

NIAS NEWS



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JANUARY 2001



Editors' Note

This is the first issue of NIAS NEWS in the new millennium! It also marks the beginning of the tenth year of publication of this newsletter, which began under the able stewardship of Major General M K Paul, our Controller. Although the format has changed significantly from what it was earlier, the contents continue to remain the same, providing you glimpses of the activities being carried out at the National Institute of Advanced Studies. What will also not change, we hope, is the continued support that we have been receiving from our readers in the form of valuable suggestions and comments on how we can improve NIAS NEWS further – please do keep writing in!

**Anindya Sinha, Hamsa Kalyani and
A Devaraju,**
Editors, January 2001



From the Director's Desk



As the first new year in the new millennium is on us, it is time to look at where the Institute stands and where we want to go. As I have written in these columns before, NIAS has two main functions. One is to carry out multidisciplinary research, and the other to disseminate the findings of such research through courses and publications to help create a new leadership in the country.

As you will see from this Newsletter our interactions with different sectors of society and government, through courses and policy studies, are now very vigorous. We have been busy during the last quarter with a course for ISRO Officers, consultations on a project related to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), a Poster Workshop on *Violence against Women*, and the First Regional Awareness Workshop on the Global Environment Facility. We have also had an International Conference on *Knowledge and East-West Transitions*, and opened a NIAS Forum on Consciousness. Many of us have been deeply involved in advising and consultancy on various policy-related issues in such subjects as energy, environment, gender and governance, and international affairs and national security.

On research there are difficulties. Resources are always hard to get, and with faculty at sub-critical levels in any given discipline we have to depend on extensive collaboration with other like-minded scholars in India and elsewhere. With the new year we would have to give much greater attention to how we can do this better – at the same time preserving the unique character of this Institute and its

philosophy. Even now we do have several programmes, some doing very well; but any suggestions that readers may have on how the complex problems facing multidisciplinary research can be tackled will be most welcome.

We are most grateful to Mr. Kanwal Grover of Hindustan Export & Import Corporation Private Limited for his continued generous support to the NIAS Library.

I take this opportunity to wish all of you a very happy new year.

R Narasimha



Research Programmes

The principal areas of research that faculty members of the Institute are currently involved in include consciousness studies, conservation biology, energy policy and renewable energy, environmental toxicology, epigraphy, fluid dynamics and atmospheric sciences, gender studies, history and philosophy of science, international and strategic studies, mathematical modelling in non-traditional areas, primate behaviour and cognition, science and technology policy, sociology and social anthropology, and theory of numbers.

More specifically, the **Gender Studies Unit** has been conducting a Poverty Assessment Study on National Highway 4, which attempts to highlight the probable consequences of widening the Tumkur-Haveri section of this highway. The thrust is to understand and measure the impact (in terms of both monetary and non-monetary benefits) on the economically and socially



under-privileged sections of the population residing in this area. In this connection, two reports on Poverty Assessment (socio-cultural) and Poverty Impact (economic) have been submitted to the National Highway Authority of India, Ministry of Surface Transport, Government of India.

The Gender Studies Unit is continuing its evaluation of the "Kannada Nadu Sakshara Nadu (KNSN)" project. Under its aegis, the reports for three districts, Koppal, Mysore and Chitradurga have been finalised and submitted to the Directorate of Mass Education, Bangalore.

The **International and Strategic Studies Unit** made a second presentation to the Board of Research in Nuclear Sciences, Department of Atomic Energy, during November 2000 on the project "**Dimensions of nuclear deterrence in the Indian context**". The research work for this project is under progress. Prof S Rajagopal visited different research institutions and universities in France and UK as well as the International Atomic Energy Agency, Austria, to discuss with experts and gather their views regarding the project.

Two projects, entitled "**South Asian women in international security: Building co-operative networks**" and "**An integrated study of the technical and security aspects of selected nuclear treaties, conventions and agreements**", which were also being conducted by the **International and Strategic Studies Unit**, have now been concluded and their final reports are under preparation.

In the second phase of the project, entitled "**Setting up of digital archives for the digital preservation of manuscripts, paintings and drawings**", being run in collaboration by the **Philosophy of Science Unit** and the

Mathematical Modelling Unit, the appointed staff of the Salarjung Museum in Hyderabad and the Sri Chandrasekharendra University Library in Kanchipuram underwent in-house training, led by the project team from NIAS. The training was designed for the initiation of digital archiving in the respective institutions using the digital technology supplied by the project. In collaboration with these institutions and during the training courses, two CDs were written containing the digital images of a selected number of manuscripts and paintings from both these institutions. For more details, please contact Sangeetha Menon (smenon@nias.iisc.ernet.in).



Publications

NIAS PUBLICATIONS

*Copies of the below-mentioned NIAS publication can be purchased from the Institute. Please contact the **Controller, NIAS**, for more details.*

I. NIAS REPORTS

R4-00 An Indo-US programme on electric power technology assessment

S Rajagopal

International and Strategic Studies Unit

R5-00 Sankalpagala samarasa: Lingabheda mattu adhikara [Kannada]

(Blending the concerns: Gender and governance)

N Shantha Mohan, Asha Ramesh and Piush Antony

Gender Studies Unit

R6-00 Streeyara melina himse: Ondu samaalochane [Kannada] (Stakeholders address violence: Violence against women)

N Shantha Mohan, B K Anitha and C Srinath

Gender Studies Unit



BOOKS

Raj, Baldev, Rajagopalan, C and Sundaram, C V 2000. *Where gods come alive: A monograph on the bronze icons of south India*. Vigyan Prasar, New Delhi.

Srinivas, P, Shetty, P K and Nagaraju, M R 2000. *Kaliyuvikeya santosha*. A Kannada translation of the book, *Joy of Learning* (published by Center for Environmental Education, Ahmedabad, 2000). Young Men's Christian Association, Bangalore.

PAPERS

Narasimha, R, (Guest Editor, Special Section) Public Access to Indian Geographical Data. *Current Science* 79: 450-503.

Narasimha, R, (Guest Editor, Special Section) Instabilities, transitions and turbulence. *Current Science* 79: 725-883.

Shetty, P K, Mitra, J, Murthy, N B K., Namitha, K K, Savitha, K N and Raghu, K 2000. Biodegradation of cyclodiene insecticide endosulfan by *Mucor thermo-hyalospora* MTCC 1384. *Current Science* 79: 101-103.

ARTICLES

Devaraju, A. Making them feel the world (on a social service organisation in Bangalore called Mitra Jyothi). *The Hindu* (MetroPlus section), October 30

Devaraju, A. Consulting him is an education in itself (on Dr A Narasimham, a well-known homeopath in Bangalore). *The Hindu* (MetroPlus section), December 4

Madhusudan, M D. Can the market save endangered species? *The Economic Times*, October 17

Madhusudan, M D. Fading flora, vanishing fauna. *The Hindu*, December 10

Vasavi, A R. Undoing ills to reclaim the hills. *Deccan Herald*, December 24



Commentary

A FEW MORE QUESTIONS ABOUT 'CONSCIOUSNESS'

Sangeetha Menon

Philosophy of Science Unit

(This essay is the first version of a lecture given at the First National Conference on "Scientific and Philosophical Studies on Consciousness" held at NIAS in February 1999)

Before any analyst come two difficulties in conceptualising 'consciousness'. The immediate problem would be to limit and specify conscious functions, whether perceptual, emotional or cognitive, and to lodge 'consciousness' in respective meanings. To maintain these specific meanings in constructing the theory and thereafter to follow uniformities would be the second problem. At both levels the casualty is the 'conscious experience'.



Reductive approaches, the class in which I will include all those attempts that trace the 'origin' or 'locus' or 'correlate' of a [conscious] function, begin with something given and proceed to map it according to the prescribed theory or experimental parameters. In order to facilitate an easier start discrete functions are taken into account, and also which are segregated by their nature. Hence the discussions on 'synesthesia', 'blind vision', 'implicit cognition', etc. But are we concerned only with these levels of experience when we talk about 'consciousness'? Definitely not!

In a writing of his Ken Wilber takes our attention to a totally different dimension of experience. He talks about appreciation of any art form as a transpersonal enterprise. (Though this has been indirectly said in much of the classical Indian mystic literature, the holonic interpretation which Wilber gives for art appreciation is novel.) This is something simply stated, we might think, at first. But this issue brings to the forefront something which has been forgotten or often neglected in conventional ways of understanding a phenomenon. Imaginations which underlie metaphorical usages evince and thereby can explain the object of experience in different ways such that the explanation itself can influence and lead to experience of the same object in a different level or intensify the original experience.

The main feature of such approaches is that they motivate us to create new and varied meanings for the same object, the object being redefined everytime by the experiencer. A non-reductionistic approach can at the most be a challenge for reductionistic approaches to search for alternate methodologies, but cannot undermine or substitute for them, for the very reason that we are not interested in

repeating the ancient myth of chicken and egg.

The emerging forum is for using alternate methodologies that are unconventional and non-standardised and are open to different levels and kinds of experiences both given and emerging. The experience of having an 'experience' otherwise ends in the categorical translation ('reduction' would be appropriate) of an experience to a theory which almost shrinks the experience into a formula. I would like to encourage, when we discuss about understanding the 'origin' and 'evolution' of consciousness, that we consider a 'non-causal causality' (of the cause not being a prior phenomenon modified or evolved to give rise to the result) of an initial experience leading to further experiences. It will not be a formulating of the experience in any cognitive sense but a redefining of it every time, where we could talk not about better definitions or theories but various definitions having their own intrinsic standards.

THE 'WHAT' AND 'WHERE' OF CONSCIOUSNESS

Where is consciousness? The question is definitely meaningful if and only if it is juxtaposed with another question, 'who is asking?', and the answer might enlighten both the intentional presence and non-intentional history of consciousness, the 'consciousness' of the questioner.

It might be argued that questions about consciousness across disciplines do not suggest the specificity of the problem addressed. It is precisely this argument I want to use as the preface before I attempt to ask a few more questions.

There could be two kinds of questions, though the structure and 'appearance' of



these questions look the same: The first kind is those which address the specific nature/s and function/s of consciousness restricting to theories or experiments proved/agreed upon. The second kind address to the same issues based on experiential possibilities. It is not that the second kind is not structured by theories/experiments. The difference is that it takes a non-linear path of looking into the possibility of having new experiences from the vantage of those already given, and also integrating the given into new experiences.

If we accept the complexity of consciousness then we need to ask both kinds of questions: to go from fewer specifics (nature/function) to more specifics, to imagine and confirm imaginations into attainable and universal realities and ways of living.

Should we proceed from the 'what' of consciousness, or the 'where' of consciousness? I am not sure which question precedes which. Unless I determine the 'what' of something the 'where' of it cannot be traced and revisited. Nevertheless if the 'where' of something is not found, how could the 'what' of it be verified. This position leads to circularity. But to posit this circularity here is not to say that any attempt to understand 'consciousness' is futile or incomplete. The evading nature of the problem suggests that there needs to be a precise starting point 'deep' enough to take the unexpected complexities and contradictions which could be presented in due course of the inquiry.

WHO IS CONSCIOUS?

Generally metaphysical positions consider 'transcendence' as the defining characteristic of that which beholds

ordinary experiences and is therefore 'away' from them. Though 'transcendence' is a necessary characteristic for my self to integrate ordinary experiences into a larger scheme of my existence, it doesn't become a hierarchically or linearly attainable state. It is unattainable if it is 'something-which-is-already-I-am'. Also because any state which could be attained in the aftermath to the completion of certain pre-requisites could also be feared to slip away. Therefore the transcendental nature of my self and the ordinariness of my perceptual/cognitive experiences do not become the defining characteristic of my I-ness or what I am ontologically. They are only descriptions to parade between different phenomenological manifestations of my Self.

From the standpoint of the continuing I-ness I correlate with my experiences. And from the standpoint of me as having varied conscious experiences I integrate them. But my Pure I-ness is not defined by the presence or absence of either of the acts, since both the choices spring from my ontological state of Pure I-ness. Pure I-ness has the ontological primacy. But it is non-opposed to the experiential I.

Experience is the prime category of understanding. The questions asked, analysis outlined, distinctions made, relations distinguished and identities sought are all on the basis of the 'mind' of the person who does the thinking and makes the inquiry. Hence the question 'why am I conscious?' is discussed to contextualise all his questions in a larger framework of two primary questions: 'what am I from what standpoint?' and 'who is asking?'. The factorisation which is unique in this methodology is that of the questioner, the knower, the experiencer, and the me-in-the-world.



Two questions visit us frequently when we look into the problem of consciousness. The first question is "what is consciousness from what standpoint?", and the second "who is asking?". The first question emphasises the category of definition, and the second factorises the analyst not only as a thinker but also as a participant in the understanding of 'consciousness'.

CONCLUSION

The complexity of 'consciousness' is such that every factor employed in the understanding of the phenomenon opens to further leads in defining it. The mystery of consciousness is that there is a circular way of an experiencer, 'the conscious being' integrating the knowledge about itself into its beingness.

There is a tension between 'the experiencer' and 'the experienced' which is not only in a theoretical level but also in an ontological level. And it is this tension which makes 'consciousness' a subject for self-exploration.

DOCTORAL PROGRAMME IN NIAS

NIAS is a unique institution that conducts advanced research in multidisciplinary areas that bridge the gap between the natural sciences, technology and the social sciences. Complementing its research programmes, NIAS also offers courses in different areas of research, development and policy for different groups of professionals including teachers, bureaucrats, and executives.

One constraint that NIAS has functioned under so far has been the lack of a doctoral programme whereby young students are trained in the research areas that the

Institute has traditionally been interested in. There is, however, an urgent need for such a programme for two principal reasons. First, the unique multidisciplinary academic culture that NIAS has so carefully been building up over the past years has to be nurtured and not allowed to dissipate with the passage of time. This would require that young, talented, and committed students are identified and absorbed into the organisation — they would then serve as torchbearers into the future. Second, much of the research being conducted in the Institute, being of an interdisciplinary nature, requires cooperation between a number of specialists. Large groups such as these would definitely benefit from young researchers of different disciplines who can actively contribute to the progress of the group in their respective areas of expertise.

It must also be noted that there has been, in recent times, increasing awareness and interest in issues relating to the interfaces between the natural sciences, technology and the social sciences among young Indian graduate students. Many of them, in fact, are becoming increasingly attracted to pursuing a research career in these interdisciplinary areas. Very few opportunities, however, exist for such students, who have dared to think differently, to pursue a career of their choice within the country. In collaboration with MAHE, an innovative leader among institutions imparting higher education in the basic and applied sciences in the country, NIAS has, therefore, begun a doctoral programme that would specifically award doctoral degrees to students interested to pursue independent research in the areas that NIAS specialises in. For more information, please contact Anindya Sinha (asinha@nias.iisc.ernet.in).

Anindya Sinha



New Faces in NIAS



Suri Venkatachalam

Dr Suri Venkatachalam, who holds a PhD in Physics from the Indian Institute of Science, Bangalore, has joined the Mathematical Modelling Unit of the Institute as Adjunct Associate Fellow from October 2000. Earlier, he was Burroughs-Wellcome post-doctoral researcher at the Department of Physics, University of California, San Diego, USA, and later at the Centre for Ecological Sciences at the Indian Institute of Science, Bangalore. He is currently one of the Directors in Metahelix Lifesciences Pvt Ltd, a privately-held startup company in the area of life science informatics.

Dr Venkatachalam's primary research interests lie in understanding the structure, dynamics and organisation of complex adaptive systems with a special focus on social and biological systems. More specifically, he has worked and intends to continue his research in the areas of computational neuroscience, modelling and simulation of social dynamics in primate societies, analysis of macro-ecological patterns, sequence analysis in genomics and proteomics, and in the modelling of reactions networks and simulations of whole cell dynamics.



Distinctions for NIAS Faculty

Dilip Ahuja

Member of the Steering Group for Environmental Assessment of Power Sector Reform by the Government of Karnataka.

R Narasimha

Member, Editorial Board, *India's National Security Annual Review*

P K Shetty

Invited to chair (along with B S Ramesh) the session on Heavy Metal Pollution, Pesticide Residues and Health, and Treatment of Industrial Effluents using Indigenous Sources at the Second International Conference on Environment and Health, held at Bangalore, December 4-6, 2000.

Anindya Sinha

Member, Editorial Board, *Current Science*, Indian Academy of Sciences, Bangalore.

THESES GUIDED BY NIAS FACULTY**P K Shetty**

P K Shetty guided the dissertation work of Mr M G Anil Kumar and the thesis submitted to the Department of Environmental Science, Bangalore University, for the Master's degree in Environmental Science. The thesis is entitled "Pesticide-induced problems on a few biotic factors of paddy ecosystem – a case study in Raichur, Bellary and Mandya districts of Karnataka".



*Courses conducted by
NIAS Faculty*

Gender Studies Unit

The Unit conducted two days of gender training for 15 senior officers of the Indian Police Service at the Vertical Interaction Course on Gender Justice and Role of Police, organised by the National Institute of Public Cooperation and Child

Development (NIPCCD) in collaboration with Bureau of Police Research and Development, Bangalore, December 11-15.



P K Shetty

Taught a course on Ecological Preservation for the students taking up competitive exams at JSS Training Institute, Bangalore, on October 14.



Important Events

Complementing its research programmes, NIAS organises a variety of seminars, workshops, and academic courses each year. Some of the important events that were organised during the period from October to December 2000 included:

FIRST REGIONAL GEF AWARENESS WORKSHOP

October 18-19

The Global Environment Facility (GEF) is a multi-lateral financing mechanism to fund projects that address global environmental issues and those that normally do not get national, bilateral or international financing. A two-day workshop was organised at NIAS to create awareness about GEF policies and processes so as to facilitate the formulation of high quality project proposals for funding.

The Ministries of Finance, Environment and Forests of the Government of India and the United Nations Development Programme in New Delhi sponsored the Workshop. Over 75 participants attended the workshop from the states of Andhra Pradesh, Goa, Karnataka, Kerala, and Tamil Nadu representing state governments, scientific

institutions, NGOs and the private sector. Speakers included Professors Madhav Gadgil and Shekhar Singh, Dr Pradeep Monga of UNDP, Mr Ujjwal Chaudhuri of MOEF, and Mr V Balaji of Swaminathan Research Foundation. The workshop was well received; its background material and agenda formed the basis for subsequent regional workshops in Lucknow, Ahmedabad and Kolkata.

Dilip Ahuja

GUEST LECTURES ON PHILOSOPHY OF SCIENCE

October 26-27

In collaboration with the Indian Council of Philosophical Research, the Philosophy of Science Unit organised a guest lecture program by Prof Evandro Agazzi, Professor of Philosophy, University of Genoa, Italy. He is currently National Lecturer 2000-2001 of the Indian Council of Philosophical Research, New Delhi. Apart from a discussion meeting with the IAS faculty on selected themes, including scientific objectivity, philosophical realism and scientific realism, the role of intellectual intuition in philosophy and science, neutrality of science, ethics of science, freedom and responsibility of science, and the concept of person in bioethics, Prof Agazzi gave two lectures on "The reality of unobservables" and "Science and values".

Sangeetha Menon

SECOND IAS COURSE FOR ISRO OFFICERS

November 6-11

The Second ISRO Course for the senior engineers and scientists of the Indian Space



Research Organisation was held on the theme, Indian Space Enterprise: Promoting Development in a Changing Economy. As before, the course was directed towards a group of 29 officers from ISRO who have been identified as constituting potentially its future leadership. The purpose of the course was to offer a view of the broader horizons necessary for the establishment of goals for the Indian space program in the 21st century.

Dr K Kasturirangan, Chairman, ISRO, inaugurated the course. As is typical for ISRO courses, the lectures included were from a variety of disciplines including science and technology, literature and the arts, and media. Speakers included Dr Anil Kakodkar and Prof Sharat Chandra, Lt Gen Sundaram and Dr V Siddhartha, Drs J P Singh and G K Jayaram, Mr Rahul Matthan, Mr Kiran Karnik and Prof U R Ananthamurthy. The highlight of the course for many of the participants were informal after-dinner discussions with Prof Satish Dhawan, the first Chairman of ISRO and Prof N Kumar, Director, Raman Research Institute. Dr Raja Ramanna delivered the valedictory address.

**M G Narasimhan
Dilip Ahuja**

INTERNATIONAL CONFERENCE ON KNOWLEDGE AND EAST-WEST TRANSITIONS

December 11-14

This international conference, attended by 54 participants – mainly historians of science and sociologists – from various Asian and European countries, focussed on how knowledge transitions have taken place in the past, largely from Asia to Europe, and what lessons could be learnt

from it today to build up an authentic knowledge base.

Most papers traced the priority of certain disciplines in science and technology to the east and established its strong influence, in the past, on the subsequent development of their ideas in the west. The reasons for poor advancement of the traditional knowledge base that was widely developed in many Asian societies, too, came under deliberation. Most speakers emphasised the need for scientists to be actively involved in establishing links with people in order to understand and disseminate the knowledge that is resident with many traditions. Finally, the problems of incompatibility of the foundations of knowledge in the various systems and the ways of merging different knowledge systems were discussed at the meeting.

The need for creating the necessary space for alternate science and technology to meet the needs of many indigenous people, while tackling the problems of pollution and resource depletion – questionable signs of modernity and progress, was considered a must for the future.

Anindya Sinha

CONSULTATION ON THE PROJECT RELATING TO CEDAW

December 27-29

A consultation on the baseline reports of the facilitating project related to CEDAW in India was organised by the Gender Studies Unit at NIAS. The particular reports that were discussed include those on women and political participation, women in armed conflict and marriage rights of women.

N Shantha Mohan

POSTER WORKSHOP ON "VIOLENCE AGAINST WOMEN"



December 30-31

A poster workshop on the theme of "Violence against women" was organised by the Gender Studies Unit to evolve posters on the theme through a participatory process involving community members, project partners of the Unit and artists.

The partner organisations and the community, in consultation, visualised the forms of violence that have already been identified through focus group discussions held at the community level. The artists present developed these into poster forms, which received feedback of the participants to be incorporated before finalising the visual display. The objective of developing these posters is to create more awareness amongst the community and the enforcement agencies, so that, in partnership, strategies can be evolved to check violence against women.

N Shantha Mohan

CONSCIOUSNESS DISCUSSION FORUM

The Philosophy of Science Unit, in an effort to increase its activities in consciousness studies and to draw upon other existing sources of knowledge and interest in this area, has initiated a Consciousness Discussion Forum, which had its first meeting on December 1. The theme chosen for discussion was "Definitions of consciousness". Prof Srinivasa Rao, retired Professor of Philosophy, Bangalore University, made the opening statements on the theme.

The Forum will meet once in two months. Following the exchange of ideas in the first

meeting, an e-group on Consciousness was formed. Those interested to join this discussion forum can either log on to www.egroups.com/groups/NIAS-forum-on-CONSCIOUSNESS/ and register themselves or subscribe to the group by sending an email to NIAS-forum-on-CONSCIOUSNESS_subscribe@egroups.com. For more details, please contact Sangeetha Menon (smenon@nias.iisc.ernet.in).



Associates' Programme

*The Institute maintains a strong outreach with its Associates Programme, organised by **P K Shetty**. The Associates of the Institute include prominent personalities from widely different backgrounds in the media, arts, policy-making and academia. Associates are invited to a monthly evening lecture series and other important events, and constitute a strong base of ongoing outside support and interactions for the Institute.*

The Associates' Programmes during the period from October to December 2000 included the following events:

- | | |
|------------|--|
| October 27 | Science and values
<i>Evandro Agazzi</i>
Department of Philosophy
University of Genoa
Genoa, Italy |
| November 8 | A recital of Carnatic classical music on the veena
<i>D Balakrishna</i> |

Sri Balakrishna, son and disciple of the late Padmabhushan Dr Doraiswamy Iyengar, is one of the leading vainikas of the Mysore

style. He has performed with his father, and given solo concerts as well as duet performances with violin and sarod artists throughout the country. He has been honoured by the Madras Music Academy, Bangalore Gayana Samaja and other institutions.

December 12 This moment has twenty-one days: An exhibition of photographs

V J Modi

The University of British Columbia

Vancouver, Canada

Dr V J Modi, a distinguished aerospace scientist, is also a renowned photographer who has exhibited around the world, including at the Nikon Centre and the Tokyo Institute of Photography in Japan. He is a former recipient of US President Eisenhower's Award for using photography to promote international understanding. This particular exhibition is based on photographs taken over an area of no more than 2 square kilometre around Karla near Lonavala, Maharashtra, during a period of 21 days that Dr Modi spent with the local rural community in 1998.



Wednesday Discussion Meetings

*The members of the Institute meet every Wednesday morning (and rarely on other mornings too!) for informal academic discussions after a talk delivered by a member of the faculty. These Wednesday meetings, organised by **Sangeetha Menon**, also serve as a forum for invited guest speakers to deliver a lecture on a subject of their choice. The discussions then continue over the high tea that follow these talks!*



The Wednesday Discussion Meetings during the period from October to December 2000 have included:

October 4 Literacy Completion Campaign - A case of Koppal district

N Sudhamani

November 24 How America elects its presidents – Part II

Prabhakar Vaidya

December 6 Open access publishing

Hamsa Kalyani

The **guest lectures** at the Wednesday Discussion Meetings during this period included:

October 30 Can mind-matter synthesis be achieved by 'generalised' Quantum Information Dynamics?

M K Samal

S N Bose National Center for Basic Sciences
Calcutta

October 11 Experiments with Sanskrit phonetics

M A Lakshmithathachar
Academy of Sanskrit Research, Melkote

November 15 Postmodernist views on science

Radhakrishna

Department of Applied Physics
Stanford University
Stanford, USA



The NIAS Literary Forum has been established in the Institute to pursue and conduct literary activities such as play reading, reading of poetry (one's own or others'), and the reading of short stories. Currently, this forum meets on one Wednesday every month. For more details about its activities, please contact
M G Narasimhan

Sangeetha Menon read out a short story entitled "The Farewell Party", authored by Anita Desai on October 25, while on December 27, C V Sundaram presented a Reading from "Dialogues with the Guru" under the aegis of the NIAS Literary Forum.

SPECIAL PROGRAMMES

There was one discussion meeting and four special public lectures organised at the Institute during the period from October to December 2000:

Discussion meeting

November 29 *Roy Bhasker*
Centre for Critical Realism,
London
And Linacre College,
Oxford, UK

Public lectures

October 19 Electronic publishing and
telecommunications –
Impacts on the global
science enterprise

Irving A Lerch
Director of International
Affairs
American Physical Society

November 15 Dynamics of self transformation

Pandit Rajmani Tigunait
Himalayan International
Institute of Yoga Science
and Philosophy
Pennsylvania, USA

December 4 Energy and the challenges of sustainability

J Gururaja
Department of Economic
and Social Affairs
UN Headquarters
New York, USA

December 6 Solar fans and solar energy

Roland Winston
University of Chicago
Chicago, USA



Meetings attended by NIAS Faculty

Dilip Ahuja

Attended the Brainstorming Workshop on the Development of a Strategy and Action Plan for the Capacity Development Initiative, Global Environment Facility, Washington DC, USA, October 10-12.

Arvind Kumar

Participated in the International Conference on Asia -Pacific and the Global Order, organised by the Indian Council of Social Science Research, New Delhi, October 2-4.

Participated in a seminar on "Indian Ocean", organised by the Asia Centre, Bangalore, October 23.

Participated in the National Seminar on Global Positioning Systems and its Applications, organised by the Aeronautical



R Narasimha

Delivered the Presidential address on "Order and chaos in monsoon rainfall" at the ISMMACS Annual Conference on Mathematical Modelling and Computer Simulation (Environmental Applications), Nagpur, October 23.

Delivered a talk entitled "Evolution of India's Nuclear Policy", XIII Amaldi Conference on Problems of Global Security, Accademia Nazionale dei Lincei, Rome, November 30.

Delivered the Inaugural address at the IUTAM International Symposium on Designing for Quietness, Bangalore, December 12.

Delivered the 22nd Sir Rajendra Nath Mookerjee Memorial Lecture entitled "Science and Technology in East and West", the 15th Indian Engineering Congress, Hyderabad, December 19.

Delivered the Inaugural address at the Indian Conference on Computer Vision, Graphics and Image Processing 2000, Bangalore, December 20.

S Rajagopal

Delivered lectures on the subject of 'codes, standards, regulations and quality assurance in the design of nuclear power plants' for the engineers and scientists of the Atomic Energy Organisation of Iran at a course organised by the International Atomic Energy Agency, Vienna, Austria, at Teheran, Iran, September 9-20.

Visited several research institutions in India and France to discuss and assess their quality of performance as a member of the

committee conducting a performance audit of various projects funded by the Indo-French Centre for the Promotion of Advanced Research (IFCAR), July 1-12.

P K Shetty

Participated and contributed to a session in the Second International Conference on Environment and Health, held at Bangalore, December 4-6.

Prabhakar Vaidya

Attended the ISMMACS Annual Conference 2000 at Nagpur, where he delivered the valedictory address on "The extended differential equations and their applications to fundamental problems of mathematical modelling", based on work done by Prabhakar Vaidya, Savita Angadi, Pierre Mazzega and R Narasimha.

A R Vasavi

Delivered a talk entitled "Basic education, child citizens and the republic" at the National Seminar on Developmental Reforms for a Resurgent Republic, Indian Institute of Management, Bangalore, December 8.

Participated as a panel discussant at the National Conference on Rebuilding Schools for Quality, Bangalore, December 19.

VISITORS TO THE INSTITUTE

The participants of the 25th Professional Course for Foreign Diplomats, organised by the Foreign Service Institute, Ministry of External Affairs, New Delhi, visited NIAS on October 17. The diplomats included representatives from Bhutan, Ecuador, Ethiopia, Ghana, Guyana, Hungary, Jamaica, Lithuania, Micronesia, Mongolia, Myanmar, Nepal, Palestine, Peru, Poland, South Africa, Sri Lanka, St Lucia, Thailand, Turkmenistan, Uzbekistan, Vietnam and

Zimbabwe. During this visit, different faculty members of NIAS briefed the diplomats about the academic activities of the Institute, while the diplomats introduced themselves and briefly discussed their work and interests.



Prof Emil Spjotvoll, Rector, Norwegian University of Science and Technology visited the Institute November 30 and held detailed academic discussions with the faculty of the Institute. He also discussed the possibility of future academic collaborations between the two institutions.

Prof Martin J Bunch, MacMaster University, Ontario, Canada, visited the Environmental Studies Unit along with Dr Rajashekara Murthy, Senior Research Scientist, National Water Research Institute, Ontario, Canada, on December 6.

Fifteen officers of the Tata Administrative Service, who had just completed their 18-month hands-on training, visited the Institute on December 8. They were briefed on the policies, objectives and the research programmes of NIAS by some of the faculty members.

There were several visitors to the International and Strategic Studies Unit in the last three months. Dr Irving Lerch, Director of International Affairs, American Physical Society, was here on October 19 and delivered a lecture on "Electronic publishing and telecommunications: Impacts on the global science enterprise". On December 4, Dr J Gururaja of the Department of Economic and Social Affairs, UN Headquarters, New York, visited the Unit and gave a lecture on "Energy and the challenges of sustainability". The other visitors were Prof Roland Winston of the University of Chicago and Mr Chris Gagne of the Stimson Centre, USA, who visited the Unit on December 6 and 10 respectively.



Upcoming Events

The XV NIAS Course for Senior Executives will be held for a duration of two weeks between 8 to 21 January, 2001. The contact person for this event is P K Shetty (pks@nias.iisc.ernet.in).



An Appeal for Funds

Building and sustaining the intellectual and social foundations of a transforming civilisation

About NIAS

India has several fine institutions, in the natural sciences, in engineering and technology, and in the social sciences. But these institutions harbour different cultures, and, indeed, are often worlds unto themselves. And there are too few bridges between and among them. The most interesting and challenging problems of the coming century probably lie in the interfaces between these cultures and disciplines – interfaces that are studied far too little in our country. It is in these no-man's lands that I believe the future of NIAS lies – in subjects that do not belong to the tidy little pigeon holes that the current knowledge system of the world has created – artificially, and for technical or bureaucratic convenience, not because that is the way the world operates. How to build these bridges, how to bring different intellectual and social communities together, and how to look at the future of our nation and the world with the greatest possible intellectual integrity as well as public and social confidence – it is the

pursuit of these aims that NIAS is taking up as its mission.



If we have to achieve these goals it is necessary for us to bring together the best in the natural and social sciences. The late JRD Tata, who conceived of this institution, saw the great need in India to form a new kind of leader – he envisioned an institution that could harness creativity and commitment, mathematics and management. With my distinguished colleagues on the faculty of NIAS, and the eminent persons we count among our Associates, I am hopeful that we can carve a unique niche for ourselves in the public and intellectual life of this country and the world, moving in the direction that our founders so clearly saw as essential for the future health of our nation.

The appeal

The pursuit of our goals demands a measure of autonomy. We need financial support from diverse sources to ensure and sustain that autonomy. The early generosity of the House of Tatas and the Government of Karnataka has given us some splendid facilities. We now need to build on this foundation, diversify our sources of income and carry out programmes that are sensitive, at one and the same time, to public and national needs as well as to the demands of uncompromising intellectual rigour.

We solicit your contributions to help us to realise our goals. Bequests can be made to the NIAS Endowment Fund in the manner described below.

R Narasimha
Director, NIAS, and
Chairman, NIAS Endowment Committee

How to make Contributions to the NIAS Endowment Fund

All contributions made to NIAS or its Endowment Fund are tax-deductible under Section 35, Subsections (i) and (ii) of the Indian Income Tax Act of 1961.

NIAS is registered under the Foreign Contributions (Regulation) Act, 1976, and is entitled to receive contributions from abroad directly (Register number 094420614, Account No. 0100005000200, State Bank of India, Indian Institute of Science, Bangalore 560 012). Contributions must be made by cheques drawn in favour of the National Institute of Advanced Studies; the cheques may be sent directly to NIAS, or credited to the State Bank of India account mentioned above with independent intimation to NIAS.

The Institute welcomes contributions of any amount. Typical sums and the purposes for which they can be used and the forms in which acknowledgements can be made are shown below.

1. *Books*
Can be donated as books or as funds to be utilised for purchase of books
Every book donated or purchased out of donation funds will carry a label indicating the name of the donor
2. *Objects of art* (paintings, sculpture etc.)
Rs 10,000/ and above
Will carry a small plaque indicating the name of the donor
3. *Annual Endowed Lecture* (speaker residing in India)
Rs 2.5 lakhs or US \$ 6,000
May be named with concurrence of donor



4. *New Office Space*
Rs 5 lakhs per room
Room will carry a plaque indicating the name of the donor
5. *Visiting Professor* (from India or abroad)
Rs 10 lakhs or US \$ 25,000
May be named with concurrence of donor
6. *Lecture Hall*
Rs 20 lakhs or US \$ 50,000
May be named with concurrence of donor
7. *East Wing, Main Building*
Rs 40 lakhs or US \$ 100,000
May be named with concurrence of donor
8. *West Wing, Main Building*
Rs 50 lakhs or US \$ 125,000
May be named with concurrence of donor
9. *Endowed Doctoral Scholarship*
Rs 10 lakhs or US \$ 25,000
May be named with concurrence of donor
10. *Endowed Fellowship*
Rs 30 lakhs or US \$ 70,000
May be named with concurrence of donor
11. *Endowed Professorship*
Rs 40 lakhs or US \$ 90,000
May be named with concurrence of donor
12. *Endowed Research Unit*
Rs 80 lakhs or US \$ 187,500
May be named with concurrence of donor



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The National Institute of Advanced Studies (NIAS) was conceived and initiated by the late Mr. J R D Tata, who sought to create an institution which would conduct advanced research in multidisciplinary areas, and also serve as a forum to bring together administrators and managers from industry and government, leaders in public affairs, eminent individuals in different walks of life, and the academic community in the natural and social sciences. The intention has thus been to nurture a broad base of scholars, managers and leaders who may contribute to tackling the complex problems facing contemporary India in a more informed and effective manner.

The philosophy underlying NIAS is given shape by its research teams, which are drawn from a variety of disciplines in the natural and social sciences. The Institute is unique in its integrated approach to the study of intersections between science and technology and social issues.



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