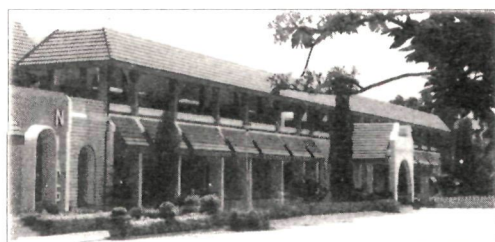


NIAS NEWS



Vol 11 No 1

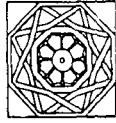
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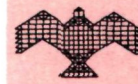
Editors' Note

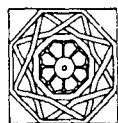
This issue of NIAS NEWS marks the beginning of the eleventh year of publication of this newsletter, which began under the able stewardship of Major General M K Paul, our Controller. Over the years we have introduced various changes in its contents and format in an effort to make it more informative and interesting. This issue too is no exception. We have now begun to incorporate small abstracts and reviews of some of the lectures and other programmes organised by the Institute to give the readers an idea about the eclectic nature of the academic environment that NIAS has always represented. We have planned other innovative changes in the newsletter as well and hope to introduce them in the forthcoming issues of NIAS NEWS.

The basic aims and purpose of the newsletter, however, continue to remain the same – that of providing you glimpses of the activities being carried out at the Institute. 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!

Before we end, we would like to apologise for two inadvertent errors that had crept into our last issue – Vol 10, No 4, October 2001. On page 41, the Discussion Meeting on China and India in Contemporary Asia, jointly organised by the Woodrow Wilson International Center for Scholars, Confederation of Indian Industries and Asia Society, was held at Bangalore, not in New Delhi. On page 46, the name of the Consul General of the United States of America who visited our Institute was Mr Bernard J Alter, not Altex as mistakenly reported.

**Anindya Sinha, Hamsa Kalyani and
A Devaraju,**
Editors, January 2002





From the Director's Desk

On behalf of all of us at this Institute I have great pleasure in welcoming Prof M S Swaminathan FRS as Chairman of the Institute's Council of Management. Prof Swaminathan is known nationally and internationally as one of the chief architects of the Indian green revolution. He has been widely honoured for his leadership of the great scientific, technological and managerial effort that went into ensuring that this country produces enough food for itself. In recent decades he has turned his attention to a large number of other projects that have to do with rural development using science (and particularly in recent years Information Technology). It is a privilege for us to have him as the Chairman of our Council, and I look forward to working with him on the future of this Institute in coming years.

At the same time we bid farewell to Dr Jamshed J Bhabha who has been Chairman of the Council since 1994. Dr Bhabha has presided with distinction over the growth of this Institute in a critical period. He has always been most helpful and encouraging to us in our efforts, and I sincerely hope that the laying down of office as Chairman of the Council does not mean that he will not continue to be interested in the future of this Institute! Once again, on behalf of all of us here, I want to thank him for ensuring that the Institute has matured so well since its foundation.

I also want to thank Mr Ishaat Hussain who was Chairman of the Council for a short period between Dr Bhabha and Dr Swaminathan.

* * *

We had another busy quarter, among the highlights of which was the play *Copenhagen* enacted at this Institute in collaboration with the Indian Institute of Science Literature Society. The play is set around the episode involving the visit of the well-known German physicist Werner Heisenberg to his earlier mentor Niels Bohr in Nazi-occupied Denmark in the year 1941. The play was absorbing and was greatly appreciated by a packed house. (Incidentally the flexible seating arrangement in the JRD Tata Auditorium was a great advantage for the staging of this play, as the set was a very simple circular platform surrounded by the audience. In fact this was one occasion where part of the audience was seated on the dais!) A report on the play appears elsewhere in this issue.

We had our share of courses, including in particular one for the Indian Space Research Organization – the third time that we have arranged it – which went off very well indeed.

I want to take this opportunity to thank the Tata Education Trust for their continued support to this Institute and for their faith in the importance of our programmes. In particular I am grateful to Mr Ratan Tata, Mr R M Lala, Mr Xerxes Desai and Dr Bhabha for the personal interest they have taken in helping us on our finances.

R Narasimha



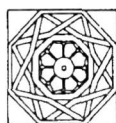
MEETING OF THE COUNCIL OF MANAGEMENT OF NIAS

The twenty-second meeting of the Council of Management and the eleventh Annual General Meeting of the Society of NIAS were held on May 30, 2001 at the Institute.

The twenty-third meeting of the Council of Management of NIAS was held on November 6, 2001, at the J R D Tata Memorial Auditorium of the Institute.

The meeting was attended by Mr Ishaat Hussain, Chairman, Mr R M Lala and Prof M S Swaminathan, Nominees of the Sir Dorabji Tata Trust, Mr Chiranjiv Singh, Nominee of the Government of Karnataka, and other members Dr K Kasturirangan, Mr N R Narayana Murthy, Prof Roddam Narasimha, Director of NIAS, and Maj Gen M K Paul (Retd), Secretary of the NIAS Council.

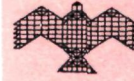
Prof M S Swaminathan, FRS, an internationally renowned agricultural scientist, was unanimously elected as the new Chairman of the Council of Management of the Society of NIAS.



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, communication and cognition, science and society, science and technology policy, sociology and social anthropology, and theory of numbers.



More specifically, the **Gender Studies Unit** has completed the evaluation of the Literacy Completion Campaign (LCC) in Karnataka, undertaken by the Unit. This study covered twenty-five of the twenty-seven districts of Karnataka with the exception of Bangalore Urban and ChamaraJanagar. The main objective of the study was to evaluate the levels of basic literacy skills attained by the participants in the literacy programme. It also evaluated the structures, organisations, mobilisation and motivation efforts, training and the systems of information flow for the effective implementation of the literacy campaign. In addition, this study proposed to suggest measures for sustainability of literacy skills among neo-literates. For this purpose, a sample of 25,000 neo-literates was drawn for Karnataka as a whole with 1,000 from each of the districts.

The study reveals that in terms of the basic literacy skills achieved by the respondents, their performance was better in arithmetic than in language. Again, in language, they were better in comprehension than in writing, while in arithmetic, they were more proficient in simple addition and subtraction over multiplication and division. Regarding their overall performance, around 30 percent and 52 percent of the respondents had scored more than 80 percent marks in language and arithmetic, respectively, and accordingly received the grade "excellent". Finally, on an average, women had performed better than men.

The evaluation reports of the twenty-five districts have been submitted to the

Directorate of Mass Education, Government of Karnataka, and to the respective Zilla Saksharata Samithis.

In connection with the project on Violence against Women, the Unit has developed posters with the active participation of both women and men. These district-specific posters, reflecting the forms of violence different communities would address for advocacy, were released in Chitradurga and Udupi districts on November 7 and November 23, respectively.

In Chitradurga district, the theme of the posters was Dowry. The participants included the president of the Zilla Panchayat, Deputy Commissioner, Superintendent of Police and Chief Executive Officer of the district. Community members released the posters at a programme organised in partnership with Grama, a local NGO, in which about 3000 people, both men and women, participated.

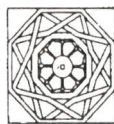
In Udupi district too the theme was Dowry, but in a form appealing for a raise in the age at which girls should be married. The participants included the members of Zilla Panchayat, Deputy Commissioner, Superintendent of Police and Chief Executive Officer of the district. About 500 people, both men and women, attended the programme. The posters were released by the Deputy Commissioner, Circle Inspector and a Zilla Panchayat member. In the absence of an NGO partner in the district, the Unit took the initiative to mobilise the community and organise the programme.

The International and Strategic Studies Unit has just completed a project on A Critical and Comprehensive Study of the Nature and Extent of State Responsibility Arising out of Nuclear Incidents/Accidents within National Boundaries and Beyond,

funded by the Board for Research in Nuclear Sciences (BNRS), Department of Atomic Energy, Mumbai.

The Unit has also just initiated the research work on the project on Prospects of Stability in a Nuclear Sub-Continent, partially funded by the United States Institute for Peace, USA.

The **Sociology and Social Anthropology Unit** has organised a consultation with state officials, members of NGOs, and academics who are working on issues related to elementary education in Karnataka. The consultation focussed on identifying trends in the new policies for promoting elementary education. The group decided to form an informal caucus in which different members would work on and present suggestions on elementary education policies to the State government.



Publications

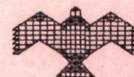
NIAS PUBLICATIONS

I. SPECIAL PUBLICATION

- | | |
|--------|--|
| 1-2001 | Discrimination and deprivation: Basic education among the poor in Jaipur <i>Local Education Report – Jaipur, Rajasthan</i> |
|--------|--|

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Narasimha, R. 2000. The environment in Indian thought In: *Proceedings of the Seminar on Environment in Purāṇas*. Bangalore: Dwaitavedādhyana Samshodha Pratishtanam. pp 1-4.



R Narasimha, R. 2001. Evolution of India's nuclear policy In: *the Proceedings of XIII International Amaldi Conference on Problems of Global Security* held during 30 November-2 December 2000. Rome: Accademia Nazionale Dei Lincei. pp 103-127

Narasimha, R. 2001. Sines in terse verse *Nature* **414**: 851

Rajagopal, S. 2001. Fissile Material Cut Off Treaty and options for India. In: *India's National Security Annual Review, 2001* (ed. Satish Kumar). New Delhi: Vikas Publishing House

Sarukkai, S. 2001. Translation and science. *Meta* 46(4): 646-663

Sarukkai, S. 2001. Mathematics, language and translation. *Meta* 46(4): 664-674

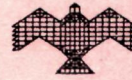
Shetty, P K. 2001. Questionable practices in agro-ecosystems in India. In: *Proceedings of the International Conference on Pesticides, Environment and Food Security*, Society of Pesticide Sciences (India), New Delhi. pp 21

Vasavi, A R. 2001. Narratives in the reconstitution of communities. In: *Communities and identities: contemporary discourses on culture and politics in India* (ed. Surinder Jodhka). New Delhi : Sage Publications. pp 126-159

ARTICLES

Kumar, A. 2001. Comments on "The Indian Response to Terror", *Southern Asia Internet Forum (SAIF) Dialogues*, maintained by the Henry L Stimson Center, Washington DC, USA, December 17 www.stimson.org

Sarukkai, S. 2001. The Gulbenkian prognosis. *Frontline*, November 9



REVIEW

Copenhagen revisited: the uncertainty principle as a metaphor for science and society in our nuclear age

Sharada Srinivasan

*This is a review of Micheal Fryan's critically acclaimed play **Copenhagen** staged at NIAS on 21 December 2001*

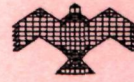
As part of the Associates' Program, NIAS was treated to an engrossing production of Micheal Fryan's Tony-award winning play *Copenhagen* (1998), a work as intellectually compelling as it is socially angst-ridden. *Copenhagen*, which has been hailed as one of the finest pieces of drama of recent years, is based on a mysterious visit made in 1941 in the middle of war by German physicist Werner Heisenberg, who was then heading the Nazi Third Reich's project to harness atomic energy, to Nazi-occupied Copenhagen to see his half-Jewish Danish mentor Niels Bohr (who had contributed towards the Allied war effort on the atom bomb by first writing to American President Roosevelt together with Einstein pointing out the destructive potential of the atom and the fears of the Nazis developing the bomb). A quarrel is thought to have ensued between the former close collaborators with the motives and goings on of the dangerous visit being shrouded in mystery. In the play, the exhumed ghosts of the two men and Bohr's wife Margarethe re-live the strained encounter, reminisce about their heady physics and debate the uncertainties concerning the motives of the visit and its future implications, against the background metaphor of the conundrums of the

revolutionary quantum mechanics that the two men had spearheaded with the Copenhagen Interpretation which encompassed Heisenberg's Uncertainty Principle, wave-particle duality and Bohr's Complementarity Principle. The uncertainty principle refers to the indeterminacy in simultaneously observing/measuring the position and momentum of a particle, while complementarity refers to the dual nature of subatomic entities like electrons and protons that behave as both waves and particles.

The three-character team rose admirably to the challenges of the complex play with Niels Bohr excellently enacted in a slightly cantankerous, disillusioned, yet paternal fashion by French actor-director Gerard Bayle, complemented by a diffident, troubled, yet eager, Heisenberg played by Gopal Krishnamurthy from Centre for Learning, Bangalore. A wary and ironical, yet civil, Margarethe Bohr enacted by Australian Merran Poplar, plays the key role of observer and influencing participant in the 'quantum collision' of human particles represented by Heisenberg and Bohr, and indeed in the play Heisenberg describes Margarethe as the nucleus, with Copenhagen as the atom and Bohr the electron. The minimalist circular stage chosen by the team set in the midst of the audience with just three chairs on which the actors kept moving positions was an effective way of conveying the way in which quantum mechanics seemed to have turned conventional notions of reality on its head. The play, itself akin to a thought experiment, also has the dead protagonists discussing the fabled paradox of Schroedinger's cat 'dead or alive' (where the imaginary cat, sealed inside a box with a radioactive mineral, manages to be both dead and alive at the same time) all of which mirrors the 'spookiness' inherent to

the physics of quantum mechanics. The play was abridged, although the audience seemed game for the full version, and while the edited version may have left out some of the finer points, it did manage to encapsulate most of the major social and scientific issues. It also captured the anguish behind the father-son relation between Bohr and Heisenberg with the latter substituting for the son that Bohr and Margarethe lost; this nevertheless seems to increase their despondency and disillusionment over his political affiliations to the Nazi regime. The interval proved to be an unnecessary diversion, since the length of the abridged play post-interval was not long enough to justify its insertion.

Why did Heisenberg come to Copenhagen and what did he say to Bohr – these tormenting questions are central to the play with his Uncertainty Principle becoming an apt metaphor for the historical uncertainty in pinpointing thoughts and motives, ambiguities and dilemmas, especially of Heisenberg's own life. As explained by Michael Fryan in his postscript, the question of why the Nazis did not develop the bomb is at the heart of the play. The play itself gives a less judgmental account of Heisenberg, than some commentators have, as a German nationalist with divided loyalties who sought, at least in his later life, to distance himself from Nazi excesses in the Holocaust and who left Bohr's institute in Danish hands in 1944 even when he had to arbitrate on a German proposal to strip its equipment after Bohr fled Copenhagen. Fryan's play takes into account one viewpoint that Heisenberg did not wholeheartedly pursue the German atom bomb project and indeed a meeting between Heisenberg and Albert Speer, the Nazi minister of armaments in 1942 shelved prospects of a German atom bomb. At the



same time Fryan veers to the explanation that the German bomb could not have been developed in any case because Heisenberg seems to have not hit upon the estimation of the rather small critical mass of fissile material that would have been needed to make a bomb from the reaction of fast neutrons in pure U235 which the scientists from Britain Peierls and Frisch had come up with. However, he concedes that this failure may have been influenced by a lack of enthusiasm on Heisenberg's part rather than inability, in contrast to the Jewish members working on the Los Alamos American bomb project who were motivated by the desperate traumas of the Holocaust and Jewish extermination at Nazi detention camps. Fryan, in his postscript, also points to the theory that Bohr's anger at Heisenberg over the 1941 visit may have been because he thought, mistakenly, that Heisenberg wished to invite him to join the German bomb programme; this would have been, in any case, too dangerous an idea for Heisenberg to pursue.

So what does Fryan's play, in the final analysis, make of Heisenberg's motives? Perhaps it was essentially to find out the extent to which the Allied bomb programme had advanced; and certainly, the play ends on the note that future generations had been saved (from the Nazi bomb) on account of the uncertainty on Heisenberg's part, whether on technical or moral grounds. The case that the uncertainty was on technical grounds, where Heisenberg did not actually believe that the bomb could be made, even less that the Allies would actually make or use it, seems to be suggested in transcripts of the surveillance tapes of the German scientists, including Heisenberg, who were interned in Britain after Germany lost the war; in one of these transcripts, he expresses genuine shock when the Allied atom bomb

was dropped on Hiroshima in 1945. But Fryan also delivers a didactic message through the voice of Heisenberg who asks in the play whether the Allied and German scientists could not join hands to prevent the unleashing of the destructive power of the atom? This, the play's Bohr cannot countenance given his mistrust of the Germans due to the terrible genocidal record of the Nazis against the Jews. Even more dramatic and controversial are the comments of Heisenberg's spirit to Bohr on the nuclear holocaust caused by the Allied bombing of the Japanese in Hiroshima in 1945 which led to their surrender: 'Did a single one of them (the physicists who built the Allied bomb) stop to think, even for one brief moment, about what they were doing? 'You used the bomb...'. At this, the ghosts of Bohr and Margarethe recoil in indignation at the accusation that Heisenberg, given what he represented, should take the moral high ground and try to make Bohr feel guilty.

Such finger pointing strikes an all too familiar chord and the staging of *Copenhagen* in these troubled times could not have been more well-timed. Fryan's Copenhagen metaphor resonates even today and is a stark reminder of the extent to which science impacts on society in the nuclear age and of the fear which has fuelled conflicts and arms races the world over. Sixty years later, far from future generations having been saved, the Cold War has left monumental stockpiles of nuclear arsenal in the hands of the US and Russia, and their fair share in other members of the nuclear club of France, Britain and China. These have contributed to the fears and insecurities of other sparring nations like India and Pakistan, which have seen fit to gatecrash into this exclusive and self-serving nuclear club, raising the stakes of war in the subcontinent. There are fears



of rogue nuclear states, and after the September 11th attacks on America, very real fears of terrorist groups such as the Bin Laden network getting hold of nuclear weapons. The blame game, where fear, remonstrations and demonisation of the other are essential components, keeps the war machine going in all conflicts, for example, in the Arab-Israeli conflict, and in tensions between India and Pakistan over Kashmir with ominous war clouds looming on the horizon today as never before. Terrorist groups pose a very grave threat to nuclear stability within the Indian subcontinent and within a volatile, military-governed Pakistan that has played with extremist fires. India seems to have been left, after the audacious attack masterminded by terrorists groups operating from Pakistan on the seat of Indian democracy on December 13th, with little option but to resort to brinkmanship, albeit with one eye conveniently kept on political and electoral expediency by some extreme right-wing saffron ideologues within the ruling combine. In another very contemporary issue, the play *Copenhagen* also questions the morality of 'collateral damage' through Heisenberg's remarks on the atom bomb dropped on Hiroshima by America and its Allies and his dismay at Oppenheimer's blasé comment that he regretted it was not used on the Germans. The American military bombing campaign in Afghanistan, for all its successes in overthrowing the oppressive religious fanaticism of the Taliban, has nevertheless led to many civilian deaths, not to mention the many thousands of refugees and victims of displacement and starvation (with even the BBC admitting that the civilian deaths exceeded those killed in New York and Washington). At the same time the terrorists who may have fled to Pakistan will escape being bombed with impunity due to Pakistan's indispensability as an ally to

Washington. I couldn't help making another surreal connection – that of the metaphor of Schroedinger's cat 'dead or alive' (where there is no way of knowing if the cat is dead or alive in its box until one looked inside). This is nowhere more apt than when applied to the situation of 'Osama bin Laden – dead or alive', as there seems to reportedly be no way of knowing whether Osama is dead or alive until he is found entombed in a bombed out cave. Finally, if there is a message in *Copenhagen*, especially for India and Pakistan at this juncture, it may well be that if there is a defining moment in time when one could pull back from the brink, future generations may well look back on it wistfully as an opportunity for peace which should have been seized – rather than as the point of no return towards war.



DOCTORAL PROGRAMME IN NIAS

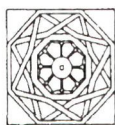
NIAS is a unique institution that conducts advanced research in multidisciplinary areas that bridge the gap between the natural sciences, technology and the social sciences. Complementing its research programmes, NIAS also offers courses in different areas of research, development and policy for different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

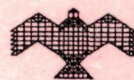
with the passage of time. This would require that young, talented, and committed students are identified and absorbed into the organisation — they would then serve as torchbearers into the future. Second, much of the research being conducted in the Institute, being of an interdisciplinary nature, requires 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. NIAS has thus begun a doctoral programme in collaboration with the Manipal Academy of Higher Education (MAHE), Manipal, an innovative leader among institutions imparting higher education in the basic and applied sciences in the country. This programme specifically involves the awarding of doctoral degrees by MAHE 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

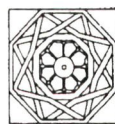


New Faces in NIAS



Sridhar Krishnaprasad Chari

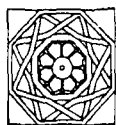
Sridhar Krishnaprasad Chari has joined the International and Strategic Studies Unit as a Research Associate, from October 2001. He has a Master's degree in International Relations, obtained with a Distinction, from the University of Leicester, UK, in 2000. Prior to joining NIAS, he was a Special Correspondent for the Indian Express covering aerospace and defence. His research interests include technological developments and the international system, aerospace, nuclear stability, the international political economy, and international economics. For his Master's thesis he had looked at the technologies associated with the so-called Revolution in Military Affairs with a view to evaluating patterns of technological diffusion among states and the effect upon the international system. He also spent a month at the School of Advanced International Studies (SAIS), Johns Hopkins University, Washington DC, USA, studying basic economics with a view to pursuing research in international political economy.



Distinctions for NIAS Faculty

K Ramachandra

Selected as a Fellow of the Board of Research in Nuclear Sciences (BRNS) during the period from August 16, 2001 to August 18, 2003



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 2001 included:

DISCUSSION MEETING ON "BLACK TUESDAY AND AFTER"

October 9

This was a faculty discussion meeting on the terrorist strikes in New York and Washington DC on 11 September 2001. S. Rajagopal started the meeting by asking the question why the United States chose Pakistan as its 'front-line ally' in its war against terrorism, despite the known support of the Pakistani regime to the Taliban, and despite offers of help from other countries in the region, including India. R. Narasimha, Dilip Ahuja, P G Vaidya and Sundar Sarukkai were among those who spoke on the occasion. The discussion touched upon several aspects of the attack and its aftermath, including the highly networked, well-planned, and essentially "asymmetric" approach that was adopted by the terrorist group, the warning signs that were not read for what they were, the complacency in the American domestic security set-up, the changes that the event had wrought in the international system in general and the region in particular, and how the under-current of worry that nuclear weapons in Pakistan's arsenal might fall into the hands of the terrorists could have influenced decision making.

Sridhar K Chari

CONSULTATIVE MEETING ON A WATER NETWORK IN KARNATAKA



October 29

The principal objective of this meeting was to explore the possibility of establishing a state-level Water Network in Karnataka. It was also considered important that various stakeholders in the sector come together to deliberate and interact on issues related to water in order to feed into policy and decision-making processes.

Approximately forty members, comprising natural and social scientists, technocrats, social activists, members of NGOs, women, and representatives of farmer communities, participated in the meeting. It was envisaged that the main objectives of the Water Network, once formed, would be to encourage interdisciplinary, integrated and holistic approaches to the water sector, facilitate the development of multi-stakeholder fora for the exchange of ideas, dialogue and dissemination of information, as well as advocate and lobby for policy change at various levels.

N Shantha Mohan

DISCUSSION MEETING ON ARCHIVING ANCIENT INDIAN MATHEMATICS

November 5

This discussion meeting was organised by and held at NIAS as a first step towards a project to be undertaken on Archiving Ancient Indian Mathematics. The meeting was attended by S G Dani, TIFR, Mumbai, S Balachandra Rao, National College, Bangalore, B V Subbarayappa, Institute of World Culture, Bangalore, Venkatesh Murthy, and several experts from NIAS

including R Narasimha, Raja Ramanna, B V Sreekantan, P G Vaidya, K Ramachandra, M G Narasimhan, Sundar Sarukkai and Sangeetha Menon.

R Narasimha spoke on the objectives of the project, B V Sreekantan on how the project has been visualised, Sangeetha Menon on the NIAS experience with the previous national projects on digital archiving and P G Vaidya on the NIAS project on image enhancement. All present at the meeting agreed on the importance of such a project and the pioneering efforts of NIAS in helping to set up project of this nature. The meeting concluded with a discussion and agreement on starting the project at the earliest. It was decided that it could begin with manuscript collections that have already been catalogued. It was also agreed upon that a proposal would be made with these objectives and submitted to the National Board of Mathematics.

Sangeetha Menon

BRAINSTORMING SESSION ON SURVEILLANCE TECHNOLOGIES FOR INDIA

November 12

Twenty experts, drawn from academia, the scientific community and the government, met in their personal capacities in this brainstorming session to discuss the surveillance technologies for India. The meeting was hosted by NIAS and sponsored by the Centre for Airborne Systems (CABS), DRDO, Bangalore.

The discussion mostly focused on making an assessment of the current status of surveillance technologies in the country and

the direction that future developments might usefully pursue. Several sessions also addressed various issues concerning the current security environment in the country, its demands on the nature of surveillance systems required, and an assessment of possible technology options.

The key areas that were discussed included: An articulation of India's threat perceptions and requirements of surveillance technology across Indian borders; status of AWACS technology in India and abroad; ASTOR, JSTAR and other modern surveillance radars; space-based surveillance; sensor technology development in India; ground/space-borne IR surveillance; software and data analysis in surveillance technologies; the role of small computers in intelligence transmission; and the status of UAV's, RPV's in India and abroad.

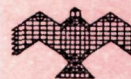
Arvind Kumar

NIAS COURSE FOR ISRO OFFICERS

3-8 December 2001

The theme of this third annual course organised for the senior managers of Indian Space Research Organisation was on the **Challenges and Opportunities for the Indian Space Enterprise**. The course was directed towards a group of 22 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 programme in the 21st century.

P.S.Goel, Director, ISRO Satellite Centre, Bangalore delivered the inaugural address. As is typical for NIAS courses, the lectures



included were from a variety of disciplines including science and technology, literature and the arts, and the media. The course agenda is reproduced below. Raja Ramanna delivered the valedictory address on the Status of Primary Education in Karnataka.

The course was much appreciated by the participants. Soon after the conclusion of the course, K Kasturirangan, Chairman of ISRO wrote the following most gracious note to Professor Narasimha: "I am writing this letter to express my deep appreciation for the excellent manner in which the programme on the Indian Space Enterprise: Challenges and Opportunities was organised by NIAS for the senior level Scientists/Engineers of ISRO during December 3-8, 2001. I understand that the entire programme, including its content, coverage and exposure as well as the selection of speakers was meticulously planned and conducted with due care and attention. Each and every participant left NIAS with deep impressions on the work culture of NIAS. I am overwhelmed by this feedback and wish you and your colleagues all the best for their endeavour."

Agenda:

1. P S Goel: Inaugural address, Challenges and opportunities for the Indian Space Enterprise.
2. V S Mani: Introduction to International Space Law
3. R A Mashelkar: Patents and the poor
4. V K Nataraj: Equity and Excellence- Corporate Responsibility
5. Kenneth Keniston: IT for Common Man – Lessons from India

6. Sulochana Gadgil: Rainfall Variability and Prediction for the Farmer
7. Manju Sharma: Biotechnology and Indian Agriculture
8. J P Singh: Commercialisation of Satellite Communications.
9. R Narasimha: Why did the scientific revolution take place in Europe and not in India?
10. U R Rao: Informal Discussion on Disaster Management
11. R L Kapur: Interpersonal Dynamics in Indian Organisations.
12. T N Seshan: Role of bureaucracy in Scientific Enterprises
13. Nrityagram: Lecture demonstration on Odissi Dance
14. N Mukunda: Doing science and planning for science in India
15. G K Jayaram: Leadership and Organisational culture
16. S K Sinha: Space and Agriculture
17. L C Jain: Lessons from Indian Planning
18. S L Byrappa: My interpretation of the Mahabharata
19. Kirit Parikh: Ten years of economic reform, what next?
20. B R Krishna Kumar: Public-Private Partnerships
21. Ramanath Cowsik: Space Science
22. Ashok Jhunjhunwala: Connecting rural India

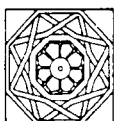


23. Ustad Bahauddin Dagar: Rudra veena recital
24. V J Sundaram: Technical aspects of national ballistic defense systems
25. Raja Ramanna Valedictory address - Status of Primary Education in Karnataka.

P K Shetty and Dilip R Ahuja

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. The Forum has decided to meet once in about two months. Following the exchange of ideas in the first few meetings, an e-group on Consciousness has been formed. Those who are interested in 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 2001 included the following events:

December 3 The Second M N Srinivas
Memorial Lecture
IT for the common man:
Lessons from India

Kenneth Keniston
Andrew W Mellon
Professor of Human
Development
Programme in Science,
Technology and Society
Massachusetts Institute of
Technology, USA

Prof Kenneth Keniston studied at Harvard College and at Oxford University. He has taught at Harvard and Yale Universities and headed the Programme in Science, Technology and Society at MIT. He now directs the MIT-India Programme. He currently also holds the position of Sir Ashutosh Mukherjee Visiting Professor at NIAS.

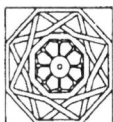
December 7 A recital of Hindusthani
classical music on the
rudra veena

Ustad Bahauddin Dagar

Ustad Bahauddin Dagar, born in the Dagar family of Dhrupad singers studied the rudra veena from a very young age with his father late Ustad Zia Mohiuddin Dagar. He now studies with his uncle, Ustad Fariddudin Dagar. Ustad Dagar has performed all over the country and over television and is known for playing rare and different ragas.

December 21 Copenhagen
IISc Literature Circle

Micheal Fryan's critically acclaimed play with Gerard Bayle as Neils Bohr, Gopal Krishnamurthy as Werner Heisenberg, and Merran Poplar as Margarethe Bohr



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 2001 have included:

October 10 Can a common man know what is Riemann Hypothesis and popular conjectures?

K Ramachandra

November 21 Has there been a counter-revolution in the history of science?

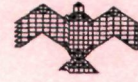
M G Narasimhan

November 28 Making sense of nonsense: Postmodernism and the science wars

Sundar Sarukkai

December 17 Diplomatic and strategic positioning in an interpenetrated world

Sridhar K Chari



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

October 17 Social intervention and social transformation: Some lessons from the Gandhian paradigm

Samir Banerjee
Bangalore

This talk dealt with some of the basic ideas within the Gandhian paradigm used toward social intervention processes. It summarised the practices and experiences of two organisations, which explicitly call themselves Gandhian – Khadi Gram (Bihar) and Gandhi Gram (Tamil Nadu) – and tried to draw lessons from these experiences and evaluate their relevance in today's milieu.

Samir Banerjee has been involved over the last thirty years with various development and Gandhian organisations all over the country. He studied at the Jawaharlal Nehru University, New Delhi, and at the Institute of Social Studies, Hague, Holland, and was a Fellow of the Indian Institute of Advanced Studies, Shimla, from 1996 - 1999.

October 18 Culture as learnables: An investigation of the approaches to non-European traditions

B Narahari Rao
Philosophisches Institut
Universität des Saarlandes
Saarbrücken, Germany

- | | |
|------------|---|
| October 24 | Back-tracking on decentralisation in Karnataka

<i>Vinod Vyasulu</i>
Bangalore |
| October 31 | Quantum brain dynamics and consciousness

<i>Manoj Srivastava</i>
Department of Humanities and Social Sciences
Indian Institute of Technology, Kanpur |

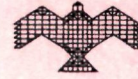
The lecture focussed primarily on several questions including whether science can provide a reductive explanation of subjectivity, why neural correlates of consciousness simply do not suffice, why quantum mechanics is needed to understand the molecular mechanisms that could underlie consciousness, and how quantum computing in brain microtubules may orchestrate the spatial structure of consciousness. It also discussed how a science of the mind may be useful in explaining the mechanisms of neuronal wiring, synaptic plasticity and cognitive development, in developing a broadened framework for the construction of quantum and molecular machines, and for explaining the social, psychological, philosophical, ethical and religious questions of daily life.

Manoj Srivastava is a mechanical engineering graduate from HBTI, Kanpur, but later turned to a student of quantum brain dynamics and consciousness. He has recently submitted his doctoral thesis to the Department of Humanities and Social Sciences, IIT Kanpur, and is awaiting his defence.

- | | |
|------------|---|
| November 6 | The role of conceptual inquiry in Buddhism; or, |
|------------|---|

can we think our way to
the end of thought?

Peter Fenner
Philosophical and
Comparative Studies
Deakin University,
Australia



Buddhism stands unique among the world's spiritual traditions for its capacity to integrate rigorous conceptual inquiry with the art of meditation. Be it the use of *koans* in Zen, the deconstructive analyses (*prasanga-vichara*) of the Madhyamika, or even the mindfulness techniques of Theravada, Buddhism seems to be able to turn our need to intellectualise and conceptualise into a tool for powerful spiritual transformation. While this interpretation of Buddhist meditation may be comforting to Western intellectuals, there often lurks a suspicion on the part of spiritual practitioners that any interpretation of the spiritual endeavor which values conceptual inquiry is yet another manifestation of the dilution and degeneration of Buddhism (the *dharma*). Thus, within spiritual traditions there is often a divide between the thinkers (the philosophers, scientists, translators and academics) and the practitioners (the meditators and yogis).

This divide, however, is not only a social phenomenon. The dilemma revolves around the question of role and value of spiritual inquiry and understanding. The critical questions are: Is conceptual inquiry spiritually progressive or regressive? And how can one tell? In order to engage with these questions, the speaker contrasted two seemingly contrary positions about the role of inquiry in the spiritual endeavor within Buddhism – those that he termed “orthodox” and “unorthodox”. The orthodox position is represented by the

more mainstream Buddhist traditions which claim that spiritual inquiry can help disclose the insight that frees us from ignorance and suffering. The unorthodox position can be found within a handful of more esoteric Buddhist traditions, such as the Mahamudra, Dzogchen and early Chinese Zen, which teach that spiritual inquiry is irrelevant, or even counter-productive, in terms of achieving spiritual awakening.

Although this lecture focussed on the role of conceptual inquiry in Buddhism, the dilemma that was addressed is encountered by all spiritual practitioners since the question of whether “what one is doing” has spiritual value or not is a concern for practitioners of any religious, philosophical or psychological system. Thus, though the presentation concentrated primarily on Buddhism, it was obvious that it was rich in implications that could be applied to the methods that occur in any religious or metaphysical tradition, such as prayer, liturgy, textual study or contemplation.

Peter Fenner is a Senior Lecturer in Philosophical and Comparative Studies at Deakin University in Australia. His books include The Ontology of the Middle Way (Kluwer Publishers, 1990), Reasoning in Reality (Wisdom Publications, 1995) and Essential Wisdom Teaching, coauthored with Penny Fenner (Nicholas-Hays, 2001). He was a Buddhist monk in the Tibetan tradition for nine years and is presently developing innovative programs based on the perspective of the Middle Path (Madhyamika) and Complete Fulfillment (Dzogchen).

November 7 The idea of Indian society:
G S Ghurye and the
making of Indian
sociology

Carol Upadhya
Bangalore

Although G.S. Ghurye is widely considered to be the 'father of Indian sociology', his work and his contribution to the development of the discipline have never been closely examined. This talk traced the development of a sociological discourse about Indian society through Ghurye's work and the relation of this discourse to diverse political, ideological and intellectual currents of the mid-19th to early 20th centuries. It also discussed how Ghurye's thought and the institutionalisation of sociology in Bombay University have shaped the discipline as well as public and political discourses about Indian society and the nation ever since.

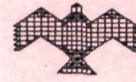
Carol Upadhyia, a social anthropologist, has written on agrarian transformation and business entrepreneurship in coastal Andhra Pradesh, and has taught sociology at SNDT Women's University in Mumbai.

November 26 Contemporary
education issues in the
USA

Dhananjaya M Arekere
Race and Ethnic Studies
Institute
Texas A & M University,
USA

December 19 New initiatives on
decentralisation

T R Raghunandan
Secretary
Department of Rural
Development and
Panchayat Raj
Government of Karnataka,
Bangalore



SPECIAL PROGRAMMES

There were one special lecture and three public lectures organised at the Institute during the period from October to December 2002

Special lecture

November 22 Remote perception or
psychic spying

M Srinivasan
Chennai

The story of the US Government-sponsored research programme and Mission-Oriented Assignments involving people with a talent of extrasensory perception (ESP) with the specific objective of gathering military-related intelligence data especially those pertaining to the former Soviet Union during the earlier Cold War years.

Public lectures

December 6 My interpretation of the
Mahabharata

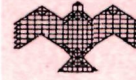
S L Byrappa
Mysore

S L Byrappa served as Professor of Philosophy at the Regional College of Education, NCERT, Mysore till 1991. Most of his novels, originally written in Kannada, have been translated into various Indian languages and four of them to English. Some of his noted novels include Vamshavruksha, Daatu, Gruha Bhanga, Parva, Tantu, Saartha and Saakshi.

December 21 The forgotten Custom's
Hedge and salt starvation
in British India

Roy Moxham

Conservator
University of London
Library
University of London, UK



This lecture by Roy Moxham, author of the book 'The Great Hedge of India' told us the extraordinary tale of the 4000-km long thorny hedge that was erected in the 1840's along the Customs Line by the customs officials of the British East Indian Company to separate British India from the princely states, of which Moxham was able to find small surviving traces in the dacoit-infested Chambal region. While the 'manichean divide' under the British Raj segregating British residential areas from 'native' ones has been known, the great divide between British India and princely India brought about by the Custom's Hedge had all but become a forgotten footnote in history. This divisive hedge was in particular used to control the movement of cheap salt from the princely states into British India and to extort the prohibitively high Salt Tax. At its height in 1869 the hedge stretched from the Indus to the Mahanadi especially separating princely Rajasthan with its great salt lakes from the Bengal Presidency which was naturally deficient in salt. About 14,000 British officers manned the hedge from mile to mile and thousands were thrown into prison every year for trying to break through it and for salt-smuggling. By the mid 19th century the salt tax per annum was equivalent to two month's salary for a working labourer and ten times higher than it was in 1930 when Gandhi was to resist it symbolically through the salt march and satyagraha. Moxham's lecture also explored the consequences that the salt tax might have had on the Indian populace, particularly in the Bengal Presidency where the salt tax was especially high between 1765 to 1878, with respect to salt starvation especially in times of famine and epidemics

like diarrhoea which require salt for re-hydration. Interestingly, A O Hume who set up the Indian National Congress had been in charge of the maintenance of the hedge and customs line. Another aspect that perhaps awaits future study is the sociological impact of this physical division of the Indian subcontinent in the 19th century for which a modern analogy can perhaps be found in the Berlin Wall.

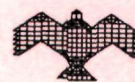
Sharada Srinivasan

December 21 The enlightenment paradigm of Native Rights and the forged hybridity of cultural rights in British India

Purushottama Bilimoria
University of Melbourne
Melbourne, Australia

The talk begun with a critique of Kant, Rousseau, Locke, and Mill in their ambivalence on the idea of 'Native Rights'. It next examined Kutathas' argument that minority claims against the violation of cultural interests by a majority community can be accommodated within the going liberal individualistic theory – for example, in terms of natural rights as the inalienable entitlement of each and every individual citizen regardless of their communal membership. The later part of the lecture underscored a moral concern over the workings of colonial social engineering that has left us with an unresolved quiddity that seems to be one bizarre consequence of the liberal charter bequeathed by Enlightenment philosophies, and which, in its post-colonial phase in the form of unreformed Personal Laws (or community laws), contributes to more injustice in liberal terms than might otherwise have been the case.

Purushottama Bilimoria is Associate Professor at the Deakin University and a Senior Fellow in Philosophy at the Faculty of Arts, University of Melbourne in Australia. He is Editor-in-Chief of the *International Journal of Philosophy and Religion and Ethics*. His books and monographs (edited along with J N Mohanty) include *Relativism, Suffering and Beyond: Essays in Honour of B K Matilal*, *Self and its Destiny in Hinduism*, *Civil Rights and Personal Laws in India: Colonial Legal Debates and Current Reforms*.



THE NIAS LITERARY FORUM

There were two meetings of the NIAS Literary Forum in the period between October and December 2001.

October 3 Tracing the times of a day
with Hindusthani classical
music

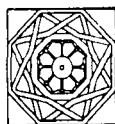
Subarna Bhattacharyya
Jawaharlal Nehru Centre
for Advanced Scientific
Research
Bangalore

One of most striking aspects of Hindusthani classical music is the choice of time, season and moods which the *ragas* depict. The subtle yet discernible changes in moods are brought about by changes in notes and style between different *ragas*. An attempt to capture the moods of the different times of the day was presented at this vocal recital through brief demonstrations of the appropriate *ragas*.

December 28 Selected readings from the
Malayalam novel
"Chemmeen"
Author: Thakhazi
Sivashankara Pillai

Translation: Narayana
Menon

Sangeetha Menon
NIAS



*Meetings attended
and Lectures delivered
by NIAS Faculty*

OCTOBER TO DECEMBER 2001

H K Anasuya Devi

Participated in an interview and discussion on the topic of "Neural networks and epigraphy" with Sanjoy Goswami on All India Radio, Bangalore. The programme was broadcast on October 7 under the Science Programme

B K Anitha

Participated in the workshop on Women and Water Network (India): Consultation in the South, organised by the Socio-Economic Unit Foundation, Institute of Local Administration, Trissur, October 12-13

Served as a discussant for the presentation on "Gender and land rights" in a workshop on Land Rights, organised by the Rural Development Institute, Washington DC, USA, at Bangalore, October 23

Participated in a workshop on Dams and Droughts, organised by Sahayoga at the Indian Social Institute, Bangalore, October 28

Delivered a lecture and led the discussion on "Gender, gender relations and gender justice" at the Vertical Interaction Course on Gender Justice and the Role of Police at NIPCCD, Bangalore, organised in collaboration with the Bureau of Police Research and Development, December 3

Kenneth Keniston

Delivered a lecture on "Rural IT in India" at the Indian Institute of Information Technology Bangalore, October 31

Delivered a lecture on "IT for the masses: Hope or hype?" at the National Centre for Biological Sciences, Bangalore, November 2

Delivered a talk on "Rural ICT in India" at the School of Management, Indian Institute of Science, Bangalore, November 30

Arvind Kumar

Participated in an international symposium on Conflict Resolution: Trends and Prospects, organised by Women in Security and Conflict Management (WISCOMP), New Delhi, October 2-8. Was discussant for a couple of sessions including round table discussions on State Security and Causes of Conflict, and Comprehensive Security and Conflict Resolution in South Asia

Delivered a talk on "Indian Nuclear Doctrine" at Pondicherry University, October 30

Participated in a brainstorming session on Surveillance Technologies for India, organised by the International and Strategic Studies Unit of NIAS in collaboration with Centre for Airborne Systems, Bangalore, November 12

Invited as a panellist for a discussion on Terrorism, New War and India's Policy Options at the Centre for Airborne Systems, Bangalore, November 13

Was invited as an external examiner of MA and MPhil degrees by Pondicherry Central University, November 30 - December 1

Sangeetha Menon

Delivered an invited lecture on “Binding experiences: Looking at the contributions of Adi Sankaracharya, Tuncettu Ezuttacchan and Sri Narayana Guru in the context of recent discussions on consciousness studies” at the Twelfth Annual Conference of the National Academy of Psychology on Psychology in India: Past, Present and Future, Kollam, Kerala, October 22-24. The paper is available on the website: http://www.infinityfoundation.com/mandala/i_pr/i_pr_kerala_frameset.htm

Participated as a commentator in the National Seminar on Rethinking Modernity, held at Sri Sankaracharya Sanskrit University, Kalady, Kerala, November 16-18, 2001

N Shantha Mohan

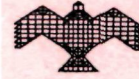
Delivered a talk on “Gender relations and violence against women”, under the aegis of the NIPCCD, Bangalore, October 3

Presented a paper and led a discussion on “Women and education” for university teachers at a meeting organised by the Promise Foundation, Bangalore, October 13

Presented a paper on “Social construction of gender – sex and gender” at the Colloquium on Convention on the Elimination of All Forms of Discrimination against Women for practising lawyers, organised by the Indian Federation of Women Lawyers – Karnataka, the National Alliance of Women, India, and the Karnataka Judicial Academy, Bangalore, October 22

Participated in a workshop on Land Rights, organised by the Rural Development

Institute, Washington DC, USA, at Bangalore, October 23



Participated in a workshop on Dams and Droughts, organised by Sahayoga at the Indian Social Institute, Bangalore, October 28

Participated in the Women's Conference at Honnsethalli, organised by Grama Vikas, Kolar, with about 800 women participants, November 2

Delivered a lecture and led the discussion on "Concept of gender and gender relations" at the Gender Sensitisation Training Programme for Senior Bank Officials of the Southern States, organised by NIPCCD, Bangalore, November 6

Delivered a lecture and led the discussion on "Gender, gender relations and gender justice" at the Vertical Interaction Course on Gender Justice and the Role of Police at NIPCCD, Bangalore, organised in collaboration with the Bureau of Police Research and Development, December 3

Delivered a lecture on "Women's empowerment" in the UGC Refresher Course on Women's Empowerment for college teachers at the Academic Staff College, University of Madras, Chennai, December 8

Delivered a talk and chaired the concluding session on the issue of "Gender, governance and Grama Sabha" at the Southern Region Conference, organised by ISST, Bangalore, at the Indian Social Institute, Bangalore, December 14

R Narasimha

Delivered the keynote address on "Experiment, physics and computation in

fluid dynamics" at the National Symposium on Advances in Experimental Aerodynamics & Measurement Techniques, Indian Institute of Science, Bangalore, 5 October .

Organized a Symposium on "Radar and microwave remote sensing in Atmospheric Science" at the Indian Academy of Sciences 67th Annual Meeting, Sri Venkateswara University, Tirupati, 9 November.

Delivered a talk on "History of atmospheric boundary layer research" at IISc, Centre for Atmospheric and Oceanic Sciences, Indian Institute of Science, Bangalore, 23 November.

Delivered the Karnataka Rajyothsava Extension Lecture-2001 on "Some thoughts on the scientific, industrial and other allied revolutions" at the Institute for Social and Economic Change, Bangalore, 27 November.

Delivered the invited Sir Ross and Sir Keith Smith Lecture on "Stability of nonparallel flows: 'minimal composite' theories" at the 14th Australasian Fluid Mechanics Conference, University of Adelaide, Australia, 10 December.

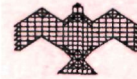
Visited Brussels on an invitation to participate in the European Union-India Think Tank Seminar, 15-16 October.

Asha Ramesh

Participated and contributed in the colloquium on Women in Conflict Situations in South Asia, organised by WISCOMP, New Delhi, October 2-8

Served as a resource person and delivered a lecture on "The Devadasis" in a technical consultation on Trafficking of Women and

Children, organised by the Institute of Social Sciences in collaboration with the NHRC, Department of Women and Child Development and UNIFEM, New Delhi, October 9



Served as a resource person to the Grameena Mahila Okkuta, Kolar district, and delivered a talk on "Issues facing rural women", October 17

Participated in a workshop on Dams and Droughts, organised by Sahayoga at the Indian Social Institute, Bangalore, October 28

Participated in an international conference and a training meeting organised by the Centre for Asia-Pacific Women in Politics (CAPWIP), Manila, the Philippines, November 8-10

Participated in a brainstorming session to develop a Master's curriculum on Public Policy and Management, organised by the Indian Institute of Management, Bangalore, November 28

Attended a meeting with the Mahila Samakhya National Evaluation team as a member of the State Appraisal Team, Bangalore, December 11

Participated in a meeting on Gender, Governance and Grama Sabha at the Southern Region Conference, organised by ISST, Bangalore, at the Indian Social Institute, Bangalore, December 14

Participated in a seminar on Intellectual Property Rights, organised by the Indian Institute of Management, Bangalore, December 14

Invited to a national meeting to develop a curriculum on Human Rights, organised by

the Singamma Sreenivasan Foundation in partnership with the NLSUI, Bangalore, December 20

Participated as a resource person in a seminar on the the Role of Women in PRIs, organised by the State Commission for Women in Bidar, December 27

Served as a resource person and delivered a talk on “Women and political participation” at the launch of a state-level Rural Women’s Confederation, Bangalore, December 31

H N Shankar

Presented a paper entitled “Can stroke be predicted using speech analysis?” at an international conference – Biovision 2001 – held at Bangalore, December 22-24

P K Shetty

Invited to be a guest speaker at the International Conference on Pesticides, Environment and Food Security, organised by the Society of Pesticide Science (India), New Delhi, November 19-23

C Srinath

Participated in a workshop on Land Rights, organised by the Rural Development Institute, Washington DC, USA, at Bangalore, October 23

Participated in a workshop on Dams and Droughts, organised by Sahayoga at the Indian Social Institute, Bangalore, October 28

Participated and contributed to the technical workshop on Indigenising Human Rights Education in Indian Universities at the National Law School of India University,

organised by the Karnataka Women's Information and Resource Centre, Bangalore, December 28



Attended the meeting on the Ethics of Sex Selection at Ashirwad, organised by Vimochana, Bangalore, December 29

Participated in the conference of Grameena Mahila Okkuta at Nijaguna Kshetra, organised by Grama Vikas, Kolar, December 31

N Sudhamani

Participated in the workshop on Women and Water Network (India): Consultation in the South, organised by the Socio-Economic Unit Foundation, Institute of Local Administration, Trissur, October 12-13

Delivered a lecture on the "Status of women" as a part of the training programme for district-level managers and executives of the Karnataka Milk Federation, organised by NIPCCD, Bangalore, October 15

Participated in a workshop on Dams and Droughts, organised by Sahayoga at the Indian Social Institute, Bangalore, October 28

Participated in the training programme on Objective-oriented Project Planning, conducted by the Tropical Research and Development Centre at the Central Training Institute, Bangalore, December 3-7

Participated in a meeting on Gender, Governance and Grama Sabha at the Southern Region Conference, organised by ISST, Bangalore, at the Indian Social Institute, Bangalore, December 13-14

Attended the meeting on the Ethics of Sex Selection at Ashirwad, organised by Vimochana, Bangalore, December 29

Participated in the conference of Grameena Mahila Okkuta at Nijaguna Kshetra, organised by Grama Vikas, Kolar, December 31

A R Vasavi

Delivered a talk entitled "State, market and society: The making of agrarian distress in India" at the National Centre for Biological Sciences, November 9

Delivered a talk entitled "Perspectives for social research in India" at a workshop on Methodologies, organised by the Institute for Development Alternatives, Chennai, December 7

Served as a Panel Discussant at the National Seminar on Food: Sufficiency, Security, Safety, held at Chennai, December 8

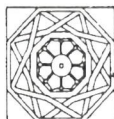
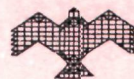
VISITORS TO THE INSTITUTE

OCTOBER TO DECEMBER 2001

Mr Tim Hanstad, Ms Jennifer Brown and Ms Renee Giovarelli, all from the Rural Development Institute, Washington DC, USA, visited the Gender Studies Unit on October 6.

Ms Vibha Parthasarathy, Chairperson of the National Commission for Women, visited the Gender Studies Unit and had a meeting with the faculty of the Institute on October 18. During her visit, she made a brief presentation on the functions of the Commission and its mandate to improve the status of women in India.

Dr M Srinivasan, former Associate Director (Physics), Bhabha Atomic Research Centre, Mumbai, visited the International and Strategic Studies Unit on November 22

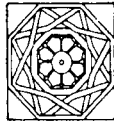


Upcoming Events

The Science and Society Unit is organising a discussion meeting for college students and teachers on **Understanding Science**. This meeting is the first of a series of such meetings involving lectures in history, philosophy, sociology and psychology of science in order to understand the many facets of science and technology. The first meeting is on February 1, 2002, at NIAS. For further details, please contact M G Narasimhan (narasim@nias.iisc.ernet.in)

An international symposium on **Science and Beyond: Cosmology, Technology and Indian Traditions** will be held at NIAS from 8-11, 2003, under the program of **Science and Spiritual Quest** of the Templeton Foundation, USA. This symposium will bring together scientists, philosophers, psychologists and spiritual leaders from India and the rest of the world to dialogue on what essentially constitutes the pursuit of knowledge. This will facilitate defining the frontiers and what falls in the 'beyond' of scientific knowledge. Discussions on questions of philosophical and spiritual issues according to the convictions and experiences of scientists as well as discussions on scientific and empirical questions according to philosophers and spiritual leaders are expected to generate a forum to bridge knowledge communities and unite them for global concerns both at personal and institutional levels. It is particularly expected that the conference will bring forth a dialogue, in a

global context, on Indian traditions of science, art, music, medicine, philosophy, psychology and spirituality. The program of the conference will include invited lectures, panels and discussions. For more details, please contact Sangeetha Menon (prajnana@yahoo.com)



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.

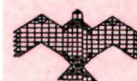
The appeal

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.

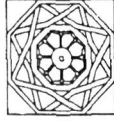
NIAS is registered under the Foreign Contributions (Regulation) Act, 1976, and is entitled to receive contributions from abroad directly (Register number 094420614, Account No. 0100005000200, State Bank of India, Indian Institute of Science, Bangalore 560 012). Contributions must be made by cheques drawn 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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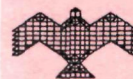
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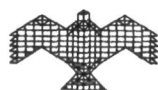
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The National Institute of Advanced Studies (NIAS) was conceived and initiated by the late Mr. J R D Tata, who sought to create an institution which would conduct advanced research in multidisciplinary areas, and also serve as a forum to bring together 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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Published by National Institute of Advanced Studies, Indian Institute of Science
Campus, Bangalore 560 012 and printed by Verba Network Services, Bangalore

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