he second talk of the Indic Center’s Gandhi Lecture Series featured Ramdas Lamb addressing the issue of “Should an Academic be an Advocate? The Intersection of Scholarship and Social Action.” Lamb shared his experiences as a non-Indian working in India and encountering academic issues, asceticism, Harijan advocacy, and rural education. His academic career has involved study of both ascetics and Harijans, one group at the top of the caste hierarchy, the other at the bottom. He also discussed both the problems and possibilities that occur if there is a social involvement with individuals in groups being studied.

Traditionally, humanities scholars and researchers working in India have been objective, dispassionate observers of the people and cultures they study. It was assumed that the researcher would have little social involvement with those he or she was researching.

“Fortunately,” Lamb said, “I had little higher education prior to going to India, so I was not burdened with academic paradigms and assumptions (that would) restrict my understanding of what I experienced. I did not know I was not supposed to identify with the people I met, their lives, their problems, and their passions. Fortunately, I got involved. As a consequence, I have sought to approach the issue of academics from the point of view that Mahatma Gandhi inspired in many: to be passionate about your beliefs and to reflect them in your actions.”

(continued on page 2)
The speed of light or just a coincidence?

S ubhash Kak is the author of The Astronomical Code of the Rigveda, In Search of the Cradle of Civilization and many papers on early Indian science. In an article for the Indian Star, a literary/arts magazine, he writes:

“Imagine that archaeologists, digging a thousand-year-old virgin site in Antarctica, come across an inscription deep underground that shows the sun, and next to it the numbers 186,000 miles per second, the speed of light. What would the world do? More likely than not, this finding would not be accepted by scholars. A fraud, they would say, committed for cheap fame. The reputation of the archaeologists would be ruined. If they didn’t hold tenure, they would lose their jobs. Only lunatics would support them, claiming that this proves aliens have visited the earth from time to time. The reputation of the archaeologists would be ruined. If they didn’t hold tenure, they would lose their jobs.

But what would the world do? More likely than not, this finding would not be accepted by scholars. A fraud, they would say, committed for cheap fame. The reputation of the archaeologists would be ruined. If they didn’t hold tenure, they would lose their jobs.

But why are we talking about the absurd scenario of the archaeologists in Antarctica? Because, we are confronted with a situation that is quite similar!

I am an archaeologist of texts. I read old texts from the point of view of the history of science. One such book is the celebrated commentary on the Rigveda by Sayana (c. 1315-1387), a minister in the court of King Bukka I of the Vijayanagar Empire in South India.

Io, one of the moons of Jupiter, takes to reach earth based on whether it is on the near side of Jupiter or the far side. Until then light was thought to travel with infinite velocity. Even Newton assumed so.

“For the first time, the moon could not be considered an absolute object. It was not the same as the earth. It moved in its own orbit. It was not fixed; it was relative. The speed of light was determined by the speed of the moon, not by the speed of the earth.

This statement could either relate to the speed of the sun or to that of light. The units are well known. For example, the Indian epic ‘Mahabharata,’ conservatively dated to 400 B–400 AD, defines one nimesha to be equal to 16/75.3 seconds; one yojana is about nine miles. Substituting in Sayana’s statement we get 186,536 miles per second.

“Unbelievable, you’d say! It cannot be the speed of light. Maybe it refers to the speed of the sun in its supposed orbit around the earth. But that places the orbit of the sun at a distance of over 2,550 million miles. The correct value is only 93 million miles and until the time of Roemer the distance to the sun used to be taken to be less than 4 million miles. This interpretation takes us nowhere.

“What about the possibility of fraud? Sayana’s statement was printed in 1890 in the famous edition of Rigveda edited by Max Muller, the German Sanskritist. He claimed to have used several three or four hundred year old manuscripts of Sayana’s commentary, written much before the time of Roemer.

“Is it possible that Muller was duped by an Indian correspondent who slipped in the line about the speed? Unlikely, because Sayana’s commentary is so well known that an interpolation would have been long discovered. And soon after Muller’s Rigveda was published, someone would have claimed that it contained this particular ‘secret knowledge.’ The fact that the speed in the text corresponds to the speed...
of light was pointed out only recently by S.S. De and P.V. Vartak. Also a copy of Sayana’s manuscript, dated 1395 AD, is available.

“Further support for the genuineness of the figure in the ancient book comes from another old book, the Vayu Purana. This is one of the earliest Puranas, considered to be at least 1,500 years old. The same reference is to be found in the other Puranas as well.

“In Chapter 50 of this book, there is the statement that the sun moves 3.15 million yojanas in 48 minutes. This corresponds to about 10,000 miles per second if considered as speed of light, and 135 million miles for the distance to the sun, if considered as the speed of the sun.

“Sayana’s speed of light is exactly 18 times greater than this speed of the sun! Mere numerology? We must also not forget that the Puranas speak of the creation and destruction of the universe in cycles of 8.64 billion years. That is quite close to currently accepted value regarding the time of the big bang.

“For the rationalists, these numbers are a coincidence. Given the significance of these numbers, they should look very carefully at the old manuscripts of Sayana’s commentary.

“There are others who would say that consciousness, acting on itself, can find universal knowledge. Look, they'd say, by examining biological cycles, one can know the periods of the sun and the moon. So why shouldn’t it be possible to know other universal truths?

“They’d add that ancient texts speak—and this is true—of embryo transplants, multiple births from the same fetus, air and space travel, slowing or speeding of time, weapons that can destroy the entire world. They’d say that it is more than ancient science fiction, (that) it shows that the human imagination can envision all that can happen.

“This brings us back to the question of whether the figure of 186,000 miles per second in Sayana’s book is an astonishing coincidence, an example of the powers of intuition, or a meaningless number.

“What do you think?”

Notes:
1. The Rigvedic hymn number is 1.50.
2. For a discussion of the technical issues, download the file speedlight.ps from the ftp directory on my homepage or see http://www.ee.lsu.edu/kak/ and then check the file speedlight.ps. You can also read this paper called “The speed of light and Puranic cosmology” on the Los Alamos Physics Archive physics/9804020.

The Wilkinson Microwave Anisotropy Probe (WMAP), a NASA Explorer mission, estimates the Big Bang singularity—considered to be the origin of the universe—to be 13.7 billion years old. This was announced by NASA in a press release on March 7, 2008.

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Fall seminar series featured talks on South Asian literature; science and spirituality; and Meridian medicine

The literature of South Asia

Professor Christopher Larkosh of UMass Dartmouth’s Department of Portuguese opened the fall seminar series of the Center for Indic Studies with his lecture on “Reading ‘Across the Current:’ In and Beyond South Asian Literatures.” In his presentation, he developed a comparative examination of contemporary works from South Asian cultures and beyond to re-evaluate the potential for greater South-South communication in the 21st century. In reading two novels on Goa by the Italian Antonio Tabucchi and the Angolan José Eduardo Agualusa, along with works of South Asian authors such as the Nepalese Samrat Upadhyay and the Pakistani Maniza Naqvi, Larkosh suggested that such an act of ‘translating South-South' may offer an unexpected set of “lessons for the future.” Those would include a series of reflections on the relative security of both the unavoidable global interconnectivity, and the critical understanding of this connectedness, (necessary indeed for the future). He focused on the role of a dialogue among “South” nations on their own terms in languages other than English and free of colonial perspective and interference. In analyzing Antonio Tabucchi’s short story, “Trains that go to Madras,” Larkosh expanded on his answer to a basic question: Can we write beyond our own identity?
Thirtha Maharaj

Understanding science and spirituality

In his presentation, Srila Bhakthi Swarup Thirtha Maharaj, a disciple of the Gaudiya Vaishnava Sampradaya, offered a new approach to understanding the relationship between science and spirituality. He observed that science involves the study, through experimentation and observation, of physical and natural worlds and their origins. Spirituality is concerned with the understanding of one’s identity, and our eternal relationship with absolute spiritual truth. The spiritual entity, he continued, maintains material bodily existence, while the supreme spiritual entity maintains the entire universe. Earthly existence is temporary, whereas there is a sole and eternal spiritual realm.

Maharaj argued that science cannot offer perfect, permanent solutions to man’s problems, but he felt that spirituality can. As a spiritual person, Thirtha Maharaj suggested that spirituality is the way to find meaning in one’s life. He also said that spirituality involves the study of a “higher dimension,” what he called the understanding of one’s actual identity and truth, or, in his words, “the spiritual truth.”

Science conducts studies of the perishable body, whereas spirituality examines the internal nature of the spirit soul, he continued. Material science allows for speculation. “Big Bang” theories try to give a certain explanation for the evolution of the world. Yet in the Srimad Bhagavatham, every graphic detail about the cosmos and other phenomena have been explained in that section where it describes the ultimate truth: “Time never begins nor ends.”

Regarding human beings, Maharaj said that the body can die, but not the soul, and that the spirit of the soul represents the “real me.”

Maharaj concluded by contending that “not stopping the duty of serving is spirituality and consciousness. Real ‘me’ or ‘I’ is something else from the body. The spirit soul is the passenger and not this body. Enlightenment understands the fact that ‘I’ is the spirit soul, not this body. The supreme soul, the supreme controller, is GOD, who controls everything in this world and we are the subordinates of GOD.

“Human life is where everyone is provided with the intelligence to understand GOD, who am I, what is the relationship with him, what is the duty that one has to follow to find a connection with the supreme soul and be really happy when we link our self with the supreme spirit.”

Dr. Vasu Brown

Practicing Meridian medicine

As problems with health care systems increase, so too does interest in non-traditional approaches and responses. Among those lesser-known approaches is “Meridian medicine,” the subject of a seminar presented by Dr. Vasu Brown, medical director of the Nemasket Health Care Center and an associate medical staff member at New Bedford Rehabilitation Hospital.

Brown said Meridian medicine is called “Nadi Vaithiyam,” meaning pulse medicine, in India. Meridian is also used to describe the channels through which energy, blood, and lymphatics flow. Lymphatics in the human body are considered its “electrical meridians.”

These meridians comprised the system used to diagnose and treat various conditions in traditional Chinese Medicine, Japanese Jin Shin Jyutsu, Indian Nadi Vaithiyam, and other meridian-based practices.

In modern times, Indians call this type of medicine ‘Nadi Vaidhya,’ to describe the pulse treatment, and vessels of vitality. Nadi medicine, according to ancient records, dates from before Moses & Gautama Buddha, and Chinese medicine incorporated this approach.

Brown outlined the main differences between acupuncture and meridian medicine, one of which is that Meridian uses “layers” to understand problems. Meridian medicine, with its theory that different energies give vitality to each other, defines these layers as various energy cycles of the body, completion or chaos, God source, Chakras, endocrine to Spirit level. Blood is related to heart, bone related to fear, muscle related to anger, deep skin related to grief, and skin surface is related to earth and worry. This layer is from 10th, 9th to 1st level. These layers are related to the parts of the body, emotions, planets, and colors. Chakras energetically affect every part of the body. The Chakras, or energy centers of the body, are stimulated by pranayama, an exercise to increase or control the power of life through rhythmic breathing.

Brown argued that some health problems are to a large extent caused by mental and/or emotional problems. She feels that tackling mental issues is key to a person’s happiness, and acknowledged that mental illness can be more difficult than physical illness. She urged her listeners to be more content with themselves.
India is fast becoming one of the most important development centers for software, IT outsourcing, R&D, biotechnology, customer contact, design, and other knowledge-based products and services. At the same time, India’s rapidly expanding middle class represents a promising new market. One of the fastest growing economies in the world, India’s current economic growth is approximately 7% annually, an impressive figure.

India’s vast pool of talents in disciplines such as engineering and information technology attracts many developed countries to outsource their manufacturing and IT services. India is a huge country with a population of over a billion, highlighting the importance of the region not only from business process outsourcing and IT perspectives, but also as one of the most attractive emerging markets for products/services from other countries.

Indian companies are having a growing influence on international business. The interest of multinational companies in India necessitates understanding the culture as well as political and economic landscape of India. Given India’s role in the world economy and its contribution to large pool of manpower in the 21st century global enterprises, it is important to understand the Indian culture and management in order to be successful in business. Considering this, Professors Bal Ram Singh and Angappa Gunasekaran conceived the idea of having a journal on Indian culture and business as a joint initiative between the Center for Indic Studies and Business Innovation Research Center at the University of Massachusetts Dartmouth.

In 2007, the first issue of the *International Journal of Indian Culture and Business Management* was edited by Professors Bal Ram Singh and Angappa Gunasekaran.

The main objective of the new journal is to promote research and understand how new business developments relate to Indian culture and management.

The journal will act as a forum for exchange of new developments in Indian business environments both in terms of opportunity and threats, and the implications of culture and political landscape on business enterprise. The journal will also

- raise the awareness about India’s current business climate;
- provide insights regarding India’s future growth opportunities; and
- offer a networking forum for academics, professionals, and entrepreneurs.

Please visit the website for more information: [www.inderscience.com/ijicbm](http://www.inderscience.com/ijicbm). Contact Professor Bal Ram Singh at bsingh@umassd.edu or Professor Angappa Gunasekaran at agunasekaran@umassd.edu for additional information or a sample copy of the journal.

### Indian business students visit Umass Dartmouth

A team of business students from Nirma Institute of Management, Ahmedabad, India, visited UMass Dartmouth’s Charlton College of Business as part of their tour of business schools in the US. In addition to exploring opportunities for academic collaboration between the two schools, UMass Dartmouth Professor Sukalyan Sengupta presented a brief overview of the Center for Indic Studies, its goals, mission, and activities. He also highlighted some unique features of Indian-American owned and operated businesses and attributed their success to some enduring elements of Indic culture.
Diwali and Navaratri festivals were celebrated with dancing, singing, and food

The Center for Indic Studies and the India Students Association joined to celebrate Diwali with a new look and a new concept that included music, dance and traditions from all parts of India. The event marked a new standard for Indians amongst the foreigners. The performances consisted of dances from Punjab called the Bhangra to a medley of south Indian folk, from Assamese's Bihu dance to Bollywood medleys and western bands. The two types of classical music, Hindustani & Carnatic were showcased at the event with Sitar and Flute accompanying singing performances. The event was a success with faculty, students, UMass Dartmouth alumni, and Indian-American children from the neighborhood.

The India Students Association further kept tradition by also celebrating the festival of Navaratri with the traditional garba dance.

Indian cuisine was served at both cultural events.
The Indic Studies Program

Indic Studies is an interdisciplinary program that not only offers courses, seminars, conferences, and research opportunities concerning the philosophy, tradition, values, art, science, culture, and religions of India, but most importantly provides a peek into an integrative approach to knowledge and life that has withstood the test of time in healthy and harmonious living against many onslaughts and challenging circumstances.

While India has been the origin of Indic ideas, these ideas transcend time and space, and thus Indic philosophy and traditions, such as Yoga and Ayurveda, are relevant to the entire world.

The importance of these ideas is so profound that Prof. W. Norman Brown of the University of Pennsylvania wrote as early as May 1939 in the Bulletin of the American Council of Learned Societies, Washington, D.C: “Every college which aims to prepare its graduates for intelligent work in the world which is to be theirs to live in must have on its staff a scholar competent in the civilization of India,” and added “No department of study...in any major university can be fully equipped without a fully trained specialist in Indic phases of its discipline.”

The courses and academic opportunities provided by the Indic Studies program at UMass Dartmouth are unique, practical, and enlightening within the current academic offerings.

We welcome students to explore this program for an enriching college experience that will in all likelihood become a treasure of their lives long after the days of college and classroom are over.

Dr. Bal Ram Singh,
program director