sent a special request to the Workshop Superintendent to expedite the fabrication work. My work picked up momentum and I was satisfied by its progress.

In four months time I could save enough to buy air tickets for my wife and two children. They joined me in February 1972 and we shifted to a private accommodation. Britain had very good school facilities for the mentally challenged children, and Raju joined one such school in our neighbourhood. Though my scholarship was enough to maintain the family, but we did feel the need for some additional money. When I mentioned this to Prof. Livesey, he assigned me some laboratory classes for undergraduates and also some consultancy work. We were not very mobile in the absence of a vehicle but we used to go on local tours by bus on most weekends.

My research work progressed fast and I submitted my thesis in Oct. 1973, just after 24 months of my Ph.D. registration, which was also the minimum time required for its completion. I found other students generally taking 3-4 years or longer to complete their Ph.D. programme. One fine morning in November, Dr. J.P. Srivastava, who was a lecturer in Mechanical Engineering Department, asked me, "How long a contract would you want as a lecturer? The University, through Prof. Livesey, is offering you a job, and what is your salary expectation?" This offer was totally unanticipated for me. I discussed it with my wife and at the same time reminded her of the promise I had made to my mother. My wife was in favour of accepting the offer; the main argument being the school facility for Raju, which was not available in India. I knew that once our other two children also joined us here it would be difficult to return to India. Taking all these factors into consideration I had to refuse Dr. Srivastava's offer.

However, I agreed to stay in UK till the end of June of the following year so that I could join my institution at Jaipur in July, when the new session began there. To my surprise, the University

offered me a visiting lectureship for seven months from December 1973 to June 1974 with a very high salary in the lecturer grade. This did provide me with some financial cushion. When I was leaving UK, my friends branded me as a very unwise person because lectureship in a British University was a very prestigious position and difficult to get. But I did not repent my decision to return to India; perhaps I did not feel comfortable in serving a foreign country, and because I was able to keep my word given to my mother.

## Career

On account of my position in the merit at Pilani, the Birlas offered me a job in Calcutta just after my Engineering graduation. Since I did not like the climate of Calcutta, I declined the offer. A friend of mine advised me to join the Polytechnic College at Udaipur and I did that on an adhoc basis. During the interview by the selection committee at Jodhpur, one of the members, Dr. M.L. Mathur said, "Why don't you join our college?" And I gladly joined the MBM Engineering College at Jodhpur in February 1962. I proved to be a good teacher and was promoted to the Reader's position just after five years, which was the minimum experience required for this post. Since the post was created due to a leave vacancy and a permanent position was not available in the Department, so after the completion of my M.E. course I moved to the Malviya Regional Engineering College, Jaipur on a permanent post of Reader in June 1969.

After two years of service, I received the scholarship offer from Salford University, UK. I talked to the Principal Mr. R.M. Advani, for granting me leave for the same. He was very cooperative and allowed me extra-ordinary leave for two years with a bond. I signed the bond for two years and proceeded on leave to UK. I kept in touch with Pilani, which was promoted to BITS by then. At one time I was informed that Director Dr. C.B. Mitra was visiting Edinburgh for attending the Commonwealth Vice Chancellor's conference, and that I should contact him. Dr. Mitra offered me a position at BITS and mentioned about their collaboration with MIT, USA, and Loughborough University UK.

On return to India, I visited BITS Pilani and decided not to join it. Meanwhile, I received the offer for the post of Professor from HBTI at Kanpur. Also Dr. R.C. Malhotra, Deputy Director, IIT Delhi, told me that I could join them as Reader. However, I preferred the Professor's position and joined HBTI in August 1975. I was the first professor in the history of the Department, and was made the Head of Department. But I had to pay a penalty to MREC, Jaipur for breaking the bond.

The Mechanical Engineering Department at HBTI was started in 1964; earlier the Institute had Chemical Engineering from the early fifties. The Institute was in fact founded in 1920 for sugar and alcohol technology courses, and was as old as the University of Roorkee (earlier known as Thompson College of Engineering). Kanpur had a chain of Ordnance factories, Air Force establishment, and other industries, and had a large population of engineers. The Institute started part-time evening M. Tech. programmes for employed Engineers. I expanded these programmes, which were a big success.

I encouraged my faculty members to pursue higher studies. They took full advantage of the neighbouring IIT in the city and joined as part-time students. After completing their Ph.D., some of them left us to join higher positions in other Institutes. We had good relations with IIT Kanpur and made use of their facilities in many ways. I was also their Senate member.

In 1980, I received an offer for the post of Professor at the University of Aden, South Yemen, through the Foreign Assignment Section of the Ministry of Home Affairs, Govt. of India. I was granted two years extra-ordinary leave and I joined the University of Aden in January 1981. The University provided facility for the faculty to visit their country every summer.

South Yemen was a small, underdeveloped and communist country having no oil resources; its economy was largely dependent on off shore fishing. It also received aid from the other oil rich countries in the region. During the days of the British Empire, Aden was a part of the Bombay province. The British captured strategic

ports en route to India and further to Australia for ruling their empire. Aden had a good migrated Indian population. The women folk wore *burka* but actively participated in the service sector, and many of the students in the college were girls.

My leave was extended for the third year. The University of Aden requested me to leave after completing the semester study. As my leave had expired I hurriedly completed my teaching commitments and was relieved in March 1984. Just a day before I was to depart Aden, I received a telegram stating that my services at HBTI had been terminated. It disturbed me, and I suspected some foul play on the part of the Director of HBTI. The Dean of the college at Aden asked me to stay over there, or return back in one month if I wished. But I decided to return to India. On my arrival, the Director of HBTI told me that I could join the Institute afresh and lodge a protest to the Government for redressal of grievances. I joined, and later on the U.P. government regularized my services.

## Pinnacle

The Government of U.P. had many engineering colleges, and it made a pool of selected candidates to be appointed as Principals / Directors. There were some serious administrative problems at Kamala Nehru Institute of Technology (KNIT) at Sultanpur, and the Government decided to change its Director immediately. One fine morning I was called to Lucknow and asked by the Secretary to join KNIT as its new Director the very next day; the decision was kept secret.

Next morning I went to KNIT with a letter from the Govt. and took over the charge of Director on November 30, 1991. I was now face-to-face with the problems of the Institute. I decided to work honestly and impartially keeping in view the general good of the students, staff and faculty. I had to take some hard decisions to resolve the problems, and within four months the Institute was restored to its normal functioning with the Government having a sigh of relief.



KNIT was an autonomous college of Avadh University on UGC approval. We were empowered to frame courses, design curriculum and conduct examinations, and the University had only to declare the results. So, we had our independent Academic Council, Board of Studies and Controller of Examination. It was a good opportunity as well as a challenge, and I made use of this facility to revise and update the curriculum to include the latest trends in engineering education.

Next year there was some students' related problem in a neighbouring Institute, the Motilal Nehru Regional Engineering College (MNREC) at Allahabad, about 100 km from Sultanpur. I received a phone call from the Secretary again, saying that I had to take over the charge of that college as well. It was late afternoon. I proceeded to Lucknow, collected the orders and reached Allahabad after midnight. I wanted to meet the Principal but he was not at home, as his residence was ransacked by the students earlier in the day. I took charge from him early in the morning, and engaged myself to sort out the problem.

I had the support of government officials like the District Magistrate and Senior Superintendent of Police, on government instructions. I had to deal with students, police, and local courts, with the assistance of college officials and advocates. We made some headway, and the students were released from police custody, after which the mood of the general students softened. The classes resumed from the next day after a few meetings with the students.

The following days were a trying time for me, as I had the charge of two engineering Institutes. I was spending three days a week at each Institute, and my wife and Raju were shuttling with me between Sultanpur and Allahabad, and occasionally to Lucknow. It was not a life of my liking. MNREC was a prestigious Institute and the Government of U.P. wanted me to permanently shift to Allahabad, quitting KNIT. However, I was of the view that the size of the Institute did not matter, and I must try to complete the work I had initiated at Sultanpur. I requested the Government to relieve me from Allahabad but this was possible only after few months.

In due course of time, KNIT Sultanpur gained reputation as an engineering Institution, and I was happy with the progress. We had strong academic programmes, and I also tried to enhance the facilities of co-curricular activities for the students. We recruited good faculty and strengthened the laboratory facilities. KNIT by then was no more a sick and problem Institute, but made a place among the pioneering Institutes of U.P. KNIT was the only Institute in the state of U.P. having the Chief Minister as the Chairman of Board of Governors. So during my tenure, I had the chance to interact with Mulayam Singh Yadav, Kalyan Singh, Motilal Bohra (during Presidents' rule), Rajnath Singh, and others.

On completion of my tenure at KNIT, I returned to HBTI Kanpur in December 1994. I relished this peaceful change. In March 1995 Raju passed away. This was a setback for me though I knew that such children had a short life span. This event had a deep impact on me and it made me realize the value and purpose of life. I decided to devote my time after retirement for spiritual, religious, and social causes. In the remaining two years of my service I engaged myself in preparation for the next phase of my life. Sushila had subscribed for "*Akhand Jyoti*" magazine and this served as a guideline for my future course of action. I retired on 15th February 1997 at the age of 60 years.

We moved to Udaipur, where I had earlier purchased a house. The owner of a private engineering college at Bareilly contacted me repeatedly, inviting me to join his college as Principal. I was in no mood to go for an assignment but my family members were in the favour that I accept the offer. Since my pension was also not released by then, I reluctantly accepted the offer on two conditions. One, I must be provided a fully furnished accommodation and two, I make no commitment of the duration of my stay, and that I could resign at any time. After two months, I resigned the job realizing that it was not the right utilization of my time in view of my earlier wish. The management requested me to complete the session, which I declined. However, I completed the semester on moral grounds and returned to Udaipur.

Haridwar was not far away from Bareilly, so I visited Shanti Kunj to familiarize myself with the work being done by the Gayatri Pariwar. In a way, my stay at Bareilly provided me the opportunity to learn more about the life and philosophy of Pt. Sriram Sharma Acharya Ji. It proved a lighthouse for me in times to come.

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## The Second Inning

The second inning of my life was a new beginning opening up new frontiers and taking me on to a new path, which I had not tread so far.



## Gayatri Pariwar

I studied the literature of Acharya Ji and I found that I could not disagree with any sentence of his book, which dealt with the philosophy of life. He made statements of truth that could not be refuted in any way. He used scientific arguments to support spiritual propositions and exhibited a high level of scholarship not only from literary and philosophical point of view, but also as a scientific observer.

I took *Guru Diksha* and also *Vanprastha Diksha* in the *Sanskara Mahotsva* held at Udaipur in 1998. I took a pledge not to work for making money hence forth. I attended yoga and meditation sessions at Shantikunj, and its practice became a part of my life. I wanted to work for school students. In order to gain entry into schools, I arranged life-time subscription of the "*Yug Nirman Yojana*" magazine to 24 schools in Udaipur.

I also came across three books on "*Naitik Shiksha*", which was used as text books for students in the Mathura and Shantikunj Ashram schools. I found that there was repetition of subject matter; the questions and illustrations for the first two volumes were also given in the third volume. I suggested that this layout could be improved for the convenience of students. I reorganized the three books into two volumes. Pt. Lilapat Sharma of Mathura Ashram accepted to publish the books if a minimum sale was assured. So, I offered to buy 1000 copies of both books for Rs. 30,000 for the purpose of starting a *Naitik Shiksha* examination for secondary and higher secondary students.

I was advised to start the programme on a small scale first and then expand it. I started the scheme in the Udaipur district in 1998. Encouraged by the response, it was extended to the Udaipur division in the 2nd year and to whole of Rajasthan by the 3rd year. Students had to pass two examinations based on the two books, supplied free, in two years, and a certificate was given by the *Gayatri Pariwar* to successful candidates.

Later on, another scheme of *Bhartiya Sanskriti Gyan Pariksha*

was started by Shantikunj for 6th to 12th standard students. I dropped the first scheme and started working on this new project. Starting from a few thousands, the enrolment in Udaipur zone increased considerably in subsequent years.

I found that there was no programme for college students. I submitted a proposal to Shantikunj and we started a debate competition activity for them. The competition was held at three levels - district, division, and state, with the winners of first level proceeding to the second, and so on. The programme was very successful and was continued for a few years.

Shantikunj now started a distance education programme. Students were registered as distance education candidates for selected courses, and coaching was to be provided by centres established at Shaktipeeth. We introduced this scheme at Udaipur. The UGC later banned any University from running distance education in states other than where it was registered, so as a result this programme was discontinued.

## The Jain Journey

During a programme of *Gayatri Pariwar* at Salumber in 1998, I met Acharya Shri Kanaknandhi Ji. Knowing that I was a Jain, he invited me to a seminar that he was going to organize at Salumber later in that year. I was impressed by his scholarship and approach, and was surprisingly happy not only to find a Jain monk talking about science, but also appreciating the contributions made by it. This was the beginning of a long lasting association, and also my formal introduction to Jainism. Before this time, I was Jain by birth and tradition but not by choice. Acharya Kanaknandhi Ji inspired me to study Jainism from a scientific perspective and this opened up a new chapter in my life.

In the year 2000, Acharya Kanaknandhi Ji had his *chaturmas* in Udaipur. Guided by his inspiration, we formed a society by the name of "*Dharma Darshan Seva Sansthan*" (DDSS) for furthering his aims and objectives. This society provided us the platform for organizing future activities on Jainism.

As my study progressed, Acharya Ji asked to me to write on Jainism. Finding myself not ready for such a venture at that time, I decided to interview Acharya Ji and write the questions and answers in the form of a book. This resulted in the publication of my first book "*Samavasaran*" on Jainism in October 2002.

Acharaya Kanaknandhi Ji had the 2002 *Chaturmas* at Pratapgarrh. Our Sansthan associated with him in organizing a National Seminar there on "Science in Jain Texts". We received good articles on various subjects of scientific interest and decided to publish the selected articles after revision by the authors on suggested lines. Bhartiya Jnanpith, a reputed publisher of Delhi, agreed to publish the book. The book "*Jain Dharma Mein Vigyan*" was finally published in 2006.

The idea of writing a book attracted my attention. By this time I had realized the importance of integrating Jainism and science. I knew that science answers the "how" of events while Jainism addresses the "why" of events, and the wedding of these two streams could greatly enhance our knowledge. I was in search of a suitable subject and found the doctrine of Karma as having great significance from both, the Jainism, as well as, the scientific points of views, and selected it as the subject of my next book.

During my study, I found that Shri Devendra Muni Shastri had justifiably referred to the views of both Svetambara and Digambara Jain traditions in his books. Acharya Mahaprajna had referred to scientific advancements along with Jain Philosophy and its tenets, and had also tried to connect the two approaches. Besides the books of these two great Acharyas, I found very useful references in the writings of Pt. Sriram Sharma Acharya Ji. I also studied the views of western thinkers and scientific texts on genetic science, bio-photons etc., which were relevant to the doctrine of Karma. The effort culminated in the book "*Jain Karma Siddhanta, Adhyatma Aur Vigyan*" published in Dec 2004.

When I came to know that Acharya Mahaprajna Ji was in Siriyari, not far away from Udaipur, I thought of obtaining his blessings for this book. I had not met him personally so far. I

presented the manuscript to him and sought his blessings. I was overwhelmed when he obliged me with an immediate response. I was highly impressed and thus began my personal association with yet another great Acharya scholar of Jainism.

I also met Muni Shri Mahendra Kumar Ji, who had authored books on scientific Jainism, a subject of my interest. My association with him continued and I had several meetings with him in times to come, and took advantage of his scholarship on the scientific aspects of Jainism.

In the year 2004, Acharya Shri Kanaknandhi Ji again had *chaturmas* in Udaipur. On this occasion we organized a National Seminar on "*Karma Siddhanta Aur Uske Vaigyanik, Manovaigyanik Avam Samajik Ayam.*" The seminar was well attended and we published the selected papers presented in the form of a book bearing the same title. Acharya Kanaknandhi Ji had a fancy for seminars and we continued to organize such events in future under his auspices.

Jainism believes that the cosmos has not been created by any super power, and that it comprises of six kinds of substances; *Dharmastikaya*, *Adharmastikaya*, *Pudgalastikaya*, *Jivastikaya*, *Akasastikaya*, and *Kala*. The scientific principles of Jainism are related to the study of these six substances. I selected this as the subject of my next book. Modern science has studied matter, the physical order of existence, and space and time. However, science has not accepted existence of *Dharmastikaya* and *Adharmastikaya*, and also that of *Jivastikaya* as it considers life as having material origin.

I found that many of the concepts of Jainism, when interpreted in modern context, have great scientific value. In fact many modern scientific findings match with the postulations of Jainism. This proves the great strength of Jainism as scientific theory. I submitted the manuscript to Prakrit Bharati Academy of Jaipur and they accepted to publish the book; it came out in 2007 bearing the title "*Satdravya Ki Vaigyanik Mimansa*".

I had been working on writing the English version of the book on *Satdravya* for some time. I thoroughly revised the earlier text and improved the presentation. I requested Muni Shri Mahendra Kumar Ji to write a Foreword to the book, and he obliged me. Prakrit Bharati Academy took time to publish it, and the book bearing title "Jain Metaphysics and Science: A Comparison" finally came out in December 2011. It was released by Acharya Shri Kanaknandhi Ji, as well as by Acharya Shri Mahashraman Ji.

Jainism presents a fascinating field of study for scientists. Though it is essentially spiritual in its approach and aims at the ultimate goal of liberation, the principles of Jainism have great scientific value. I realized that all its principles and their scientific interpretations must be collected at one place. It would enable the readers to appreciate the scope and depth of Jainism, and also its scientific value. This study led to collection of material that was organized in a new book with the title "Scientific Explorations of Jainism". The book contains fourteen chapters dealing with all major aspects of Jainism that are important for scientific exposition of its principles. M/s Motilal Banarasidass has agreed to publish the book in their special series "India's Scientific Heritage". Carrying opinions of some leading scholars of USA, I hope the book to open new grounds on Jainism in the English speaking world.

## International Exposure

Acharya Kanaknandhi Ji is a prolific writer. He has deep respect for the ancient Indian culture, and he is also very proud of it. He realizes the importance of the scientific values of Jainism and wishes to see its message spread in the world. He asked and encouraged me to go abroad to promote Jainism.

Dr. Jag Mohan Humar of Udaipur, now living in Ottawa, was visiting Acharya Shri and during that time he offered to help by introducing me to JAINA, of which he was one of the Directors. Jain Associations in North America (JAINA) is an apex body of about 65-70 Jain Associations in USA and Canada, which organises various programmes for Jains in those countries, including bi-annual conventions. The next convention was to be held in Santa Clara in

July 2005. On the recommendations of Dr. Humar, JAINA invited me to this convention.

### USA - 2005

While preparing myself for the convention, I thought of having some useful literature in English. I soon prepared an abstract version of my book on Karma *Siddhanta* in English and published it with the title "Jaina Doctrine of Karma: The Religious and Scientific Dimensions". I also thought it proper to arrange lectures at some more places in the US to take full advantage of the trip. For this purpose, I requested my friend Dr. Ganesh Harpavat in Dallas and others to do the needful. *Dharma Darshan Seva Sansthan* came forward to finance my trip partially. Shri Pradhuman Zaveri, a disciple of Acharya Shri Kanaknandhi Ji, and a resident of Santa Clara was my host there, and he also extended some financial help.

I spoke on the "Doctrine of Karma" in the convention and also distributed free copies of the English book. The lecture was well attended and the audience liked the scientific form of presentation, which was a new experience for them. My lectures were also held in Houston, Dallas, Austin, and Phoenix, and the scientific study of Jaina principles was appreciated by all. It was particularly recommended for the younger audience. I also visited the *Preksha Dhyana* centre in Huston and participated in the birthday celebration of Acharya Mahaprajna Ji.

### London and USA - 2007

The next JAINA convention was to be held in July 2007 in New Jersey, and I got an invitation to participate in it as a scholar. Equipped with my new study, I decided to talk on a variety of subjects this time. Before leaving, I obtained blessings of Acharya Shri Mahaprajna, who was having *chaturmas* at Udaipur. *Dharma Darshan Seva Sansthan* again provided me partial financial support for the trip. I travelled via London, where I lectured at local Jain centres and the Sayer Centre, where Samani Ji were staying. I spoke on the Doctrine of Karma as per the choice of the organizers. I met Dr. Natubhai Shah, who was doing pioneering work on Jainism in U.K. I also visited Jain temples in Leicester and Potasbar.



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The JAINA convention was held in Adison, USA, and the arrangements were distributed at three centres. At one centre an exhibition was arranged in which the main attraction was the gem stone idols of 72 *Tirthanakars*, 24 each of the past, present, and future era. These idols, after exhibiting at many cities of the world, were to be finally installed in the Jain centre of America, New York.

Besides Jain monks, the convention was addressed by Sri Sri Ravishankar, Baba Ram Deva, and the Congressman Frank Palone, who was awarded Padma Bhushan by the Government of India in recognition of his work on world peace through religious harmony. We also held a group discussion on Jain unity on the initiative of Shri Nirmal Dosi, a disciple of Acharya Kanaknandhi Ji. I visited Siddhachalam Ashram founded by Muni Sushil Kumar Ji, who had migrated to the US in 1975, and was the force behind the formation of JAINA. After his demise in 1994, the Ashram is now being graced by his disciple Shri Amrender Muni.

My lectures were also held in Dallas and Atlanta. The audience appreciated the scientific presentations of Jain principles, and endorsed that this was the need of time. They suggested that I write the book on *Satdravya* in English for the benefit of English knowing readers. I met Shri Vinod Daryapurkar in Atlanta, who was dedicatedly working on the web site [www.jainworld.com](http://www.jainworld.com) and was awarded the President JAINA prize that year in recognition of his services to Jainism.

### **Melbourne - 2009**

The forthcoming event of the Parliament of World's Religions in December 2009 at Melbourne caught my attention. This is a prestigious top ranking international organization promoting world peace through dialogue among different religions and religious organizations, institutions, religious leaders, scholars, activists, and artists of the world. I saw this event as a good opportunity to promote Jainism at the international level.

I submitted a proposal and it was accepted. Shri Naresh Jain

of New Jersey, who was one of the Directors of Parliament, was a recommendatory to this decision.

It may be mentioned that the first Parliament was held in 1873 in Chicago in which Swami Vivekananda was the main attraction. Shri Veerchand Raghavji Gandhi, a freedom fighter on foreign soil and an exponent of Jainism, had then presented Jain views in this Parliament. The next parliament was held after a hundred years in 1983 again at Chicago, and thereafter it has been held every five years.

The fifth Parliament at Melbourne, held for a week, was attended by about 6000 delegates from all over the world, and spanned all religions and communities of the world. It provided a unique experience of meeting and mixing with not only people of different faiths and countries, but also of the same faith living in different corners of the world. This was a mini world of religions interacting mutually through dialogues, lectures, demonstrations, performances, exhibitions, literature, films, and personal contacts.

Bhattaraka Devendra Kirti Ji and I spoke on the Basic Tenets and Karma in Jainism. In all, there were 18 to 20 programmes on Jainism, proportionately much less than other religions. Sessions were arranged on various international issues, and two sessions were devoted to the problem of nuclear disarmament. I represented the Jain views and said that Jainism is against all kinds of weapons, as it advocates non-violent methods to resolve conflicts and differences, and for the removal of injustice. The solution is a nuclear free world, and the practice of *Anuvrat* can help the world in preventing wars and bringing peace on the planet. I also came in contact with the International Society for Science and Religion (ISSR), which organized three sessions of talks by top ranking scientists, scholars, philosophers, and religious leaders.

The Oxford University, in Collaboration with the International Society for Science and Religion, announced an International Conference on God and Physics in July 2010 at Oxford. I submitted a paper on "Jain Philosophy and Modern Physics" and it was accepted. I could not attend the Conference due to some family

problem and sought permission of the organizers for presentation of the paper by another scholar. The organizers agreed, deviating from the normal practice. Dr. Natubhai Shah of London presented the paper on my behalf, and during the discussions he invited Oxford and Cambridge Universities to undertake research programmes on Jainism and science. One of the delegates stood up and said, "Why don't you do it?" I see this as a challenge to Jain scholars.

## Jain Unity

Jain unity, the unity among the many divisions and sects of Jainism, is a dream of many Jains. Some Acharyas had made attempts in the past for unity among the sub-sects of Svetambara tradition, particularly Sthanakvasi sects, with some success. The major division is between the Svetambara and Digambara traditions. Many Shravakas, particularly from the educated class, and some enlightened Acharyas are of the opinion for a total unity. Acharya Mahaprajna Ji, Acharya Shiv Muni Ji and Acharya Kanaknandhi Ji had expressed their wishes in public for total Jain unity.

Inspired by Acharya Kanaknandhi Ji, I got involved in this important movement. I personally communicated the wishes of Acharya Kanaknandhi Ji to Acharya Mahaprajna Ji, who then organized meetings of representatives of all sub-sects of both traditions. I also met Acharya Shiv Muni Ji and obtained his blessings for this move. We had many meetings at Bhivani in the 2006 *chaturmas* of Acharya Mahaprajna Ji, but ultimately we did not make much headway because the Jain leader from Delhi, who was deputed to pursue the proposed plan of setting up a *Jain Vikas Manch*, lost interest.

However, the grounds suggested for unity by Acharya Mahaprajna Ji in consultation with Acharya Shiv Muni Ji, as noted below, are strong enough to form a sound base for similar efforts in future.

1. Protecting the existence of Jain religion.

2. Safeguarding the existence of Jain community.
3. Making plans and initiating actions to spread the message and philosophy of Mahavira to every part of the world and philosophy of Mahavira to every part of the world.
4. Preserving *Agamas* and Scriptures.
5. Promoting harmony and good relations among all sects.

## Jainism and Science

My study bears out that Jainism and science can contribute to their mutual understanding. They are complimentary and not contradictory to each other, and their comparative study can enhance our knowledge of the living as well as the non-living world. I envisage that a cooperative study of the two disciplines shall bring them closer for the benefit of mankind and all living beings at large.

The world shall recognize Jainism as a scientific religion and also as a universal faith benevolent to all kinds of people, communities, and societies. Jainism has all the ingredients to address the regional, national and global problems on the planet and ensure a peaceful, just, fearless, and shortage free life in the world. It can help conserve the natural resources, protect the environment, reverse the climate change, and turn this Earth into a heavenly place.

Modern science has made a commendable progress in the study of the physical world, but being empirical in nature, it yet remains far from truth. Jainism deals with the living and the non-living world with equal authority and propounds the ultimate truths, some of which are beyond comprehension of the modern day scientists. This in fact is an incentive rather than discouragement for scientists to study Jainism.

For the purpose of scientific study, a living system must be seen to exist at three levels – the soul, the subtle bodies, and the gross material body. Though the soul is the most important component of the system, but being non-physical in its interactions

with the other two components, it is difficult to be analyzed scientifically. However, this does not hinder us from making an analysis of the system, as the changes in the soul are reflected as corresponding changes in the karma body. So for the purpose of scientific study, it is enough to consider interactions between the subtle bodies and the gross body, the karma body representing the soul activities on the physical plane.

Scientists tend to explain life considering the processes in the material body alone and therefore arrive at conclusions that are prone to further questioning. A complete understanding of the system must consider the existence, and the processes taking place therein of both the subtle body and the gross body, and the interactions between them. Jainism makes such an approach possible and opens up vast new grounds to understand life, and to study our existence in a holistic manner. This kind of study may need beginning of a new kind of science to deal with the subtle bodies and their interactions with the gross body. The rewards would be profound and will give a new vision of our existence, and discover the marvel of nature that supports a system as complex as the human body.

## Comparative Study

I foresee the following gains from a comparative study of Jainism and science.

**1. Recognition of consciousness as an independent power different from the gross body.** The western thinkers are still struggling to define consciousness and to know its role in the body system. Jainism clearly maintains that consciousness (soul) is different from body and describes its properties as well as interactions with the body in detail.

**2. Better understanding of the world at the micro level.** Jainism describes the physical existence, especially at the micro and lower level that has still not been explored by science. Science helps in understanding the Jain concepts, which at times appear to be abstract ideas. The Jaina concepts, e.g. *paramanu* and *vargana*, can

greatly improve the scientific knowledge of the micro world. Jainism propositions indicate that at the ultimate smallest level the physical world exists as vibrations with a very high level of uncertainty. The electric charge is the fundamental form of energy and is the source of the fundamental forces in nature. The world is dynamic all the way; stativity appears to be an elusive temporary phase in the dynamic world.

**3. Discovery of new scientific theories to explain the structure of the Universe.** The universe is a finite structure having a shape; it is eternal and has not been created by any super power. The scientific theories of the universe based on inferential arguments and simplified mathematical solutions are essentially incomplete and do not compare with Jaina concepts based on observations of the Omniscient. Science as yet does not recognize the two constituent components of the universe, *dharma* and *adharma*, of the Jaina scheme. The Jain ideas can revolutionize the scientific approach and help discover more realistic theories.

**4. Expansion of the realm of physical sciences to include the soul.** Jainism contains vast knowledge on living beings, and the structure and performance of physical body of organisms. Jainism emphasizes that the physical body cannot be successfully studied independent of the soul. Science misses this connection between the soul and body and tries to explain all phenomena of the body purely as material entity. However, some scientists have recognized the incompleteness of the materialistic approach and are in search of additional factors that influence life. Jainism can help science to fully understand the processes and mystery of life.

**5. Demystification of the mind.** The mental faculty of human beings poses intriguing challenges to scientists, psychologists and philosophers. The mystery of the mind is far from understood. The Jain ideas help solve this riddle and suggest a structure mainly in the subtle realm that explains the functions and performance of mind working in conjunction with the brain and other parts of body. The Jain model shows the source of intelligence and intuition power that is essential for operation and functioning of the mind and body.

6. **Explaining the epistemological processes and knowledge behaviour.** According to Jainism, *jnana* (loosely termed as knowledge) is the property of the soul. The *jnana* that is covered by karma is unveiled by special efforts of the soul. The manifested *jnana* and *darshana* becomes agent for cognition activity of the being. The cognition activity generates knowledge. Jainism presents an extensive theory of knowledge gained in two distinct ways, the indirect and direct cognitions. Jaina theory of knowledge can be powerful means for psychologists and scientists to understand human psychology and cognitive performance. The Jaina theory and neurological studies together can enable us to explain the epistemological processes and our knowledge behaviour.

The study of interaction between Jainism and science is fascinating and generates an unending curiosity to understand the natural processes and soul performance. It has turned me into a student collecting pebbles at the shore of vast sea of knowledge as revealed by the Omniscient, and I am enjoying it.

## Works and Appreciations

In October 2007, *Dharma Darshan Sewa Sansthan* and *Vigyan Samiti*, Udaipur organized a National Seminar on Jain Philosophy and Science in my convenership, and under the auspicious presence of Acharya Mahaprajna Ji, Yuvacharya Mahashraman Ji, and Muni Mahendra Kumara Ji. The seminar was well attended and was appreciated by Acharya Ji. On this occasion, a proposal was passed to establish a Study Centre on Jainism particularly to promote the scientific study of Jainism.

During this event I came in close contact with Dr. K.L. Kothari, the founder and the force behind *Vigyan Samiti*. He asked me to become a member of the *Samiti*, which started my association with the organization. On my suggestion, Dr. Kothari agreed to start the Study Centre in *Vigyan Samiti* and I was made its convener. The Centre has been working since then and contributes to the study of Jainism, particularly in scientific perspective.



The next *chaturmas* of Acharya Shri Mahaprajna Ji in 2008 was held in Jaipur. On this occasion my book "*Satdravya Ki Vaigyanika Mimansa*" was released by Acharya Shri. In the same year Jain Vishva Bharati, Ladnun, conferred "*Jain Agam Manishi*" ney of Rs. 51,000 sponsored by the M.G. Saravagi Foundation, Kolkata, was possible only during the Kelwa *chaturmas* of Acharya Mahashraman Ji in 2011. The *Kundakunda Jnanapith*, Indore also awarded a prize for the second best paper published in *Arhat Vacan* in 2008. Since then I have been regularly contributing papers to this Journal.

Dr. Natubhai Shah is teaching Jainism at Antwerp (Netherlands) and he also organizes learning camps in U.K. He said that teaching theory is easy but showing the students how Jainism is practiced in life is difficult. He asked me to produce some films showing the practice of Jainism. Dr. Paras Mal Agrawal and I prepared a script and produced a documentary film of about 35 minutes on the "Life of a Digambara Shravaka" showing six kinds of daily practices he is supposed to observe. This documentary is now available on YouTube at

<http://www.youtube.com/watch?v=qUJAdraeds8&feature=relmfu>.

I presented a paper on "Philosophy of Mind: A Jain perspective" in the First Asian Philosophy congress, New Delhi held in March 2010. A US journal approached me for permission to publish the full paper in their journal. I agreed and the paper was published in the March 2011 issue of US-China Education Review.

The David Publishing Company, USA, publishing the journal "US-China Education Review" started a new journal "Philosophy Study" and appointed me as a reviewer. This of course added to my workload.

I had been regularly contributing articles to "*Tirthankar Vani*" published from Ahmedabad. The editor, Dr. Shekhar Chandra Jain, decided to change the format of the magazine from monthly to quarterly and make it a research journal. He requested me to be on its editorial board.

The Florida International University at Miami, USA, which has been offering courses on comparative religion, also has Samani Ji teaching Preksha Meditation for some time as part of a course. In the year 2010, Bhagwan Mahavir Chair was instituted in the University Jain community. The University decided to have an International Advisory Board for programmes on Jainism and appointed me as one of its member. The University formulated an online certificate course on Jainism in the Modern World having Jainism and Science as one of the topic. On request from the University, I recorded two lectures of about one hour each on this topic. I hope it would generate interest in the students to go for further study in the field of Jainism and science.

I met Dr. Hukumchand Bharill in Dallas during my 2007 visit. He had written a small book on the 47 powers of *Atman*, which were described by Acharya Amritchandra Ji in his book *Atmakhyati*. I translated the subject matter of this book in English. Dr. Paras Mal Agrawal obtained the permission from Dr. Bharill to publish the work. Dr. Agrawal wrote a forward and the book was submitted to *Todarmal Smarak* of Jaipur for publication.

## Lessons from Life

Life is a book and we learn lessons from it. In the end, I wish to share some of my life experiences with all of you.

1. Do not allow money to decide the course of your life. Take the right decision commensurate with the goals of your life.
2. Observe honesty in your personal and professional lives. It adds to your success besides bringing reputation, peace, and happiness.
3. Always think positive. Negative thinking encroaches on your abilities and retards your progress, besides causing mental tension and worries.
4. Ups and downs are part of life. In case of adverse happening do not lose hope and balance. Instead, look forward and multiply your efforts.

5. Recognize the purpose of your life, the sooner the better. There could be purpose in professional life, as well as thereafter. Be clear in your thinking.
6. There are two theories about fellow beings; all are good unless proved otherwise, or all are bad unless proved good. I accepted the first theory and it never failed me.
7. Try to do justice with everyone you work with. Everyone has aspirations and it should be accepted and respected. Be impartial in your actions, favouritism amounts to injustice.
8. Do not harm others for your personal gains, may it be individual or the organization you are serving. It pays you back in terms of good relations and confidence.
9. Don't miss the opportunity of helping others and doing something good. You should rather be grateful to them for providing this chance to you.
10. Be grateful to your well wishers. Remember them and try to reciprocate in future, possibly in a greater measure.
11. Charity is good; it enables you to repay the social debt.
12. Never think that you have learned enough; be a student for your whole life. The later life in fact gives the advantage of experience and improves your learning skills, maturity, and power of taking good decisions. Curiosity is the key to learning.
13. Creativity produces excellent results in life. You can improve creativity by sustained attention and restricting your thinking. Early morning hours are generally good for new ideas. Your intuition power is at its peak in silence. You may not strike at the correct idea in the first attempt. Let the idea incubate for some time and you shall be able to improve on it and make the right statement.
14. Minimize your personal needs. Simple life is an easy way to peace and happiness.
15. Don't be carried away by the allurements and glitter of physical comforts, new gadgets and products. Go only for that which is necessary for you.

16. Spirituality is not retiring from active life. On the contrary, spiritual viewpoint improves the quality of activity. Spirituality is the best virtue as it brings satisfaction, peace, and happiness.
17. Try to be independent in your life. This is the way to be happy.
18. Indian culture and Jainism are full of life values. Find time to read the ancient texts and learn from them to guide your life in the present context.
19. Division of life in four *ashramas* is a good philosophy. One must lead *vanaprastha* life after the age of 60 (or 65) in his or her house. This makes spiritual advancement possible and provides time to do social and religious service, which you could not do in your busy professional life.
20. Practising yoga daily for ½ to 1 hour keeps you physically and mentally fit, and helps you achieve your objectives in life.
21. There is no use of amassing wealth and leaving it for the next generation. Try to use your wealth for a good cause in your life time and set a good example for your children.
22. *Anuvrat* improves your personal life, helps the society, and preserves the environment. Try to follow as much as possible.
23. *Samskaras* received in childhood guide the personal conduct for the whole of life. The moral, cultural, and religious values inculcated in early life become the foundation of the belief system.
24. Be patriotic in your approach. Nations having patriotic population progress fast bringing prosperity and welfare to their peoples. Nation's interest must be placed above personal interest.

My wife Sushila provided me continuous support cooperation, and love throughout the two innings of my life. She steadfastly held the home front and let me free to devote my time to my career in the first inning and to my spiritual pursuits in the second inning. She proved to be the better half in the real sense.

Pt. Sriram Sharma Acharya Ji, Acharya Kanaknandhi Ji, Acharya Mahaprajna Ji, and Muni Mahendra Kumar Ji were the source of inspiration in my second inning, and provided me guidance for my new venture. I express my deep sense of gratitude to all of them with full heart (*shraddha*) and all the wisdom (*pragya*) at my command.

I am also thankful to all my friends and well wishers, whose names have appeared in this text, for their support and cooperation. My blessings to my sons, Sanjeev and Vinay, and daughter, Manju, their spouses, Sonia, Leena and Kamal S. Jain, and their children, and wish they also finally follow the spiritual path that is so satisfying and fulfilling in life.

***Om Araham***

## Publications

### (A) Engineering

#### Research Papers

- 1 "Utilization of wind power in arid areas of Rajasthan", Indian Journal of Power and River Valley Development, August 1967
- 2 "Velocity modification and induced turbulence in flow through screens", The Indian Engineer, August 1969
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- 4 "The electric discharge machining process", Journal of the Institution of Engineers (India), January 1971
- 5 "Tool wear – causes, effects and control", The Indian Engineer, September 1971
- 6 "A case for teaching systems design", The Institution of Engineers (India), Rajasthan Center, 11th Annual Number
- 7 "A theoretical and experimental investigation of flow through short axisymmetric contractions", Fifth Australian Conference on Hydraulics and Fluid Mechanics, Centerbury, December 1974
- 8 "The aerodynamics of sand transport", Transactions of Indian Society of Desert Technology, January 1976
- 9 "Optimized intake system for a four stroke single cylinder diesel engine", Third National Conference on I.C. Engines and Combustion, Roorkee, December 1976
- 10 "The development of diffuser science" The Institution of Engineers (India), Rajasthan Center, 15th Annual Number
- 11 "A reduction method for a linear time invariant system based on deterministic time-lag", National Systems Conference, Coimbatore, June 1977
- 12 "An Initial approach to the design of very wide angle axisymmetric diffusers with gauzes to achieve uniform outlet velocity profiles", Transactions of ASME, Journal of Fluids Engineering, June 1977

- 13 "Design of two-dimensional ducts having specified velocity distribution on the boundary", Journal of Aeronautical Society of India, August 1976
- 14 "Axisymmetric flow in boundaries defined by two-dimensional theory", Journal of Aeronautical Society of India, November 1976
- 15 "An experimental study of desert cooler performance", ISME Conference on Mechanical Engineering, Delhi, December 1977
- 16 "Use of simulation in deterministic optimal group technology layout", ISME Conference on Mechanical Engineering, Delhi, December 1977
- 17 "Part time post-graduate education of engineers", National Seminar on Educating the Engineers of the Future, The Institution of Engineers (India), Bangalore, January 1979
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- 23 "Group layout of a production system", Journal of the Institution of Engineers (India), Mech. Eng. Division, November 1984 – January 1985
- 24 "Temperature distribution in two layered skeletal muscle undergoing rhythmic contraction", Journal of the Institution of Engineers (India), Interdisciplinary Panels, June 1986



- 25 "Heat Exchange in extremities of animals", 24th Rocky Mountain Bioengineering Symposium, Fargo, USA, April 1987
- 26 "Gauze assisted very wide angle axisymmetric diffusers giving uniform outlet flow – choice of boundary", 15th National Conference on Fluid Mechanics and Fluid Power, Srinagar, November 1987
- 27 "Wind tunnel test performance of two semi-circular bucket Savonius rotor", 16th National Conference on Fluid Mechanics and Fluid Power, Kanpur, December 1988
- 28 "Analysis of flow through hydraulic ram by characteristics method", 16th National Conference on Fluid Mechanics and Fluid Power, Kanpur, December 1988
- 29 "Effect of friction and vane thickness on slip factor of radial impeller", 17th National Conference on Fluid Mechanics and Fluid Power, Warangal, 1990
- 30 "A performance model for reciprocating cleaner". Journal of the Institution of Engineers (India), Agriculture Engineering Division, September 1993

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"Fluid Mechanics and Fluid Power", Editor, Tata McGraw-Hill Publishing Co. Ltd., New Delhi, 1988

## (B) Jainism

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1. "Manah Aur Usaka Swaroop", 5th Vaigyanik Sangosthi, Pratapgarh, October 2002
2. Jaina Doctrine of Karma, article series, Tirthankar Vani
3. "Consciousness, Soul and Scientific Faith", 7th International Conference on Peace and Nonviolent Action, Jaipur, November 2008
4. "Vargana Vigyan", Arhat Vacan, Oct-Dec 2008
5. "Doctrine of Karma", 5th Parliament of World's Religions, Melbourne, December 2009

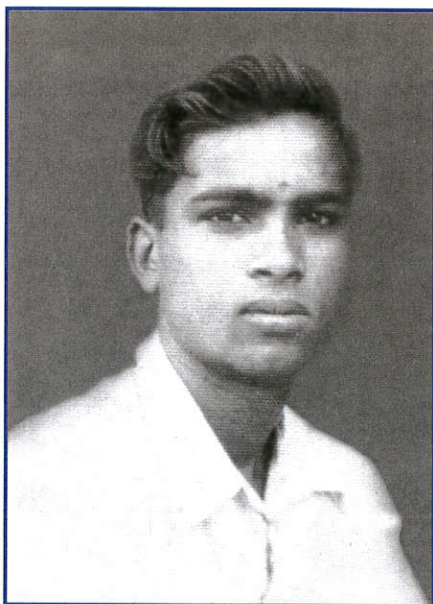
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7. "Philosophy of Mind: A Jain Perspective", First Asian Philosophy Congress, New Delhi, March 2010
8. "Jain Philosophy and Modern Physics", IRC Oxford and International Society for Science and Religion conference on God and Physics, July 2010
9. "Jain Dualism: A Philosophical and Scientific Analysis", Arhat Vacan, July-Dec 2010
10. "Consciousness and Knowledge: A Jain Perspective in Modern Context", Seminar on Consciousness and Knowledge: Scientific and Spiritual Perspectives, ISJS, Dec 2010
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12. "Bhasha Vigyan", , Arhat Vacan, July-sept 2011
13. "Jain Dualism-2: Fields and Interactions, Arhat Vacan, Oct-Dec 2011
14. "Soul: The Intelligent Designer", Tirthankar Vani,
15. "Systems Philosophy in Ancient Jain Texts", Tirthankar Vani,
16. "The Fate of the Universe: Argument from Jain Philosophy", Tirthankar Vani,
17. "Kya Manushya Sarvashreshtha Prani Hai?", Tirthankar Vani,
18. "Jiva Vikas Aur Mastishka Vikas", Preksha Dhyan
19. "The Eleven Doubts", Tirthankar Vani, January and April 2012
20. "Consciousness: Quantum & Jainism", article series, Tirthankar Vani, July 2012 (and next)
21. "Biological Intelligence and Human Faculties", National Symposium on Jain Philosophy, Science and Scriptures, Jasol, Oct 2012
22. "Some Structural Concepts of Soul", Arhat Vacan
23. "Emotions and Bhava in Jainism and Western Thought", To be

published in Arhat Vacan

24. "Karma Siddhant Aur Aparigraha", Encyclopedia of Aparigraha, Prakrit Bharati Academy, to be published
25. "Jiva or Soul in Jainism", Journal of Gyansagar Science Foundation (Forthcoming)

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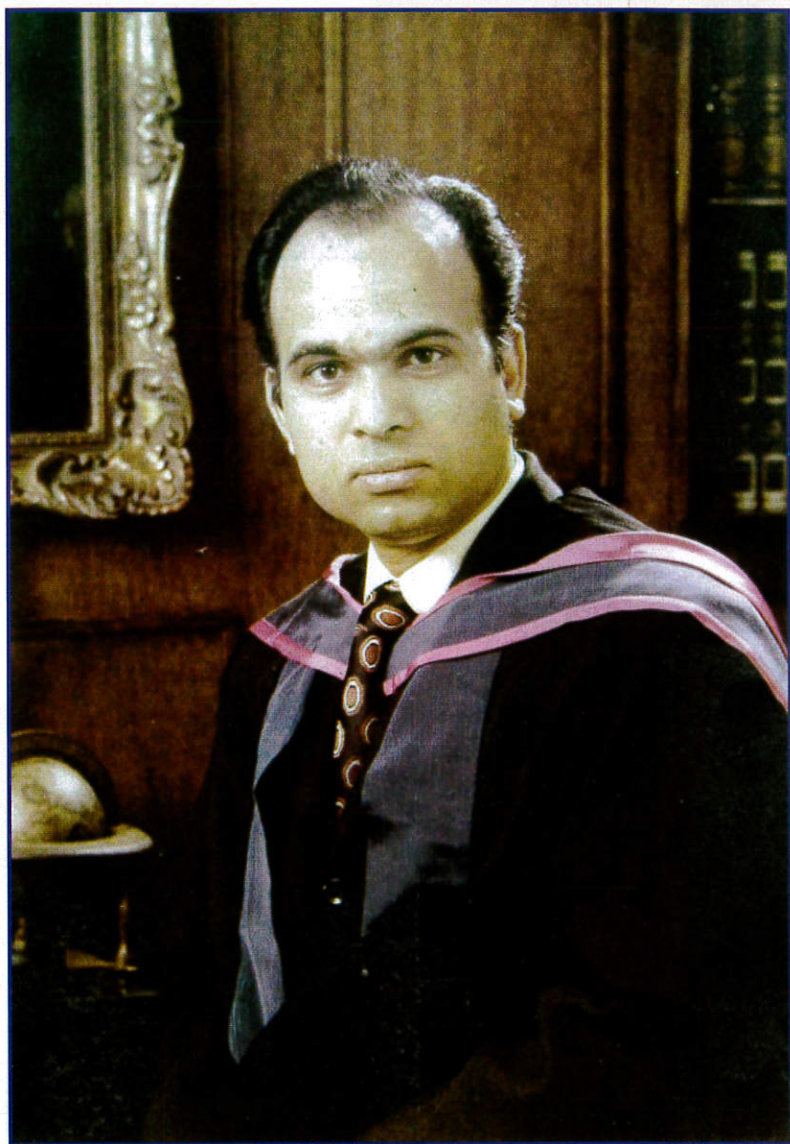
- 1 "Samavsaran-Acharya Shri Kanaknandhiji ki Amrit Vani", 2002
- 2 "Jain Karma Siddhant, Adhyatma Aur Vigyan", 2004
- 3 "Jaina Doctrine of Karma", 2005
- 4 "Karma Siddhant", Editor, 2005
- 5 "Jain Dharma Mein Vigyan", Editor, Bhartiya Jnanpith, 2006
- 6 "Satdravya ki Vaigyanik Mimansa", Prakrit Bharati Academy, Jaipur, 2007
- 7 "Jain Metaphysics and Science: A Comparison", Prakrit Bharati Academy, Jaipur, 2011
- 8 "Scientific Explorations of Jainism", Motilal Banarasidass (Forthcoming)



High School Student, 1951

Graduate Engineer, 1961





Doctoral Convocation 1973

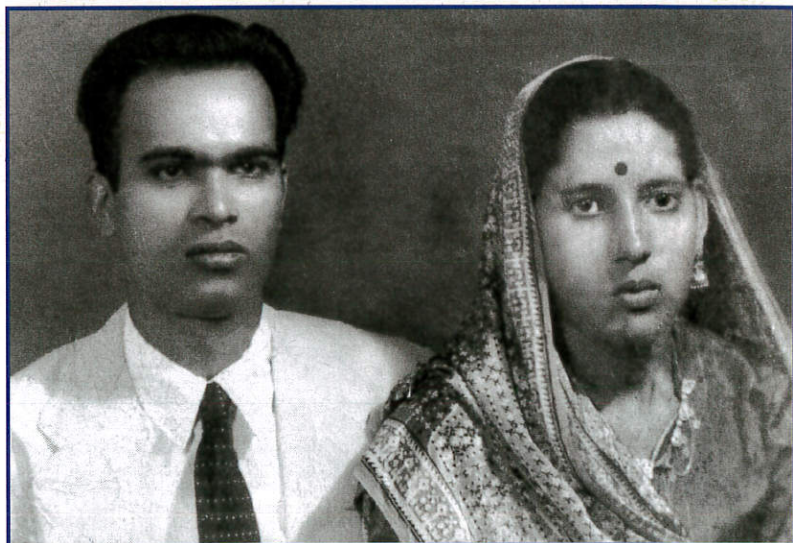




**Shri M.A. Ayyangar, Speaker Loka Sabha  
Visiting our exhibition model, Pilani, 1958**



**Pt. Jawahar Lal Nehru, PM  
Visiting our exhibition model, Pilani, 1959**



With wife Sushila, 1959



Prof. J.L. Livesey, my Ph.D supervisor and Chairman  
Mech Eng. Dept, University of Salford, and Mrs. Livesey at our  
residence in Salford, 1973





Director, Kamla Nehru Institute of Technology  
Sultanpur, addressing Convocation, 1994



Receiving Felicitation certificate from  
Acharya Kanaknandhi ji, 2005



**Family group 2005 : Back - Kajal, Mrinal, Nehal  
Middle - Sanjeev, Vinay, Self, Sushila, Kamal S Jain  
Front ; Sonia, Leena, Vrinda Manju**

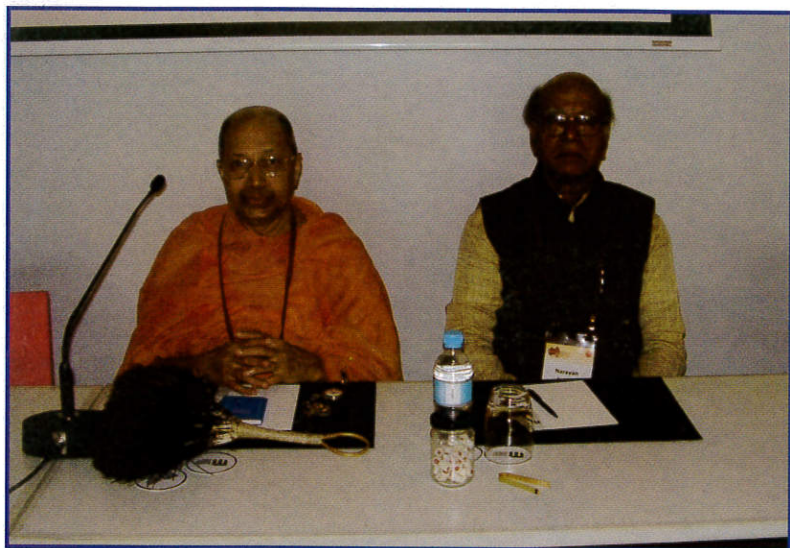


**With grand children on 50th Wedding anniversary, June 2008.  
from Left - Nehal, Kajal, Mrinal, Mannat, Joyleen, Vrinda absent**





With Amrender Muni, Siddhachalam, USA, 2007



Making presentation at 5th Parliament of World's Religions, Melbourne 2009 (with Bhattarak Devendrakirti Ji)



At Shantikunj, Haridwar, 2007



Felicitation by Gayatri Pariwar on the occasion of Birth Centenary of Pt. Sriram Sharma Acharya, 2011



सबको सदबुद्धि

ॐ भूर्भुवः स्वः

सबके लिए उज्ज्वल भविष्य

## युगत्रहषि पं. श्रीराम शर्मा आचार्य जन्म शताब्दी

तत्वावधान : गायत्री तीर्थ, शान्तिकुंज, हरिद्वार

दिनांक : 01 जून 2011



श्री नारायणलाल कच्छरा, निवासी उदयपुर, जिला - उदयपुर ने युग निर्माण योजना - गायत्री परिवार मिशन के नींव के पत्थर के रूप में सक्रिय भागीदारी की है। अतः इन्हें शान्ति कुंज हरिद्वार की ओर से 'अग्रज सम्मान' प्रदान किया जाता है।

गुरुसत्ता एवं आद्यशक्ति माँ गायत्री से आपके दीर्घायु एवं उज्ज्वल भविष्य की मंगल कामना करते हैं।

*R.D. Gable*  
( रामेश्वर दयाल गुप्ता )  
व्यवस्थापक  
गायत्री शक्तिपीठ, उदयपुर

*S. Singh*  
( डॉ. आलोक व्यास )  
कन्द्रीय प्रतिनिधि  
अखिल विश्व गायत्री परिवार  
गायत्री तीर्थ, शान्तिकुंज, हरिद्वार

अपना सुधार ही संसार की सबसे बड़ी सेवा है,  
हम बदलेंगे- युग बदलेगा- हम सुधारेगे- युग सुधारेगा  
हमारा लक्ष्य - मनुष्य में देवत्व का उदय - धरती पर स्वर्ग का अवतरण





In heartfelt appreciation to

*Dr Narayan Kachhara*

for the invaluable contribution of your expertise, insight and wisdom  
to the 2009 Parliament of the World's Religions  
in Melbourne, Australia



COUNCIL FOR A  
PARLIAMENT OF THE  
WORLD'S RELIGIONS



*The Two Innings of My Life*

**Dr. Narayan Lal Kachhara**

55, Ravindra Nagar, Udaipur 313001 (Raj.)

E-mail : nlkachhara@yahoo.com