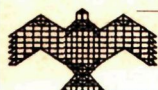


NIAS NEWS



Vol 9 No 3

July 2000



- *Research Programmes* 6
- *Publications* 8
- *Commentary* 12
- *Distinctions for NIAS Faculty* 24
- *Important Events* 24
- *Associates' Programmes* 27
- *Wednesday Discussion Meetings* 27
- *Upcoming Events* 33
- *An Appeal for Funds* 34
- *The NIAS Faculty* 38

JULY 2000





Editors' Note

We have again received a number of messages from readers who have appreciated the new format of NIAS News, and sincerely thank all of those who have taken the trouble to communicate this to us. Please do continue to provide us with your valuable support, and do write in with your comments – whether they concern the structure or the contents of the newsletter.

There were again a few mistakes which had inadvertently crept into the last issue of the newsletter. The name of Ms Asha Ramesh, Research Associate at our institute and joint author of two reports of the Gender Studies Unit, reported in the last issue of NIAS News, had unfortunately not been highlighted. We hope to ensure that such errors are avoided in the future.

**Anindya Sinha, Hamsa Kalyani and
A Devaraju,**
Editors, July 2000



From the Director's Desk



During the last four months, there have been two occasions when the current and future academic programmes of the Institute have been discussed. The Academic Council of the Institute met on 21 March 2000 as was already reported in the last issue of the Newsletter. The members of the Council from outside the Institute include Prof O Siddiqui, Mr T R Satish Chandran, Mr A Madhavan, Prof D M Nanjundappa, and Prof N Balakrishnan. I take this opportunity to welcome these distinguished persons to the Academic Council and look forward to interactions with them in deciding the future course of our academic programmes.

The Academic Council has recommended that NIAS should find resources for two new units, respectively in Science and Society and Mathematical Modelling. It also highlighted the value of the course that NIAS has generally been running for university and college teachers. The Council of Management of the Institute met on 26 May 2000 and accepted the recommendations of the Academic Council. It was also agreed to plan a new building on the eastern side of the campus, to provide offices for all the faculty and some additional facilities for meetings. The faculty are now scattered in different buildings on campus, and in particular for lack of any other accommodation occupy several rooms in what has always been intended to be the guest house of the Institute. A new faculty block would release the guest rooms that the faculty are now occupying. All of these of course require more resources, and it is now important for all the friends of NIAS to help it to generate the endowment funds required from

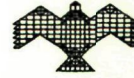
wherever they can be obtained. I am happy to report in this connection that Prof V J Modi (the University of British Columbia, Vancouver, Canada) has made a generous gift of Rs.10.0 lakhs to the Institute.

A major event during the quarter was the *second dialogue on nuclear issues* between the Committee on International Security and Arms Control (CISAC) of the US National Academy of Sciences and an Indian team assembled by NIAS. The dialogue took place during 22-24 May, and carried further the discussions begun last year. During the meeting, Prof John Holdren, Chairman of CISAC, gave an extremely well-argued lecture on the energy-environment-development challenge to a packed auditorium, as part of the Associates' Programme for the month of May.

On 30 June, a one-day consultation on Women and Violence was organized by the Gender Studies Unit. The results of a field study conducted by the Unit in six districts of Karnataka were presented at the meeting. We were happy that the Minister for Women and Child Development, Smt Motamma, was present at the meeting, which was attended by panchayat members from the six districts, representatives from the media, the police, and various NGOs.

R Narasimha

NEWS FROM THE LIBRARY



We acknowledge, with deep gratitude, the donation of a further sum of Rs 5 lakh from Mr K K Grover towards the continuing development of the NIAS Library.

The Sociology and Social Anthropology Unit announces the availability of reading and research materials related to education. Books related to the following topics are now available in the library for consultation:

- Philosophy of education
- Sociology of education
- History of education reform in India
- Debates and studies on primary education in India
- Education policy
- Teacher education
- Newspaper articles and debates on education (1996-2000)

Funds for initiating this documentation were made possible by a grant from the Spencer Foundation, Chicago, USA.



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 period from April to June 2000 marked the beginning of the first phase of the project entitled **Setting up of Digital Archives for Digital Preservation of Manuscripts, Paintings and Drawings**, funded by the Department of Science and Technology and the Ministry of Culture. This project is being conducted by Sangeetha Menon of the Philosophy of Science Unit and Prabhakar Vaidya, with B V Sreekantan as the chief advisor. The goals of the project include establishing units for digital preservation of manuscripts at the National Archives, Delhi, the National Museum, Delhi, the Salarjung Museum, Hyderabad, and the Chandrasekhara University Library at Kanchipuram. In the first phase of this project, the main emphasis is on training personnel from these organisations and helping them carry out a pilot digitisation programme.

This project also deals with the development of better image enhancement techniques. Digital photographs, when magnified, often appear grainy and look pixelised. Prabhakar Vaidya and Savita

Angadi have begun a systematic investigation to correct problems of this nature. To begin with, four different methods of enhancing one-dimensional digitised data were implemented and compared. This work has recently been extended to actual two-dimensional images, using spectral methods. The resulting pictures show a striking improvement.



The International and Strategic Studies Unit made a presentation to the Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE) on the research project entitled **Dimensions of Nuclear Deterrence: In the Indian Context** in April 2000. The project has been accepted and necessary financial sanction issued by BRNS. Research work for this project, to be completed in eighteen months, has already commenced.

A presentation was also made by the International and Strategic Studies Unit to BRNS, DAE, in connection with another project entitled **A Critical and Comprehensive Study of the Nature and Extent of State Responsibility Arising out of Nuclear Incidents/Accidents within National Boundaries and Beyond**. This project has been accepted by BRNS and financial sanction provided for it. Research work has also commenced on this project.

In the Epigraphy Unit, H K Anasuya Devi and her technical assistants, N Survarnann Vasudev and Dimple Kolhapure are working on the last phase of the project entitled **Development of Software Technology for Epigraphy Texts**.

H N Vijaysimha, S Shinde and S K Sahoo, undergraduate students from the Regional Engineering College, Tiruchirapalli, completed a three-month summer project (April to June 2000) entitled **Computer**

analysis and recognition of ancient Indian scripts: A case study – Brahmi, under the guidance of H K Anasuya Devi of the Epigraphy Unit, in partial fulfilment of the requirements for the degree of Bachelor in Engineering in Computer Science and Engineering.



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 SPECIAL PUBLICATIONS

1-00 A Draft E-commerce Bill

R Matthan¹, S Balakrishnan² and S Manohar³

¹Matthan Law Offices, Bangalore

²Supercomputer Education and Research Centre, Indian Institute of Science, Bangalore

³Computer Science and Automation, Indian Institute of Science, Bangalore

II. NIAS REPORTS

R1-00 Status of electrical power transmission in India and possible technological developments

S Parameswaran

Chairman, IEEE, Bangalore Section

III. NIAS LECTURES

L5-99 Understanding some misunderstandings on the role of intellectual property rights in

technology and its transfer

V Siddhartha

Officer on Special Duty at the
Secretariat of the Scientific
Adviser to the Defence
Minister



L1-00 Recent trends in science and
technology policy

J J Salomon

Honorary Professor, Chair
Technology and Society
Conservatoire National des
Arts et Metiers Paris, France

BOOKS

Anitha, B K 2000. *Village, caste and
education*. Rawat Publications, Jaipur

PAPERS

Balasubramanian, R and Ramachandra, K
2000. The proof that certain functions are
entire II. *Bulletin of Calcutta Mathematical
Society* **92**: 59-62

Kailas, S V and Narasimha, R 2000. Quasi-
cycles in monsoon rainfall by wavelet
analysis. *Current Science* **78**: 592-595

Kumar, A 2000. China and export controls.
In: *The peacock and the dragon: India-
China relations in the twenty first century*
(ed. K Bajpai and A Mattoo), Har Anand
Publications, New Delhi, pp 146-154

Kumar, A 2000. India and nuclear
disarmament. In: *Nuclear India: Problems
and perspectives* (ed. A Subramanyam
Raju), South Asian Publishers, New Delhi,
pp 57-68

Sundaram, C V, Baldev Raj and
Rajagopalan, C 2000. Chemistry and

chemical techniques in India. In: *History of science, philosophy and culture in Indian civilisation* (series ed. D P Chattopadhyaya) – Volume IV: *History of metallurgy in India* (ed. B V Subbarayappa), Project of History of Indian Science, Philosophy and Culture, Centre for Studies in Civilizations, New Delhi, pp 23-53

Vasavi, A R 2000. Towards people's education system. Review of the "Report of the Kerala Education Commission". Kerala Shashtriya Sahitya Parishad, Kochi, 1999. *Economic and Political Weekly* **35**: 1261-1262

REPORTS

Shantha Mohan, N, Ramesh, A and Antony, P 2000. Blending the concerns. A report on the one-day consultation on "Gender and Governance" , held at NIAS

Udgaonkar, B M and **Rajagopal, S** 2000. Steps towards a nuclear weapon-free world. Department of Atomic Energy, Government of India, New Delhi

Vijaysimha, H N, Shinde, S and Sahoo, S K 2000. Computer analysis and recognition of ancient Indian scripts: A case study – Brahmi. A summer project report submitted in partial fulfilment of the requirements for the degree of Bachelor in Engineering in Computer Science and Engineering, Regional Engineering College, Tiruchirapalli

ARTICLES



Devaraju, A. Doyen of Kannada literature (on Late Dr Masti Venkatesh Iyengar). *The Hindu*; 2 June, 2000

Narasimha, R E-governance: A blueprint for the future. *Parliamentary Affairs Millenium Special* **6**: 13; 2000

Narasimha, R. George K Batchelor – an obituary. *Current Science* **78**: 1564-1565; 2000

Narasimha, R. David G Crichton – an obituary. *Current Science* **78**: 1565; 2000

Narasimha, R and **Paul, M K.** Rediscover railways (Bangalore-Mysore Corridor). *Deccan Herald*; 28 January, 2000



Commentary

EXCLUSION, ELIMINATION AND OPPORTUNITY: TRENDS IN INDIA'S PRIMARY EDUCATION

A R Vasavi

Sociology and Social Anthropology Unit

A field-based research study (sponsored by The Spencer Foundation, Chicago, USA and the National Institute of Advanced Studies, Bangalore) was initiated in May 1999 and the first round of research completed in April 2000. Prof M N Srinivas had been the advisor for the research project and had provided vital support and inputs. The emphasis on ideas relating to education and citizenship is, especially, owed to his insights and interest. The study focuses on understanding the structural and localized problems pertaining to educational deprivation in six different communities in six states of India. The research was conducted in partnership with the following NGOs who have specialised in educational issues: SIDH in Tehri Garwal, Uttar Pradesh, DIGANTAR in Jaipur, Rajasthan, EKLAVYA in Khategoan (Devas district), Madhya Pradesh, IDS in Thanjavur, Tamil Nadu, and GRAMA SIRI in Prakasam district, Andhra Pradesh and in Bangalore city, Karnataka. Trained field researchers in all the sites have helped gather data on a wide range of issues pertaining to the community, schools, teachers and children. We describe below a preliminary overview of the findings of the study.

A summary of the study

The calls for universalising primary education in India, where adult literacy levels continue to be at fifty-two percent

(1991 census) and a large number of school-age children remain out of school, have gathered strength. Yet, most of these assertions seek to incorporate children into a school system that is largely urban, alien and bureaucratic in its functioning and orientation. And far from the compensatory role that a modern nation state must play in a democratic society, many children in India continue to be excluded, eliminated and distanced from their primary right to education. This is largely due to the fact that schools as institutions have not become the recipients of either economic or political support from the state. As a result, children from households in poverty, low-ranked caste groups, adivasis/tribals and many girls remain outside the circuit of literacy as well as the enablement and empowerment that it could have assured them as adults. Such exclusion results primarily from the fact that schooling in India continues to be located within a topography of pyramidal social relations based on caste, class, religion and gender.



While the agents and processes of exclusion are structural (economical, political and social), the processes of school elimination are those that relate to the alienating syllabus, its irrelevant content and orientation, and problematic teaching-learning methods. Rather than children "dropping out" of their own volition, they are "eliminated" from the school and its system. Yet, despite these systemic disadvantages, there is a new mass thrust for education. Increasing numbers of first-generation learners are now attending schools with hopes of challenging their socially inherited inequities and seeking to make a new life. Decentralized administration, new forms of caste mobilization, the entry of a large number of NGOs into the education sector are factors that have made possible the new

opportunities for education among the poor and disadvantaged.

But the trends in the increasing presence of the poor and low-ranked castes groups have led to an increasing withdrawal of the children of the relatively better-off and upper-caste groups from these schools. The result is not only a two-track/dual system of education (the government schools with vernacular languages for the poor and low-ranked caste groups and the private schools with English medium education for the rich and the upper-caste), but also an increase in “school differentiation” where a range of schools cater to varied class, sectarian, and linguistic demands. Such trends indicate that in an increasingly “marketised civil society” education is no longer a public good but is rather a private good. These trends call attention to a new problem in which the viability of instituting ideas of citizenship via schools and the education system stands challenged. Even as policies seek to integrate community involvement so as to develop and establish community schools - a polarization that thwarts such collective efforts is underway. And ironically, as the problem of accessibility to education is sought to be addressed, a new problem of differential schooling and a differentiated citizenry arises.

Vignettes from the six regional research sites will highlight the differences in the educational opportunities of children and the ways in which the life of the school draws on the political, economic and socio-cultural structures of the community.

Scarecrow girls

Little girls sit perched high up on scarecrow stands within fields of maize, rice and wheat. To keep the winged predators away,

the girls whistle, hoot, clap and yodel intermittently. In the Tehri Garhwal area of Uttar Pradesh, that forms the lower belt of the Himalayan ranges, this is only one of the multiple chores that pre-teenage girls are compelled to do. And it is girls such as these who are absent from school who account for the region's dismal record of 16 percent female literacy compared to the 62 percent literacy for males. While the region's high altitude, scattered hamlets and poor agricultural conditions account for high male out-migration to the urban areas, it is the cultural assigning of a large load of the domestic and non-domestic work to girls and women that retains them in conditions of mass illiteracy. The absence of girls from schools is compounded by the region's stark differences in the conditions of schools. Known for their salubrious climate, the townships of Dehra Dun and Mussoorie are home to some of the most exclusive and most expensive residential schools in the nation. But the schools that cater to the local, rural population stand in stark contrast to those that cater to national and international elite. State allocation of funds to clusters of these local government schools is lower than the cost of a single child's school fee in an exclusive school (Rs 4 lakhs or \$ 10,000/- per annum). Biases in financial allocation, the remoteness of the area, a poorly regulated and organized education-bureaucracy and, until now, the inability of the people to assert their rights to education form important reasons for educational deprivation in the region.



"New eyes, new arms"

Breaking age-old conceptions of the "uncivilised and uncivilisable" tribal are little boys and girls from the tribal or *adivasi* communities of Bhils, Gonds and Korku who now attend schools in the tribal belt

of Dewas district in Madhya Pradesh. Their presence has been made possible by the government's new thrust for mass education in which schools have been established in almost every hamlet and teachers are now accountable to the local elected administrators (the *panchayat*). Though they learn not in their mother tongues, but in that of the dominant state language (Hindi), they exhibit an enthusiasm that indicates their commitment to education as an opportunity for a new life. In the degraded hill and forest communities, where only a hundred and odd villages out of several thousand in the block have motorable roads, the new, first generation learners face insurmountable problems to attend schools: they walk an average of four kilometers daily to attend schools; some register in the boarding schools (*ashram shalas*) thereby bearing the absence of their large extended families; and they risk injuries and illness in walking to schools in the rainy season. In Kanakariya's Ashram Shala, we meet Mamata, a Korku who is the only person from her hamlet to be at a school and who is literate. And she tells me, gently but with an admirable confidence, schooling means "new eyes, new arms" for her, her family and the members of her hamlet. But the enthusiasm of the children and the parents is not matched by the functioning and teaching-learning methods of the schools. As our field researcher, Dhuleshwar Raut, observes in his field notes, the schools function on an irregular bases, the teachers are either absent periodically or are engrossed in the routines of their own lives. Schools close down for a range of reasons other than the official holidays and the quality of teaching fails to provide any stimulus to the enthusiastic and intelligent children.

“We have become untouchables ourselves”



As children from low-ranked caste groups enter the government schools, many high-ranked caste teachers only tolerate their presence as resulting from the unnecessary dilution of the caste-system by the government. In claiming that they have “become untouchables”, teachers indirectly critique the burden that they bear of teaching in mixed caste and religious schools. In the once royal and highly feudal city of Jaipur, Rajasthan, caste-based discrimination is only one of the factors that accounts for the fact that the state has one of the lowest literacy rates in the nation. Compounding such long-term exclusion of the low-ranked castes from any rights to education are other cultural practices such as the immurement of girls, the restrictions on their mobility and child-marriages which combine to prevent a large proportion of girl children from their rights to education. Lucrative industries such as the gemstones and clothing industries, which thrive on cheap, under-paid child labour, are additional factors that retain children out of school. And in an environment that is already vitiated by caste and gender discrimination are the growing communal or religious tensions which have led to the Muslims, in one of the wards, withdrawing their children from school and having them attend only the local *madrassa*.

Platform children

The Municipal school in ward number one is in the center of the bustling town of Thanjavur in Tamil Nadu, a renowned temple town that is also emerging as a leading education centre. Yet, any visitor to the primary school will be taken aback by the state of the school and its children. A once solid building is now in a state of

dilapidation and the children are unwashed, unkempt and seem unhealthy. As the teachers indicate, most of these children are from the area's poorest and the lowest ranked caste groups, the *Thottans* or the sweepers, the *Kallars* or the "robbers", the *Pallayars* or the diggers, and the *Chakliyors* or weavers. Linking the caste background of the students to their problems of high absenteeism, inattentiveness, high drop-out rates and general insubordination, the teachers rue that it is these "platform children" who like passengers in a railway platform are listless, and responsible for the declining standards of the school. In a town where commercial activities and caste-based political mobilization have empowered the low-ranked caste groups, it is the declining interest in schools as public institutions and the need to cater to the poorest that accounts for their decline.

"What's in a name?"

In the coastal villages of Vadarevu in Prakasam district of Andhra Pradesh, children from the *Vadabalji* fishing community of about 6000 persons remain largely out of school. The local, government school capacity is for only two hundred children and these are filled by children from the agricultural communities. Subject to a life that is hard and uncertain, the children of the *Vadabalji* are absorbed into fishing and its trade at an early age. When a Christian missionary group had opened a new and large school, with additional incentives of free food, textbooks and uniforms for children to be sent there, the parents had responded optimistically. Yet, two years down the line, many have chosen to withdraw their children, citing the renaming of their children by the school as the reasons for withdrawal. As they remark, both astutely and with dignity,

“What’s in a name? Everything that was and everything that should be”. The *Vadabalji*’s educational condition is marked first by the state’s denial of their rights to education and then their subjection to an erosion of their identities only so as to receive a formal education. There are few instances of such open and prolonged educational deprivation as that among the *Vadabalji* and calls attention to the need for the state and educational institutions to cater to the economic and social particularities of these communities.



Children as parents

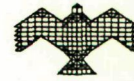
In the metropolis of Bangalore, known increasingly as the Silicon Valley of India, the children of a congested slum, Ragi Gudda, are victims of two punitive systems. As residents of a colony that is deemed to be an “illegal squatter”, they are denied basic civic facilities of water, electricity, and housing. At the same time, many children live in homes and families that are subject to the pressures of perennial unemployment, alcoholism and fragile family relations. Only a fraction of the colony’s children in this slum of 5000 and odd houses attend schools and that too schools that are marked as catering to the poorest section of the city’s population. The government’s only school within the community caters to only about thirty percent of the children and was built by a private charitable trust. The school, with classes 1 to 4, has two rooms in two different streets and is in a poor condition. But, two dedicated teachers assume multiple roles of being counselors, doctors, advisers and community mobilisers to the children and their families thereby assuring some schooling experience to at least some of the children. But, as they, and other teachers from the schools that these children attend, indicate it is hunger and

the restlessness that it engenders that keeps many children away from school. As economic pressures mount, children are withdrawn (mostly girls as domestic workers and boys as garage aids and errand boys) to support the family. And often it is the older children in the family who assume the roles of the parents and provide the child care services and in many cases, by being employed, provide the economic support for the education of their younger siblings.

Detailed observations from each of these sites can be supplemented with other sources of data. These additional data sources are: (1) Child-focussed interview schedules in which fifteen percent of school-going and out-of-school children from each site (approximately a thousand children), have been selected and interviews with their parents, teachers and the children themselves have been conducted; (2) Descriptions of a day in the life of the schools; (3) Focused group discussions with members and key actors in each community; and (4) Class-room observations with an emphasis on understanding the nature of classroom transactions in different types of schools. Details from the child-focused schedules help highlight the ways in which families, communities and states impact on the educational opportunities of children. Such data will enable us to understand inter-state/regional differences in educational opportunity and highlight ways in which the lives of children, especially the opportunity to be educated, is linked to the inputs of the family, community and state.

Linking administrative measures and orientations to factors such as parental involvement, teacher effects and community conditions will enable us to

identify the grounds on which schools can be “effective”. The issue of the impact of the curriculum to the knowledge base of communities and the relevance of formal education to the life opportunities of the people also need to be considered. Details from the interviews, observations and the histories of different schools should be used to indicate ways in which different persons, inputs, and practices enable schools to function effectively.



A preliminary overview of the above data sources indicate that several issues pertaining to the understanding of primary education – its structure, process, context and impact – need to be re-thought, especially if research is to contribute towards policy formulation. For example, the easy acceptance of poverty per se as the key factor for the non-enrolment of children in schools needs to be revised. As other studies have indicated and as is confirmed by this study, it is the lack of the functioning of viable and relevant schools that prevents many children from attending schools. In many ways, the acceptance, by members of the education administration and teachers, of poverty as the reason for poor enrolment in school has become a legitimising source for the absence of children from school. In addition, the idea that there is a persistence of urban bias in education needs to be revised as this study indicates the extent to which life in the urban, low-income zones, especially the slums, poses far more threats to the educational opportunities of children than in many rural areas. The recent focus on “communities” in the new primary education programmes requires more qualification and caution and should not be built on simplistic ideas of communities being able to manage and administer education programmes. The need of the hour is for the state to continue to be a key

provider and regulator of the education programmes, while seeking to generate a sense of ownership of schools among communities and addressing the sharp economic and social variations in different communities. As such the state needs to take a proactive approach and role if conditions such as that of child labour, early marriage, politicization and prevention of the functioning of schools, and persistent gender, caste and language based educational deprivation are to be addressed.

Out-reach and advocacy

Further plans are to develop an advocacy and out-reach programme with the findings of the study and to provide policy-level suggestions. Apart from publishing a full report of all the findings, separate reports for each of the sites will be developed and will be termed Local Area Education Report (LAER). The reports will be in the local languages and will be shared with members of the local bureaucracy, educationists, panchayat and nagar-palika members and NGOs.

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



Distinctions for NIAS Faculty

R Narasimha

Awarded the Fluid Dynamics Award for 2000 from the American Institute of Aeronautics and Astronautics, USA

Elected Foreign Associate of the US National Academy of Sciences, USA

Nominated a Member, National Security Advisory Board, Government of India

Nominated a Member, Consultant Group of Eminent Senior Scientists, Government of India



Important Events

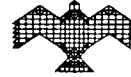
Complementing its research programmes, NIAS organises a variety of seminars, workshops, and academic courses each year. Some of the important events that were organised during the period from April to June 2000 included:

DISCUSSION ON US COMPUTER EXPORT CONTROLS

15 May, 2000

A half-day discussion meeting was held on the nature of US computer export controls, the new regulations and their implications. The objective of the meeting was to inform interested scientists, engineers, businessmen and decision-makers about the new regulations, and to discuss the technological and policy options for meeting Indian

computer needs. A detailed briefing on these issues was given by Dr V Siddhartha, Officer on Special Duty at the Secretariat of the Scientific Adviser to the Defence Minister, at this meeting.



R Narasimha

CISAC-NIAS DIALOGUE ON INTERNATIONAL SECURITY

22 – 24 May, 2000

This dialogue was held for the second time between the Centre for International Security and Arms Control, USA and the National Institute of Advanced Studies, Bangalore for three days, and covered a wide range of topics relating to arms race dynamics, Indian Nuclear Doctrine, Comprehensive Test Ban Treaty, and the role of nuclear weapons in international security. Seven members from USA and eleven members from India participated in the discussions, while some of these participants also presented papers on the topics mentioned above.

S Rajagopal

CONSULTATION ON WOMEN AND VIOLENCE

30 June, 2000

The Gender Studies Unit had organised a one-day consultation on "Women and Violence". The Director of NIAS, Prof R Narsimha gave the welcome address, while the introductory remarks were made by Dr Shantha Mohan, Fellow of the Unit. The Hon'ble Minister for Women and Child Development, Government of Karnataka, Smt Motamma inaugurated the meeting and delivered a very impressive keynote address.

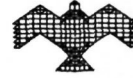
Dr B K Anitha, Gender Studies Unit, made a presentation on the findings that had emerged from a field study conducted through focus group discussions held with community people in the six districts of Kodagu, Chitradurga, Kolar, Bijapur, Koppal and Udupi. This was followed by an interactive session. The panelists of the interactive session comprised of Ms Gita Aravamudan (journalist), Mr Satyanarayan Rao (Director, Karnataka Police Academy), Ms Donna Fernandes (activist), Mr S K Chakrabarti (Principal Chief Conservator of Forests, Karnataka), Mr V V Bhaskar (Director, COD), Mr C Narayanswamy (ex-MP), Mr Palakshappa Poojar (Deputy Director, Department of Women and Child Development, Government of Karnataka). This session was chaired by Justice Shri Sadashiva (Chief Executive Chairperson of the Legal Aid and Services Authority, and Sitting Judge of the Enquiry Commission). These panelists responded to an interactive session which comprised of participants from the city as well as from the six districts where the study was conducted. The participants included NGO representatives, panchayat members, researchers, academicians, community people, police functionaries and the media.

The consultation concluded with a plan of action for the individual districts, prioritising on the issues that the communities had identified. The concluding session was chaired by Ms Ruth Manorama, President of the National Alliance of Women. (NAWO).

N Shantha Mohan



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.*

The Associates' Programmes during the period from April to June, 2000, included the following events:

28 April The future of Bangalore

K Jairaj

Commissioner, Bangalore City Corporation

23 May The energy-environment-development challenge

John P Holdren

Harvard University, USA



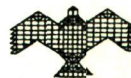
Wednesday Discussion Meetings

*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 April to June 2000 have included:

- 19 April Is disarmament doomed?
S Rajagopal
- 10 May An inordinate ability of
monkeys to remember ordinal
numbers!
Anindya Sinha
- 26 May Cow-dung, commerce and
conservation: The changing
face of natural resource
exploitation around Bandipur
Tiger Reserve
M D Madhusudan
- 31 May Ferns, fractals and
fundamental particles
Prabhakar Vaidya
- 7 June A critical review of mental
health care in India
R L Kapur
- 15 June Computer analysis and
recognition of ancient Indian
scripts – a case study of
Brahmi
H K Anasuya Devi
H N Vijaysimha
Sandeep Shinde
Swarup Kumar Sahoo
- 28 June The 'community gap' in
primary education
A R Vasavi

The **guest speakers** at the Institute during this period was:



- 3 May Life history evolution in the laboratory
Amitabh Joshi
Jawahar Lal Nehru Centre for Advanced Scientific Research, Bangalore
- 17 May Technical finger printing and stylistic authentication of south Indian metal icons
Sharada Srinivasan
Bangalore
- 21 June Ayesha's world: A butcher's family in 19th century Bombay
Asiya Siddiqi
Bangalore

THE NIAS LITERARY FORUM

A new forum, "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') reading of short stories and so on. These activities are aimed at providing complementary support to the Institute's more regular work. The activities are open to all members of NIAS fraternity. Currently, this forum aims to meet on one Wednesday every month. For more details about its activities, please contact **M G Narasimhan**.

On 26 April, 2000, the forum had organised a reading of a short story entitled "Everything that Rises Must Converge" by Flannery O'Connor. The story was read by Anindya Sinha, while Dilip Ahuja who had selected the story, led the discussion.

The forum had also organised a programme on 14 June, 2000, in which two short *chataquas* – Amar and Omega Minus – were narrated by Prabhakar Vaidya.

SPECIAL PROGRAMME

Dr Rama Melkote, Osmania University, Hyderabad, presented a video taken at the time of the arrival in India of the Pakistani delegates to the recent Indo-Pakistan meeting of the Citizens' Forum for Disarmament and Peace at Bangalore, on 10 April 2000.



Visitorships held by NIAS Faculty

Arvind Kumar was a Visiting Fellow at the Henry L. Stimson Center at Washington DC, USA, under its Visiting Fellowship (VF) programme during 1 April – 31 May, 2000. As a part of this programme, he interacted with key policy makers at the State Department, Pentagon, National Security Council, and the Department of Energy and had discussions on a number of important themes including nuclear issues, the future of Indo-US relations and matters related to international security. He also visited a number of important thinktanks working in the field of nuclear issues and south Asian security at Washington DC. At the Henry L. Stimson Center, he worked on a project on the National Missile Defense and its impact on south Asian security.

During this period, Arvind Kumar delivered a talk on "The rationale behind India going nuclear" at the School of Advanced International Studies (SAIS), Johns Hopkins University, Washington DC, on 12 April, 2000. He was also invited as a panellist on

a television discussion on “The emerging situation in the Indian subcontinent and future of Indo-Pakistan relations” at Washington DC, on 15 April, 2000. Finally, he attended the first week’s sessions of the VI Nuclear Non-proliferation Treaty (NPT) Review Conference at the United Nations headquarters in New York between 24 – 28 April, 2000.



Meetings attended by NIAS Faculty

Asha Ramesh

Participated as a resource person at the one-day training programme for elected representatives and women leaders of self-help groups, organised by the Grameena Mahila Okoota of Gram Vikas, the SRWK study partner of the Gender Studies Unit in Kolar district on 26 June, 2000. About 40 people – both men and women – participated in this meeting.

Dilip Ahuja

Presented a paper on **Promoting Environmentally Sustainable Transport: Developing a Strategy for GEF Operational Program Number 11** at the International Workshop on Transport Oriented Projects in the GEF Climate Change Focal Area, Paris, France, 4 – 5 May, 2000.

Participated in the STAP (Scientific and Technical Advisory Panel of the Global Environment Facility) Brainstorming on Power Sector Reform, Bangalore, 26 – 28 June, 2000.

N Shantha Mohan

Presented a report on **Panchayati Raj**, based on the recent study conducted by the Gender Studies Unit on the Gram Panchayat elections, at a national-level

consultation organised by the Institute of Social Studies Trust, Bangalore, on 1 June, 2000. Representatives from the four southern states, as well as a few other states, actively working to enable women's effective political participation, deliberated in this meet.

Sangeetha Menon

Participated in a three-week summer school on Working of Mind, held at the Indian Institute of Advanced Study, Shimla, from 2 – 24 June, 2000. She presented a paper entitled **Behind the Eluding: Tracing the Known and the Unknown** at this school.

S Rajagopal

Presented a paper on **The Future of CTBT and the Roles of India and USA in that Future** at the CISAC-NIAS Dialogue on International Security, NIAS, 22 – 24 May, 2000.

VISITORS TO THE INSTITUTE

Dr Mohammed Ayoob, Distinguished Professor of International Relations, Michigan State University, USA, visited the International and Strategic Studies Unit on 9 June, 2000.

Another visitor to the International and Strategic Studies Unit was Prof T V Paul, Associate Professor, Department of Political Science, McGill University, Canada, who was here on 20 June, 2000.

Finally, Dr Kenneth King, Assistant CEO, Global Environment Facility, Washington DC, USA, visited the Science and Technology Policy Studies Unit on 20 June, 2000.



Upcoming Events



A seminar on Infrastructure – Transport, Watershed Management and Water Harvesting and IT – in Construction Management is being organised on 1 July, 2000 by NIAS and the Alumni Association of Jadavpur University – Bangalore Chapter (AAJUB). For more details, please contact Maj Gen M K Paul (Retd) at mgp@nias.iisc.ernet.in

The Fourth NIAS Course for IFS Probationers will be held from 30 July to 5 August, 2000. The central theme of the course will be "India and the Oceans". For more information about the course, please contact Sangeetha Menon (smenon@nias.iisc.ernet.in).

The ISRO Training Programme is scheduled to be held from 6 – 11 November, 2000. The programme is being organised by Dilip Ahuja (dahuja@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





The NIAS Faculty

Prof R Narasimha (PhD Caltech)

Director

roddam@nias.iisc.ernet.in

roddam@caos.iisc.ernet.in

Dr Raja Ramanna (PhD London)

Honorary Professor

rr@nias.iisc.ernet.in

Prof S Rajagopal (BTech Guindy)

Homi Bhabha Chair, International
and Strategic Studies

rajgopal139@hotmail.com

Prof B V Sreekantan (PhD TIFR/Bombay)

S Radhakrishnan Chair,

Philosophy of Science

bvs@nias.iisc.ernet.in

Prof R L Kapur (PhD Edinburgh)

J R D Tata Visiting Professor

rlkapur@bgl.vsnl.net.in

Prof Dilip Ahuja (PhD Virginia)

ISRO Professor of Science and Technology
Policy Studies

dahuja@nias.iisc.ernet.in

Prof Prabhakar G Vaidya (PhD Southampton)

Professor

pgvaidya@nias.iisc.ernet.in

Prof C V Sundaram (DIISc)

Honorary Visiting Professor

cvs@nias.iisc.ernet.in

Prof K Ramachandra (PhD TIFR/Bombay)

Honorary Visiting Professor

kram@nias.iisc.ernet.in

Dr H K Anasuya Devi (PhD IISc)

Fellow, Epigraphy

hka@nias.iisc.ernet.in

Dr Shantha Mohan (PhD ISEC/Bangalore)

Fellow, Gender Studies

shantham@nias.iisc.ernet.in

Dr A R Vasavi (PhD Michigan State)

Fellow, Sociology and Social Anthropology

arvasavi@nias.iisc.ernet.in

Dr P K Shetty (PhD IARI)

Fellow, Environmental Studies

pks@nias.iisc.ernet.in

Dr B K Anita (PhD ISEC/Bangalore)

Research Fellow, Gender Studies

anibk@nias.iisc.ernet.in

Dr Sangeetha Menon (PhD Kerala)

Research Fellow, Philosophy of Science

smenon@nias.iisc.ernet.in

www.gallery.passion4art.com/members/smenon

Dr M G Narasimhan (PhD IISc)
Research Fellow, Philosophy of Science
narasim@nias.iisc.ernet.in



Dr Sundar Sarukkai (PhD Purdue)
Research Fellow, Philosophy of Science
sarukkai@nias.iisc.ernet.in
sarukkai1@yahoo.com

Dr Anindya Sinha (PhD TIFR/Bombay)
Research Fellow, Philosophy of Science
asinha@nias.iisc.ernet.in

Mr Arvind Kumar (MPhil JNU)
Research Associate, International and Strategic Studies
arvind@nias.iisc.ernet.in

Ms Pioush Antony (MPhil CDS/JNU)
Research Associate, Gender Studies
pantony@nias.iisc.ernet.in

Ms Asha Ramesh (BSc Karnataka)
Research Associate, Gender Studies
aramesh@nias.iisc.ernet.in

Mr C Srinath
Research Associate, Gender Studies
srinath@nias.iisc.ernet.in

Mr M D Madhusudan (MSc Saurashtra)
Research Scholar, Philosophy of Science
madhu@nias.iisc.ernet.in

Prof N Balakrishnan, Honorary Professor
Information Sciences Division,
Indian Institute of Science, Bangalore
balki@serc.iisc.ernet.in

Prof Vijay Chandru, Honorary Professor
Computer Science and Automation, Indian Institute
of Science, Bangalore
chandru@csa.iisc.ernet.in

Prof R K Kochhar, Honorary Professor
National Institute of Science,
Technology and Development Studies, New Delhi
rkk@csnistad.ren.nic.in

Dr A Ramachandran, Honorary Professor
Bangalore

Prof D P Sen Gupta, Honorary Professor
Electrical Engineering,
Indian Institute of Science, Bangalore
dps@ee.iisc.ernet.in

Dr H N Sharan, Honorary Professor
Netpro Renewable Energy India Ltd, Bangalore
netpro@blr.vsnl.net.in

ADMINISTRATION

Maj Gen M K Paul VSM (Retd) (BE Jadavpur)
Controller
mgp@nias.iisc.ernet.in

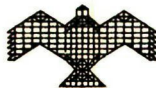
LIBRARY

Ms Hamsa Kalyani (MLISc Bangalore)
Assistant Librarian
niaslib@nias.iisc.ernet.in

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.

Sangeetha Menon



Prof R Narasimha
Director
National Institute of Advanced Studies
Indian Institute of Science Campus
Bangalore 560012, India
Tel: 91-80-3344351, 3462050
Fax: 91-80-3346634
Telex: 0845-8349 IISC IN
Email: niasoff@nias.iisc.ernet.in
URL: www.iisc.ernet.in/nias/

Published by National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore 560 012 and printed by Verba Network Services, Bangalore

For Private Circulation only