



NIAS

NEWS

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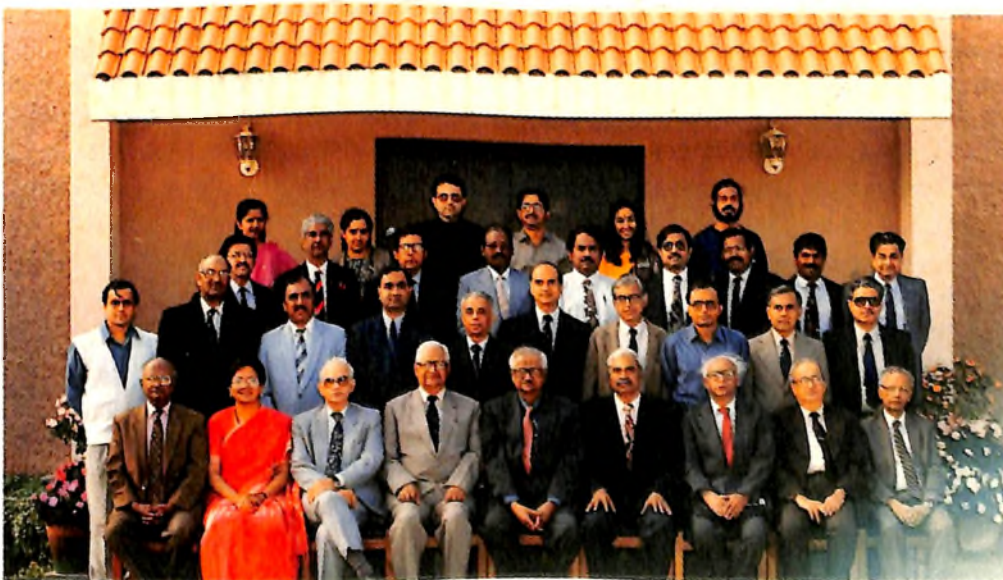
Saturday, 1st July 1995

No. 1

This Sixth issue of the NIAS Newsletter covers the activities of the Institute for the period from January 1, 1995 to June 30, 1995. In keeping with the tradition of NIAS the first half of 1995 has been packed with courses, seminars, workshops, faculty and guest lectures, apart from Associates programmes.

The ninth NIAS course on "An Integrated Approach to Knowledge and Information" for senior executives was held between January 9, 1995 and February 4, 1995. The participants were an appropriate blend of devoted executives from the Government, Industries, Defence Services etc. This course was inaugurated by Mr. M.Y. Ghorpade, Former Minister for Rural Development and Panchayat Raj. The topic of his inaugural lecture was "Grass Roots Democracy". The valedictory address was given by Dr. G.V.K. Rao and the topic of his address was "Investments and Agriculture". The varied subjects covered in the Course were Advances in Space Technology, Non-conventional energy sources, Recent advances in medicine, Materials and society, Constitution and the law, New advances in Bio- technology, Philosophy and Technology, Astronomy, Current trends in Indian society, National and inter-national politics, Brain and its functions, Organisational behaviour in Indian culture, Population policies in India, appreciating Indian architecture etc.

Highlights of evening lectures were Mr. Mark Tully's "My life and my work", Dr. Raja Ramanna's "Security", and Mr. Sudeep Banerjee's "Adult literacy programmes in India". In addition, there were symposia on "Indian industry : New opportunities and challenges" and "Relevance of Gandhi to modern India".



Participants of the Ninth NIAS course with the Faculty

The Institute is preparing for the third NIAS course on "An Integrated Approach to Knowledge and Information" for University/College teachers, scheduled to be held between July 3, 1995 and July 29, 1995. The response from prospective participants from various colleges and universities in the country has again been very encouraging. This Course is jointly

sponsored by Jawaharlal Nehru Centre for Advanced Scientific Research, University Grants Commission and NIAS.

An Indo-US joint non-official meeting on "Technology Transfer and Non-proliferation" had been held between January 17-19, 1994 at NIAS. Thereafter, Dr. Raja Ramanna attended a unique conference on Arms Control in South Asia, at Shanghai known as "SHANGHAI Conference" during February 23-26, 1994. As a follow-up of the SHANGHAI Conference, a meeting was held at Goa in mid-January 1995. Senior level participants from China, India, Pakistan and United States met at this workshop sponsored by Centre for Policy Research, New Delhi. The aim was to discuss the linkages between regional and global arms control. The conference brought together representatives from four distinct cultures and national ideologies in an informal, non-official setting. Dr. Raja Ramanna was the leader of the Indian team.

An International Workshop on "Qualitative Methods in Mental Health Research" was held at NIAS during April 10-12, 1995. The Workshop was organised by NIAS and was supported by International Development Research Centre (IDRC), Canada. A report on the Workshop appears elsewhere in the Newsletter.

Other interesting Workshops on "Human Rights" at the Karnataka Police Academy - Mysore were organised by NIAS at the request of Prof. N.R. Madhava Menon, Director of the National Law School of India University. A brief report on these also appears elsewhere in the Newsletter.

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THE FACULTY

UNIT : HEALTH AND HUMAN BEHAVIOUR

This unit is engaged in two major projects.

a) CREATIVITY AMONGST INDIAN SCIENTISTS:

The first project entitled "Creativity amongst Indian Scientists" is supported by the Institute funds and is being conducted by Prof. R.L. Kapur with the assistance of Ms. Susmita Subramanyam, Research Associate. The first two stages consisting of a development of a definition of Creativity, and to explore those psycho-social issues which might be related to low productivity in Indian scientists and the selection of creative scientists from the Indian Institute of Science through a process of peer evaluation have been completed. In the third stage ten scientists recognised as creative by their own peers and ten other scientists randomly selected from the senior faculty of the Indian Institute of Science are being interviewed in great detail regarding the psychological processes related to their research work. The third stage is now in progress and will be completed in the next three months. Thereafter the report will be ready by December, 1995.

b) A PSYCHO-SOCIAL STUDY OF ALIENATION AMONGST INDIAN YOUTH:

The second project entitled "A Psycho-social study of Alienation amongst Indian Youth" being conducted by Prof. R.L. Kapur as the Principal Investigator and Dr. Biswajit Sen as the Co-investigator is supported by Defence Research Development Organization. This project aims to examine the responses of the youth to the socio-political climate in terms of whether they are committed to a violent response or to a socially constructive response. The work has been done through a large scale survey of the youth throughout the country. The results of the survey are ready and have been shared with the faculty of NIAS as well as DRDO. The results of individual interviews are now being analysed and the process would be completed by August, 1995. The final report on the project will be ready by December, 1995.

UNIT : PHILOSOPHY OF SCIENCE.

Work is in progress in Philosophy of Science and Technology. The work of Epistemology and Philosophy of mathematics is near completion. A paper on Technology and objectivization is also near completion. As reported earlier this new unit is constituted by Dr. Raja Ramanna, Prof. B.V. Sreekantan and Dr. Sundar Sarukkai.

UNIT : WOMEN'S POLICY RESEARCH AND ADVOCACY (WOPRA)

The WOPRA Unit was set up to impact positively on the status of women through research and advocacy. The Unit has been involved in the following activities over the last six months.

Study of the Status of Women in Karnataka:

This study aims to assess the status of women in Karnataka state through both primary and secondary research data. The team has collected both quantitative and qualitative secondary data, which are currently being analysed. Issues for primary research have been identified in consultation with NGOs and academic experts, and a tentative questionnaire has been prepared for pre-testing.

Advocacy:

The Unit is a part of the national task force that has undertaken to prepare a non-governmental alternative report to be submitted to the UN Committee on the "Elimination of All Forms of Discrimination Against Women" (CEDAW). The recommendations and strategies which emerged out of the 'National Working Conference on Women and Literacy' jointly organised by the Unit and the UNESCO Institute of Education (Hamburg, Germany) will be tabled at the UNESCO Asian Regional Conference on Women and Literacy at Manila this June.

As a member of different committees at the state and national level (such as the Karnataka Chief Minister's Expert Committee to revise the Panchayati Raj Act), Ms. Srilatha Batliwala has been involved in advocating changes in legislation, government policies and programmes. Through her work for DAWN (Development Alternatives with Women for a New Era - a south-based International Women's network) and ASPBAE (Asia- South Pacific Bureau of Adult Education), she has been involved in advocacy at the international level.

UNIT : ENVIRONMENT

Dr. P.K. Shetty has initiated work on a research project, sponsored by the Department of Atomic Energy on "Bio-remediation of Pesticide Contaminated Agricultural Soils and Effluents". He will be collaborating with Prof. K.M. Madyastha, Department of Organic Chemistry,

Indian Institute of Science, Bangalore and Dr. K. Raghu, Head, Nuclear Agriculture Division, Bhabha Atomic Research Centre, Bombay. This is the first experimental project wherein both IISc and NIAS are closely associated with each other.

The primary purpose of the research task is to evolve methods for de-contamination of pesticide-polluted soils in and around Bangalore through bio-remediation techniques. For the laboratory experiments, two of the most commonly used pesticides are being selected through a field survey conducted by the Institute. Experiments will be conducted to enrich and isolate micro-organisms, capable of degrading the pesticides of interest and also to identify the key parameters/processes that would have to be modified in order to enhance the rate and the extent of bio-transformation. The project duration is three years, starting from June 1995.

Presently Dr. Shetty is also guiding three research students from Bangalore University in their project work.

UNIT : EPIGRAPHY CENTRE

NIAS has recently taken up a programme relating to epigraphic studies, with the possible use of the computer. This study is being undertaken by Dr. Anasuya Devi, Research Fellow. Epigraphy came into existence as a gift deed, involving documentation and analysis of ancient texts. Pervading many interdisciplinary areas, it is the study of inscriptions written on materials such as stones, seals, palm leaves, coins, silver plates, copper plates etc. from the earliest civilization through the present day, their interpretation and classification.

The emergence of the computer as a symbol processing machine has opened vast possibilities of examining questions concerning articulation, decipherment and interpretation of these inscriptions. Bridging the gap between the epigraphy and the researcher is a difficult task. Much has been said about the necessity of linking the two, but there has been relatively little work on developing computational models using Artificial Intelligence techniques. A knowledge based system for epigraphy should be able to create an environment for the epigraphists to interpret and make references to the visual world for machine readability. The building of an expert system

should greatly enhance the performance of the computer epigraphy system.

An exploratory meeting has been held with epigraphists of experience at the Archaeological Survey of India, Mysore - to select an area for initial collaboration.

The objectives in the proposed activity will include:

- i) To create a computer based technology environment to aid in the analysis and interpretation of epigraphic material.
- ii) The computerized environment, it is hoped, would eventually enable the 'domain expert' to undertake new forms of analyses and address issues not contemplated so far, at a much faster rate.

In this regard the background study has already been completed.

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VISITING CHAIRS

HOMI BHABHA VISITING CHAIR - PROF. C.V. SUNDARAM

The Homi Bhabha Chair is presently devoted to studies concerning Energy options, Advanced Materials development and issues relating to Environmental Impact.

During the period under review, a survey was made on public perceptions that are affecting the pace and course of atomic energy development, in India and other parts of the world. On the one hand, the demonstration of technological feasibility of a variety of nuclear power reactors and the sustained and substantial contribution of nuclear power stations to world electricity generation have given the atomic energy establishments in many parts of the world a legitimate sense of achievement and pride. At the same time, the fact remains that the high expectations of growth that were raised in the public mind during the 1960's and the early 70's, have not been realised. Following the panic that was caused by the two nuclear accidents, the first at Three Mile Island in USA in 1979 and the second at Chernobyl, in the former USSR in 1986, public confidence in the safety of nuclear reactors had been rudely shaken

up, and fears and doubts still linger in the public mind, notwithstanding the excellent records of safe and economic nuclear power generation in countries like France and Japan. The Atomic Energy Establishments may have been guilty of 'over-promising'; they have also been accused of being 'condescending' in their attitudes to genuine public fears about 'radiation', and of not being frank and prompt in sharing information. Superimposed on this, is the fear that a world-wide spread of nuclear power can provide opportunities for nuclear proliferation, and encourage irresponsible acts by immature politicians and communities.

It is an interesting situation of many challenges - technological, political, and even psychological. While pursuing the technological goals, the S and T community has to devote an equally organised effort to allay the genuine concerns in the public mind, with a high sense of participation. The political problem of controlling nuclear proliferation is even more formidable - which requires a series of confidence-building measures and the evolution of effective mechanisms of control, side by side with wisdom and courage of a high order on the part of all nations.

When we become more and more aware of the diminishing resources of fossil fuels and of the adverse consequences of too rapid a consumption of these fuels, and also realise that options like solar energy are still a long way from a stage of large scale commercial demonstration adequate to meet the energy demands of the world, it will be worth every effort on the part of society as a whole to establish nuclear energy as a safe, reliable and economic energy source in the interim time frame - until more attractive options become firmly available.

J.R.D. TATA VISITING CHAIR - PROF. M.N. SRINIVAS

The main project which Prof. M.N. Srinivas is engaged in is the portrayal of cultural and social changes which have occurred in the country during his life. An important part of this project is concerned with his training as a sociologist/social anthropologist at the universities of Mysore, Bombay and Oxford and his subsequent contribution to the teaching and development of sociology in Baroda, Delhi and Bangalore. The

format he has chosen to do this is an autobiography.

**DR. S. RADHAKRISHNAN CHAIR -
PROF. B.V. SREEKANTAN**

Prof. B.V. Sreekantan is preparing a consolidated report on the different approaches to consciousness studies that he has compiled over the past two years.

A paper entitled "Correlations in the Masses, Lifetimes of Radionuclides and Fundamental particles" by Dr. Raja Ramanna and Prof. B.V. Sreekantan has been published in the first week of May, 1995 issue of Modern Physics Letters 'A'. The technical book "Extensive Air Showers" written by Prof. B.V. Sreekantan in collaboration with Prof. M.V.S. Rao of Tata Institute for Fundamental Research is undergoing final revision of the manuscript and will be sent to the publisher in early July.

SIR ASHUTOSH MUKHERJEE CHAIR

A Visiting Chair in the name of the renowned educationist Sir Ashutosh Mukherjee is going to be instituted shortly. This chair will be supported by M/s. Peerless General Finance and Investments Company Limited, Calcutta.

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ASSOCIATES PROGRAMME

During the first half of 1995, there has been a few additions in the Associate membership. The present situation is as under:-

All India membership - 333 (including 191
participant Associates)
Local Associates - 95 (including 11
participant Associates)

The topics of the Associates Programmes during this period were:-

1. January 13, 1995 - A talk on "MY LIFE AND MY WORK" by MR. MARK TULLY.

Mr. Mark Tully was the Chief of Bureau for BBC, New Delhi from 1971 to 1993. From 1993 to 1994 he was the South Asia Correspondent to BBC, New Delhi.

His talk was organised both as an evening lecture for the Ninth NIAS Course, as well as a

part of Associates Programme. Mr. Tully spoke about his impression of Indian society and later contrasted it with the direction the Western societies were going in. Two important points made by him dealt with the process of 'westernization' of India and the perceived role of the caste system. It was his view that as India begins to imitate various facets of the West, especially in the commercial arena, the character of Indian society gets diluted. He spoke on the need to cultivate the Indian languages while stressing that the fascination for English had created an elite class in our country. He also briefly touched upon the nature of Indian democracy and suggested that it could be modified to take into account the structure of our society. His comment that caste system should be seen in a proper perspective even given its abominable practices, gave rise to a vigorous debate.

2. March 10, 1995 - A lecture on "THE RESILIENCE AND PRACTICAL UTILITY OF DEMOCRACY IN INDIA" by PROF. JAMES MANOR.

Prof. James Manor is no stranger to India. He has extensively studied the Indian political system.

Briefly the theme of his talk was that the 'decay' in politics and political institutions which are being alluded to too often these days, needs to be understood properly. Along with this sense of decay, there are positive, creative responses to the needs of our society. This political regeneration was discussed in detail. Decayed political institutions are rebuilt in various ways. New forms of institutions, like the Mandal Panchayats of Karnataka, are another form of this regeneration. Another important type refers to individuals or groups who uphold certain political or constitutional ideals. That criminal cases are very rarely brought against politicians and that they are rarely convicted, was a strong failure of the judicial system. But the press has evolved its own way of accountability through exposures of corruption. The impetus for changes comes from the powerful voice of the people during election time. Governments or leaders are rejected and the system of regeneration is put in place. He concluded by saying that although decay seems to be prominent now, the nascent process of regeneration leaves enough hope for creative change.

3. April 28, 1995 - A talk on "THE ROLE OF SUBJECTIVITY IN SCIENCE" by PROF. A.N. MITRA formerly Einstein Professor of Indian National Science Academy. A brief on his talk appears elsewhere in the NIAS NEWS.

4. May 26, 1995 - A lecture on "CO-OPERATION AND CONFLICT IN INSECT SOCIETIES" by PROF. RAGHAVENDRA GADAGKAR of Centre for Ecological Sciences, IISc and JNCASR.

The main theme of this presentation was that both co-operation and conflict are inevitable in any group of interacting entities, be they groups of interacting molecules or nations. It was suggested that there are some general rules that govern the balance between co-operation and conflict which are independent of the level of complexity of the interacting entities. In an attempt to unravel such rules Prof. Gadagkar has chosen paper wasps as a model system. These insect societies contain sufficient complexity to make their analysis interesting but at the same time they are eminently amenable to experimental manipulation. Using a combination of theoretical models and experimental data, Prof. Gadagkar demonstrated a number of examples of co-operation and conflict in these insect societies. He showed how genetic relatedness between the interacting partners is only one of the many factors that modulate co-operation and conflict. Above all, this lecture brought home to the audience the incredible complexity and flexibility of the behaviours that insects can perform. Many of the behaviours he described were tantalizingly reminiscent of co-operation and conflict in human societies.

5. June 30, 1995 - A lecture cum video demonstration on "REHABILITATION IN THE AREA OF MENTAL HEALTH" by DR. S. KALYANA SUNDARAM, Secretary, Richmond Fellowship Society of India, Bangalore Chapter.

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**INTERNATIONAL WORKSHOP ON
"QUALITATIVE METHODS IN
MENTAL HEALTH RESEARCH"
(A REPORT BY DHANU NAYAK)**

The Institute held an international workshop on "Qualitative Methods in Mental Health

Research" from April 10- 12, 1995. The workshop was organized under the initiative of NIAS and was supported by the International Development Research Centre (IDRC), Canada. Prof. R.L. Kapur (Deputy Director, NIAS) was the convenor of the workshop.

The international faculty were from a variety of disciplines and countries. Disciplines such as medical and social anthropology, psychiatry, clinical psychology and health sociology were well represented. The faculty were from USA, UK, Canada, Israel and India. They included Dr. Arthur Kleinman (Anthropology and Psychiatry, Harvard University; U.S.A.), Dr. Roland Littlewood (Anthropology and Psychiatry; University College, London, U.K.), Dr. Anwar Islam (Sociology; IDRC, Canada), Dr. Gilles Bibeau (Medical Anthropology; McGill University, Canada), Dr. Vivian Khamis (Health Sociology; Bethlehem University, Bethlehem), Dr. Veena Das (Social Anthropology; Delhi School of Economics, New Delhi), Prof. M.N. Srinivas, (Social Anthropology; NIAS, Bangalore) and Prof. R.L. Kapur (Psychiatry; NIAS, Bangalore) besides others.

There were 30 participants who were largely young researchers (psychiatrists, psychiatric social workers and clinical psychologists) from different states of India and also from Nepal, Bangladesh and Iran.

The workshop was the first of its kind to be held in India. It is of particular importance at a time when research is dominated by quantitative methods such as survey techniques, standard statistical methods and the increasing use of computerized packages, in the use of which significant data is lost in the process of translating essentially qualitative information into quantitative terms. The workshop dealt with alternative, and many times complementary, methods by which such loss of information is mitigated during the collection and analysis of data. Some of the methods were narrative analysis, visual anthropology, focus group techniques and participant-observation.

The workshop was divided into lectures which covered the fundamentals of various kinds of methods, as well as shorter presentations by faculty of work they have done using qualitative methods. An entire session was devoted to the interface of quantitative and qualitative methods

using computer packages. Lastly, the participants were divided into small groups, headed by a faculty member, where synopses of research proposals of participants were discussed.

The diverse fields of study and experience of the faculty and participants enabled a genuine discourse across disciplines and gave a new meaning to interdisciplinary studies in the subcontinent.

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ROLE OF SUBJECTIVITY IN SCIENCE - PROF. A.N. MITRA

The essential theme of Prof. A.N. Mitra's talk was to put in perspective some standard perceptions of Science as a (purely objective) interplay between "theory" (calculus of logic and mathematics) and "experiment" (empirical matters of fact and data) in the sense of an airtight framework which does not permit the intrusion of any other dimension within this scenario. The scope for such intrusion comes about from a vital ingredient - the "thematic" component [G. Holton] - which has since the days of Kepler and Newton been (surreptitiously?) playing a crucial underlying role in the shaping of all major scientific theories to date. It is a nebulous concept which defies a quantitative definition and cannot even be subjected to a standard theory vs experimental test! [This is not in conflict with the Popperian definition of Science, viz., its "falsifiability", since the latter refers only to its 'structured' part but not to its 'spirit' which resides only in the human mind and is beyond any such 'verdict']. It is the role of this element in Science which turns out to be largely **subjective** in nature and content.

Now the thematic element itself admits of two further classifications according as its 'subjectivity' is in the plane of abstract scientific thought itself, or at a more mundane level of human behaviour and interactions. The abstract aspect in turn may be divided into three categories according to its **degree of acceptability** in the scientific world, viz., 'Principles', Postulates and 'Prejudices'. Principles (e.g., Fermat, Hamilton, Relativity,

Uncertainty, Second Law of Thermodynamics) are so well tested in the plane of theory versus experiment over long periods of time, that they are now a part of the scientific discipline itself. At the other extreme lie the so-called 'Prejudices' in scientific thought (e.g., naturalness, beauty & simplicity, Duality in Science, Bootstrap philosophy, Shell-structure and infinitum) which are more nebulous in character and despite their instant appeal, resist structured formulations (towards theory vs experiment confrontation). 'Postulates' occupy an intermediate position between these two.

The above type of subjectivity injects a sort of "value judgement" on the thematic component and operates only in the abstract plane. The other aspect of subjectivity (developed by Thomas Kuhn) deals at the **human** level and is more reminiscent of socio-political revolutions. This has to do with an element of 'struggle' among several competing ideas (Paradigms) in which the "fittest" (with maximum internal self-consistency) are given the best chance to survive. This implies a 'preselection' with its **arbitrary element** to 'decide' on the further evolution of the concerned scientific discipline, to the exclusion of parallel ideas. This is a highly constraining situation, one in which the prospective worker is expected to think within pre-existing 'conceptual boxes', and therefore strongly discourages novelty of ideas, since the 'chosen belief' gets entrenched with time due to the commitment of a large band of competent workers. Yet in the long run an inherent 'governor' mechanism within such "Normal" science prevents any indefinite suppression of novelty. For, in response to the exigencies of fresh experimental challenges, the so-called 'anomalies', it often becomes necessary to invoke a new 'Paradigm'. And when the challenge assumes a colossal form, the situation takes the shape of a "Scientific Revolution" (e.g., Copernicus, Newton, Lavoisier, Einstein and Quantum Theory among the major ones).

This process has a strong resemblance to political revolutions, since a choice between competing paradigms is like one between incompatible modes of community life. And in this struggle, the final arbiter is the "assent of the

community". In this scenario, Science has a two-fold role in which the objective part concerns only the impact of Nature and logic, but the major part of the activity, namely the techniques of persuasive argumentation, is a highly subjective exercise. The latter shatters the myth about the intrinsic objectivity of Science in favour of a more "chauvinistic" view somewhat analogous to the Darwinian view of a natural selection process through the survival of the fittest. Thus Science has a dual personality : i) the objective (detached?) aspect of laboratory investigation ; ii) the subjective (ego?) aspect of competing paradigms. And frequently the latter dominates the former.

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REPORT ON DST PROJECT - 'FORMULATION OF CRITERIA FOR EFFECTIVE R&D FUNDING'

There are quite a number of government agencies in India providing funds for Science and Technology research in various disciplines. Individual agencies follow their own criteria and procedures in the selection of projects and institutions to be supported, and monitoring of the progress. A study has been undertaken to review the present system and make recommendations towards improvement so that S&T funding in India is better co-ordinated between the agencies.

Following visits to various funding agencies in Delhi in September-October 1994 by Dr. V. Suchitra Mouly to gain a first hand impression, meetings were held with the experts from the fields of electronics and materials science to obtain their impressions of the development status in these areas and their projections for the future.

A questionnaire was developed and distributed across research institutions to obtain responses from Scientists and Engineers regarding the present S&T funding practices. The themes covered in the questionnaire dealt with the initiation and submission of project proposals, peer review mechanism, budget sanction, evaluation of completed projects, follow-up, identification of thrust areas etc. and also possible steps for promotion of

second line institutions. Responses to the questionnaire are being analyzed.

Dr. Suchitra Mouly made field trips to a few selected institutions such as an Indian Institute of Technology, a Regional Engineering College and a University to understand the problems faced by researchers at the different institutions, in obtaining research grants. She has held discussions with senior scientists heading mission programmes, Inter University Consortium for DAE facilities etc. to know how they view the present system. She has also visited a successful industrial research laboratory in the private sector.

An interim report on the findings so far is being sent to the DST.

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VISIT BY DR. C. SUBRAMANIAM

Dr. C. Subramaniam accompanied by Prof. Ananda Krishnan, Vice Chancellor, Anna University, Madras and some other leading industrialists visited NIAS on March 3, 1995.

Dr. Raja Ramanna, after briefly introducing the faculty and staff to the visiting dignitary, outlined the activities of the various faculty of the Institute and the relevance of the projects undertaken by them. The need for collaboration between research centres and the industries in the wake of the changing economic scenario was also stressed.

Prof. R. L. Kapur underlined the philosophy of the Institute which aims to adopt a multi-disciplinary approach, bringing a blend of physical, biological and social sciences. While



Dr. C Subramaniam and Dr. Raja Ramanna during the former's visit to NIAS

highlighting the activities of his unit, he also mentioned about the study undertaken by the **Women's Policy Research and Advocacy Cell**. Professors M. N. Srinivas, B. V. Sreekantan and C. V. Sundaram, our Visiting Professors explained the activities in their areas of responsibility.

Dr. C. Subramaniam in his brief talk, expressed his happiness about the establishment of an Institute of this character in the country. He emphasised the importance that the country has to lay on improving the "quality of life". The need to improve the overall status of women is an important component of this index. He also cited the importance of the role of Education in realising the above objectives.

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GUEST SPEAKERS

1. Mr. G. Ramesh is a senior correspondent with PTL, Madras. He has translated many books on Philosophy into Tamil. He is also a well-known writer of Tamil fiction.

(a) March 15, 1995 - Mr. Ramesh spoke on **FOUCAULT'S 'ORDER OF THINGS'**.

This talk was a summary of the influential book 'Order of Things', by the renowned French Philosopher, Michel Foucault. Foucault mines the human sciences to see hidden structures which have helped shape the growth of disciplines like economics and psychology. One of the major themes discussed was that of 'episteme', which, like a paradigm but different from it, shapes the view which influenced the way human sciences developed till around 1950.

(b) March 16, 1995 - Mr. Ramesh also spoke on **HISTORY OF TAMIL LINGUISTICS**.

This talk summarized the growth of Tamil linguistics starting with the sourcebook of Tamil grammar, Tholkappiyam.

Various rules of linguistics as enumerated in these books and as developed by many other scholars, including the Jain Munis of Medieval India, were also described.

2. Prof. B.R. Sharma, renowned Sanskrit Scholar spent a few days at NIAS. He gave two talks to the faculty:

(a) May 9, 1995 - **ORIGIN OF THE VEDAS** - Prof. Sharma gave a general introduction to the Vedas. The Vedas belonged to an oral tradition and the collection was itself called Brahma, which means first. The name as Veda came after the great scholar, Veda Vyasa, who compiled the collection into four Vedas. Veda means knowledge and also refers to a small brush used to clean sacred places. The Rig Veda is the oldest of the Vedas and mainly comprises mantras in praise of deities of nature. Sama Veda is composed in Vedic meter. The recension of the Vedas were also discussed. One of the important points dealt with the presence of women Rishis as described in these texts. A short introduction to the account of cosmic evolution as described in the Rig Veda was also given. The date of origin for Rig Veda is till a matter of debate.

(b) May 18, 1995 - **PRONOUNCIATIONS OF SANSKRIT** - Prof. Sharma also gave a basic introduction to Sanskrit grammar, as enunciated mainly by Panini. He dealt with phonemes, phonetics and pronunciation. Some phonemes used in the Vedas have disappeared. The classification of phonemes was based on how the sound is articulated by us. The common presence of diphthongs in Sanskrit and European languages was also mentioned. There were interesting examples of how the sounds change depending on the geographical region. The presence of 'zha' in Tamil and Malayalam, the mutation of 'ya' to 'ja' in Bengal and Orissa, the pronunciation of 'sha' as 'kha' in Punjab, the use of 'la' instead of 'tha' in Kerala by the Namboodri Brahmins, were some of the interesting points discussed in detail.

3. May 20, 1995 - Ms. Chitra Sundaram Anand - **"FOCUS ON WOMEN EXECUTIVES - A CAREER PERSPECTIVE"**.

Ms. Chitra S. Anand from Chase Manhattan Bank, New York, Vice President in charge of Global Funding Relationships and Structured Products gave a lecture entitled, "Focus on Women Executives - A Career Perspective".

A substantial part of the lecture was organised around two surveys conducted by Korn-Ferry, a research organisation in London; one in 1982 and another in 1992. The survey covered, 2,000 and odd senior women in Fortune 500 companies. The comparative figures for 1982 and 1992 show positive trends; there are more women in senior decision making positions in this decade; more

women are managing the pressures of a career and the home, and many more women are entering industrial conglomerates. However, the survey data also indicated that there is a low representation of women in senior positions. In addition to their careers, women also take up the primary responsibility of household tasks and child-care. Some women in the survey have reported sexual harassment at the workplace. There are fewer women in industrial conglomerates when compared to other sectors.

Discussing strategies to eliminate discrimination in industry, Chitra suggested that men who are in senior positions need to create space for women to use opportunities and will have to arrive at what is referred to as the "comfort-zone with women". More women need to have a policy to deal with sexual harassment, more women need to become mentors, and women in the corporate sector need to form networks.

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**LECTURES/ADDRESSES/SEMINARS/
RESEARCH/PUBLICATIONS/
PRESENTATIONS BY NIAS
FACULTY**

(FROM JANUARY 1, 1995 TO JUNE 30, 1995)

**DR. RAJA RAMANNA
DIRECTOR**

1. January 16, 1995 - Participated in the Shanghai Initiative Round II Conference held in Goa.
2. January 18, 1995 - Foundation-Day lecture on "Scientific Research and Government Support" and Piano Recital at the National Institute of Oceanography, Goa.
3. January 25, 1995 - Lecture on "Security" to the 9th NIAS Course participants at NIAS.
4. February 10, 1995 - Foundation-Day lecture at the Central Building Research Institute, Roorkee.
5. March 5, 1995 - Valedictory Address to the participants in the Symposium on "Law, Judiciary and Economic Reforms" organised in connection with Dr. P.S. Lokanathan's Centenary Celebrations at

the Institute for Social and Economic Change, Bangalore.

6. March 31, 1995 - Lecture on "The Structure of Music" to the Members of the Bangalore Club, Bangalore.
7. April 5, 1995 - Inaugurated the National Seminar on "Man, Industry and Environment" organised by the Department of Environmental Science, Bangalore University, Bangalore.
8. April 10, 1995 - Inaugurated the International Workshop on "Qualitative Methods in Research".
9. April 11, 1995 - Piano recital to the participants at the International Workshop on "Qualitative Methods in Research" at NIAS.
10. April 24, 1995 - Lecture entitled "On the Correlations of Masses and Lifetimes of Radio-nuclides and Fundamental Particles" to the students of the North-Eastern Hill University, Shillong.
11. April 26, 1995 - Lecture on "Liberalisation and Science & Technology Research" to the members of the State Council of Science, Technology and Environment, Government of Meghalaya, Shillong.

PUBLICATION:

1. A paper entitled "Correlations of Masses and Lifetimes of Radio-nuclide and fundamental particles" by Dr. Raja Ramanna and Prof. B.V. Sreekantan published in the first week of May, 1995 issue of Modern Physics Letters 'A' Vol. 10, No.9, 1995. Pages 741-753.

**PROF. R.L. KAPUR
DEPUTY DIRECTOR**

LECTURES:

1. March 4, 1995 - Lecture on "Violence Amongst the Indian Youth" delivered at J.S.S. Training Institute for Competitive Examination (JSSTICE), Bangalore.
2. April 3-5, 1995 - Participated in a workshop on "Violence, Political Agency & the Construction of the Self" organised

by the Rajiv Gandhi Institute for Contemporary Studies, New Delhi.

3. April 6-8, 1995 - Presented a paper on "Mental Health Care in India & the Global Context - An Examination of Historical Developments and Suggestions for Future Policies" at the seminar entitled "World Mental Health: Problems and Priorities in Low Income Countries", organised by Rajiv Gandhi Foundation, New Delhi.
4. April 10-12, 1995 - Organised a 3-day International Workshop on "Qualitative Methods in Research" for Mental Health Researchers.
5. May 3-5, 1995 - Conducted a 3-day workshop on "Motivating Police Officers Towards Respect for Human Rights" for police personnel at Policy Academy in Mysore and presented a paper with Ms. Susmita Subramanyam on "Understanding Human Behaviour: Some Psychological Considerations for Promoting Sensitivity to Human Rights"

UNDER-PUBLICATIONS:

1. "Mental Health Care in India & the Global Context - An Examination of Historical Developments and Suggestions for Future Policies"
2. "Understanding Human Behaviour: Some Psychological Considerations for Promoting Sensitivity to Human Rights" by Prof. R.L. Kapur and Ms. Susmita Subramanyam.

PROF. C.V. SUNDARAM HOMI BHABHA VISITING PROFESSOR

LECTURES:

1. January 13, 1995 - Lecture on 'Materials and Society' at the 9th NIAS Course.
2. January 28, 1995 - Talk 'On Gandhi', in the Symposium on 'Gandhi and his relevance to present-day India' at the 9th NIAS Course.
3. April 6, 1995 - Lecture on 'Processing of Nuclear Materials' in the Refresher

Course for Chemistry Teachers in Engineering Colleges, on 'Chemistry of New Materials' at the Department of Chemistry, Central College, Bangalore.

4. May 20, 1995 - Valedictory lecture on 'Nuclear Energy Development' at the Summer Science Course at Mahajana Education Society, Mysore.
5. June 5, 1995 - Two lectures on 'Ancient and Modern Metallurgy in India' in the course on History of Science at the The Institute of World Culture', Bangalore.

PUBLICATIONS:

1. 'Thoughts on Humanism and the Gandhian approach' (Invited article for the special publication on 'Facets of Humanism', The Institute of World Culture, Bangalore.)
2. 'Aspects of Beryllium Metallurgy - the Indian Experience', (for the special issue of the Journal of the Electrochemical Society of India, June 1995)
3. 'History of Metallurgy' (Invited contribution for the volume on History of Science in India, Editor B.V. Subbarayappa)

PROF. M.N. SRINIVAS JRD TATA VISITING PROFESSOR

LECTURES:

1. January, 1995 - "Social Impact of Electronic Media", National Seminar organised by Centre for Media Studies, New Delhi, at Bharatiya Vidya Bhavan, Bangalore.
2. January 28, 1995 - Talk on "Gandhi's Religion" in the Symposium on "Relevance of Gandhi to Modern India" at the 9th NIAS Course.
3. February 22-23 1995 - Participation in the International workshop on "Sericulture Development in India", ISEC, Bangalore.

4. February 23, 1995 - Chairman, International Steering Committee on Beneficiary Assessment in Sericulture.
5. March 11, 1995 - Inauguration of "Bangalore University Sociology Teachers' Association" at Senate Hall, Bangalore University.
6. March 16-18, 1995 - Participation in the Indo-Dutch Project on "Alternative Development" at ISEC, Bangalore. Rounding up the theoretical discussion on March 18, 1995.
7. March 21, 1995 - Lecture on "Social Change in Modern India" at the S.N.D.T Women's University, Sociology Department.
8. March 31, 1995 - Talk on "Sanskritization and Westernization at the Faculty Meeting, at NIAS, Bangalore.
9. April 10-12, 1995 - Participation in an International Seminar on "Qualitative Methods in Research" for Mental Health Research at NIAS, Bangalore.

PUBLICATIONS:

1. The theme Essay in the publication "Bangalore: Scenes from an Indian City" by Gangarams, Bangalore.
2. The editing of "Caste: Its Twentieth Century Avatar" is complete and will be published early in 1996 by Penguin (India) Ltd.

PROF. B.V. SREEKANTAN

DR. S. RADHAKRISHNAN VISITING PROFESSOR

LECTURES:

1. January 21, 1995 - Lecture on 'Modern Astronomy' at Vainu Bappu Observatory, Kavalur to the participants of 9th NIAS Course.
2. February 1, 1995 - Lecture on 'Physics and Consciousness' to the participants of 9th NIAS Course.
3. February 20 & 21, 1995 - IPA C.V. Raman lectures on 'Physics Astronomy

Connection' at Mulund College, Mulund, Bombay and SNTD College, Bombay.

PROF. A.N. MITRA
VISITING PROFESSOR

LECTURES:

1. April 20-21, 1995 - Invited talk on 'A new quantum number characteristic of permutation symmetry group S_3 , realised through the complex basis' at the Saha Institute of Nuclear Physics, Calcutta.

PUBLICATIONS:

1. Paper entitled 'Strong SU(2) - Breaking and mass splittings in pseudoscalar Mesons' - submitted to Physical Review (March 1995)
2. A perspective review on 'Quark and the Jaguar' (by M. Gell-Mann) - Current Science (in press)
3. Submitted a contribution on 'A dynamical scheme for the understanding of hadronic widths' (Detailed paper in preparation).

DR. BISWAJIT SEN
FELLOW

LECTURE:

1. April 1995 - Two lectures on "Youth Psychology" at the Centre for Electronic Design and Technology of the Indian Institute of Science, Bangalore.

INVITED SEMINAR

1. A 2-day seminar on the occasion of World Environment Day organised by the Indira Gandhi Rashtriya Manav Sangrahalay at their premises in Bhopal on June 5-6, 1995. The focus was on Environment, Heritage and Community.

PAPERS:

1. Observations from the project "A Psychosocial Study of Alienation among Indian Youth" - paper presented at the Workshop on "Qualitative Methods in Research" at NIAS in April 1995.
2. "Waves of Violence : Are there seeds to hope" published in VOICES, June, 1995.

MS. SRILATHA BATLIWALA
FELLOW

LECTURES:

1. January 20, 1995 - Lecture on "What You Can Do for the Advancement of Women", at the Valedictory function of the BMS Women's College, Bangalore.
2. February 1, 1995 - Lecture on "Status of Women in India", in the 9th NIAS Course at NIAS.
3. February 3, 1995 - Lecture on "Women's Health - Role of Science and Technology", at the Workshop on Women, Science and Technology, organised by Co-ordination Unit (South) for World Conference on Beijing.
4. April 29, 1995 - "Political Empowerment of Women", in the ISST National Workshop on Women and Panchayati Raj, Bangalore.

PUBLICATIONS:

1. "Energy as an Obstacle to Improved Living Standards", in UNDP, 1995 : *Energy as an Instrument for Social Change*, UNDP, New York.
2. "Women and Energy - Bearing the Brunt of Labour", in *HINDU Survey of the Environment* - 1995, The Hindu, Madras.

DR. P.K. SHETTY
RESEARCH FELLOW

LECTURES

1. January 24, 1995 - Lecture on "Impact of Pesticides on Human Health and the Environment" at the Government Degree College, Doddaballapur.
2. April 5, 1995 - Lecture on "Influence of Metalaxyl and Pendimethalin on soil phosphatase activity in the Rhizosphere of wheat" at the National Seminar on Man, Industry and Environment, Department of Environmental Science, Bangalore University.
3. April 6, 1995 - Lecture on "Synthetic Chemicals and the Bio-environment" at the National Seminar on Man, Industry

and Environment, Department of Environmental Science, Bangalore University, Jnana Bharathi, Bangalore.

DR. V. SUCHITRA MOULY
RESEARCH FELLOW

INVITED SEMINAR:

1. May 16, 1995 - Invited lecture organised jointly by the School of Management and the Department of Mechanical Engineering, Indian Institute of Technology, Bombay on "*Organisational Ethnography*".

RESEARCH CONSULTANCY:

1. May 3-17, 1995 - Assisted in developing Attitude Scales for a questionnaire on the "*Issues related to Land Consolidation*" - A joint research project of Indira Gandhi Institute of Development Research, Bombay, Yale University, USA and the Free University Amsterdam (SoW), The Netherlands.

PUBLICATIONS:

1. Mouly V. S. and Sankaran J. K. "*Organisational Ethnography : An Illustrative application in the study of Indian R&D settings*". Book published in May 1995 by SAGE Publications (New Delhi, Thousand Oakes, London).
2. Mouly V. S and Sankaran J.K., "*On the Study of Settings marked by severe-superior subordinate conflict*" Accepted for publication in *Organisation Studies* (Cambridge, U.K.) April 1995.

DR. SUNDAR SARUKKAI
RESEARCH FELLOW

LECTURES:

1. January 20 & 23 1995 - Three lectures were given to the participants of the 9th NIAS Course on the "Philosophy of Science", "History of Indian Technology" and "Philosophical and Cultural Elements of Technology".

UNDER PUBLICATION:

1. "Humanism and Technology", in the Golden Jubilee issue on "Facets of Humanism", Institute of World Culture, Bangalore.

DR. H.K. ANASUYA DEVI
RESEARCH FELLOW
LECTURES

1. March 6, 1995 - Lecture on "Knowledge Representation using 'Perl Language' - a case study" at Department of Computer Science and Engineering, Indian Institute of Technology, Kanpur.
2. June 6, 1995 - Lecture on "Computer and its applications" at SERC, Indian Institute of Sciece, Bangalore.

MS. ANITA GURUMURTHY
RESEARCH ASSOCIATE

WORKSHOPS/SEMINARS:

1. January 23-25, 1995 - Workshop on the "Preparing an Alternative CEDAW Report", New Delhi.
2. Seminar on "Functioning of Family Courts, organised by Vimochana", Bangalore.

MS. ANITHA B.K.
RESEARCH ASSOCIATE

WORKSHOP/SEMINAR:

1. January 17-18, 1995 - Workshop on "Role of NGOs in Panchayati Raj", ISEC, Bangalore.

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VISITS ABROAD

1. VISIT TO NEW ZEALAND:

Dr. Suchitra Mouly was invited to the Department of Management, University of Canterbury at Christchurch, New Zealand, between November 24 and December 3, 1994. She presented two talks, one based on her recent book on Organisational Ethnography and another on "the barriers to productivity among Indian Public Sector organisations". These talks were attended by local executives registered for MBA programme under Continuing Education programme, Ph.D students and the faculty of the department of Management.

2. VISIT TO BANGLADESH:

Anita Gurumurthy visited Bangladesh during December 18-22, 1994 for a programme organised by the International Women's Rights Action Watch

(IWRAP) - Asia-Pacific on "Promoting Equality and Rights in the context of the **Convention on the Elimination of All Forms of Discrimination Against Women**". The **Convention** places on the State ratifying it the obligation of promoting equality and rights of women through legislative and other measures. India ratified the Convention in 1993.

The programme was designed for advocates of women's rights from South Asian countries that have ratified the **Convention** - India, Bangladesh, Sri Lanka and Nepal and aimed at strengthening their understanding of concepts relating to women's human rights, and their skills of advocacy, particularly in addressing and holding accountabl, the state, which by ratifying the **Convention** has undertaken to promote women's rights. There were totally 15 participants.

The programme was very enriching since it introduced her to new concepts and provided an opportunity to understand CEDAW as a tool to fight discrimination.

3. VISIT TO CANADA:

Susmita Subramanyam is attending a Summer Programme on "Social and Cultural Psychiatry" at McGill University, Mastreal, Canada during the month of June 1995.

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WORKSHOPS ON "HUMAN RIGHTS" AT THE KARNATAKA POLICE ACADEMY

IN MYSORE MAY 3-5, 1995 AND MAY 9, 1995

Prof. R.L. Kapur, along with Ms. Susmita Subramanyam, Ms. Anita Gurumurthy and Dr. Umapathy of the Police Academy, organised this workshop for police sub-inspectors under training, on behalf of the National Law School of India University.

A group discussion was first held on the question of "Why Human Rights At All?." The participants proved exceedingly resourceful in discussing these issues. Next, the biological and social basis of human behaviour was discussed with a view to understanding how motivation towards particular actions actually arise. This was followed by a group discussion. On the same day, role plays were performed on various real issues.

Next day, a group discussion was conducted on examples of police atrocities. In the next session the film 'Ardh Satya' was shown. This was followed by a series of talks by senior policemen about the stress policemen have to undergo in the course of their careers.

On the final day, the physiological effects of stress and stress management were discussed in the morning. In the afternoon an open discussion was conducted on the three-day programme, and each participant was asked to write up a review of the entire programme. These reviews have been analysed. The feedback has been very positive.

NIAS also conducted another Workshop on "Women and the Police" on May 9, 1995 for the police sub-inspectors along with Hengasara Hakkina Sangha (HHS) - an organisation working on legal education of women. Ms. Srilatha Batliwala and Ms. Anita Gurumurthy teamed with HHS for this Workshop.

The first session was designed to address myths and stereotypes about women and the second session dealt with atrocities on women and an analysis of social and attitudinal factors leading to such behaviour. To assess the participants' views about women, a questionnaire was administered. The analysis of these will feed into the work of the WOPRA Unit. The Workshops were mutually beneficial to the trainers and the trainees.

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MISPERCEPTIONS ON NUCLEAR PROLIFERATION

Deepa Ollapally and Raja Ramanna

Relations between India and the United States have improved considerably since the end of the Cold War, but they are still punctuated by controversies over nuclear non-proliferation. To a significant extent, these conflicts seem to be the result of persisting American beliefs that India is obstinate about the Nuclear Non-proliferation Treaty, that India is vulnerable to technology-denying efforts, and that it can be equated with its neighbour, Pakistan. These perceptions take on added import because of the assumption by American policymakers that South

Asia is the most dangerous nuclear hot spot. Implicitly, India's image also continues to be that of a revisionist state destined to be at odds with the United States, a status quo global power. These are misperceptions that deserve attention.

The NPT has come to represent the core of U.S. non-proliferation efforts. The Clinton administration is keen to get an indefinite extension. The United States sees India's continuing opposition to signing what New Delhi considers an inherently discriminatory NPT as symptomatic of India's tendency to obstruct global arms control efforts. This view, however, discounts India's numerous disarmament initiatives.

In India's view, the NPT curbs the spread of nuclear weapons to non-nuclear states without providing adequate security guarantees. Furthermore, it fails to reduce or eliminate stockpiles of the weapon states and thus legitimates them. India regards vertical and horizontal proliferation of nuclear weapons as equal threats to peace, and contends that elimination efforts ought to proceed in tandem. It also believes the United States unfairly singles it out from Pakistan and Israel, two other key NPT non-signatory states. Although undeclared, Israel is surmised to have a sizable nuclear arsenal. While Pakistan is on record as having the components of at least one bomb and was identified in reports last summer as having weapons-grade contraband plutonium from the former Soviet Union through Germany.

India's Restraint:-

For its part, India has remained at the threshold level. In the two decades since the Pokharan test explosion, India has neither tested nor deployed nuclear weapons. Nor has it transferred sensitive nuclear technology or trained nuclear experts from other countries. Within India there is a broad consensus for protecting the country's nuclear option but no significant lobby for "going nuclear" among the scientific and political elites. India's support of non-proliferation has received little U.S. acknowledgement, although its record is better than the United States' from this perspective.

Given that military planners assess capabilities rather than intentions when making strategic choices, India's restraint could be viewed

as exceptional. Neighbouring China has steadily advanced the size and sophistication of its nuclear weapons program, and until recently the superpowers continued their intense competitive build-ups. The second Strategic Arms Reduction Talks treaty ceiling of 3,000 to 3,500 warheads for the United States and Russia by the year 2000 - and even the lower ones recommended by some American strategic analysts - fail to assuage India's concerns about the potential for a nuclear holocaust or the security of nuclear have-nots. India's goal of eliminating all nuclear weapons through a non-discriminatory regime is gaining adherents (former Defence Secretary Robert McNamara is one) and precedents (including the convention banning chemical weapons).

Almost 20 years of painfully slow negotiations were capped in 1993 by the signing of the Chemical Weapons Convention. The CWC would subject all countries' chemical industries and facilities to verification, with sanctions against violators. Previously, the United States insisted on maintaining a two-percent security stockpile until all states possessing chemical weapons destroyed their stocks to an equivalent level. Until it shifted its policy after the Persian Gulf War, Washington's insistence was regarded by India as yet another non-proliferation instrument that would create two unequal classes for the purpose of controlling the spread of weapons rather than eliminating them.

The all-or-nothing attitude attributed to India by some American observers tends to neglect or underestimate the flexibility, even initiative, that Indian policymakers have demonstrated on several arms control measures. India has championed a ban on prospective plutonium production and highly enriched uranium for weapons, even though it would result in highly unequal stockpiles of materials among nations. Although details are still to be worked out, India is co-sponsoring with the United States a U.N. resolution that accepts in principle a global ban.

It is becoming increasingly clear that the NPT by itself is unable to contain proliferation. The Iraqi and North Korean cases reveal the shortcomings of the NPT approach and of America's coercive strategy against the so-called rogue states. In the more uncertain post-Cold War period, in which some states may feel more pressure to adopt self-help measures, the United States is likely to be

tested elsewhere. During such a time, the support of a stable and democratic country like India could be valuable. Even with the NPT as the core of its non-proliferation efforts, the United States would better serve its interests by recognizing India's continued support for measures consistent with the spirit of the NPT.

ISOLATING THE SUBCONTINENT:-

The American tendency to equate India and Pakistan, especially pronounced in the past, artificially reduces Indian security concerns, making any wider strategic calculations by India appear unreasonable. Sino-Indian relations are now clearly on the upswing, but the memory of the 1962 war and the continuing border dispute between the two countries in the face of significant Chinese military superiority suggest that Indian concerns were not baseless. The strategic links between China and Pakistan, especially the sale of M-11 missile components, indicates that China views Pakistan as one instrument of its foreign policy toward the subcontinent. China has reportedly provided assistance to Pakistan's nuclear program, and Chinese missiles and nuclear weapons can reach India. This has increased the existing imbalance in China's favour. Although China formally acceded in March 1992 to the NPT (as a nuclear weapon state on terms different from those offered currently to other countries), it is not a member of the Nuclear Suppliers Group, which delineates guidelines calling for restraint in exporting sensitive technologies like production of heavy water, enrichment, and reprocessing. The U.S. policy of isolating arms control initiatives to the Indian subcontinent does not match the strategic realities of the area.

The most recent five-power proposal put forth by the United States continued to focus on nuclear issues in South Asia as an Indo-Pakistani problem. Chinese participation was premised on the exclusion of its nuclear arsenal from consideration. Meanwhile, China continues to engage in nuclear testing despite moratoriums by other nuclear states, and it appears disinclined to forego tactical nuclear weapons, unlike many other nuclear powers. Not surprisingly, India rejected the American proposal (as it had before).

From the Indian perspective, America's outlook on South Asia's present and potential nuclear capability is based on faulty assumptions.

There is a strong fear in the United States that a nuclear-capable Pakistan and India have made South Asia "the most dangerous place on earth". Such a view fits what some have termed the nuclear theology of the West: that developing countries are more prone to go to war with each other and that these wars are more likely to escalate to nuclear war if the nations have such a capability. Beneath this view seems to be the unstated assumption that leaders of developing countries are more irresponsible, volatile, and cavalier with the lives of their people. In the case of India and Pakistan, Kashmir is seen as the probable spark.

But the behavior of Indian and Pakistani leaders suggests otherwise. In the three Indo-Pakistani wars since independence, considerable restraint was exercised in avoiding civilian targets and in not pushing the military advantage to gain territory in the heartland or disputed areas—for example, India's decision not to thrust forward in the western sector in 1971 or to "liberate" Kashmir. There is little reason to believe that the two countries will change their behavior after obtaining nuclear capability and act with less caution than before. Indeed, a strategy of "nuclear realism" by India and Pakistan has given rise to bilateral confidence-building measures, including a mutual agreement not to attack each other's nuclear installations, reciprocal notification of key military exercises, and a hot line between the nations' army generals. The United States' policy in the region gives a hollow ring to its current non-proliferation exhortations. Throughout the 1980s, at the height of Pakistan's nuclear weapons project, the United States pursued a policy of strategic alliance and military largess without which Pakistan's success would have been unlikely.

NO KNOW - HOW:-

The post-Cold War period, there are signs that the United States is stepping up efforts to limit the transfer of dual-use technologies to developing countries. Technology denial is considered a workable form of containing proliferation. This assumption seems misplaced, especially in the case of India, which already has a technological base. The policy of closing the technology door to new

entrants does not appear to be a viable or verifiable way of managing destabilizing technologies that will inevitably be developed. Moreover, the multilateral technology control regimes that have evolved under the American umbrella resemble cartels rather than global institutions from India's vantage point.

American optimism regarding limiting dual-use technology is questionable in the case of India. The vast majority of technologies that fall into this category are state of the art and crucial to industrial modernization. Leading-edge technologies are a precondition to global economic competitiveness, and it is only logical to expect India, which is poised to harness the latest generation of technical know-how as part of its economic liberalization drive, to resist unwarranted constraints. Indian objections to such schemes are in part related to the perception that they spring not only from America's strategic compulsions but also from economic motivations aimed at eliminating or disabling potential second-tier competitors in the most lucrative sectors of the global economy.

When the Missile Technology Control Regime was formed in 1987, India already had a fairly ambitious space and missile program. Since then India has successfully tested the Prithvi short-range, ground-launch missile and the medium-range Agni. While analysts disagree on the exact extent of the MTCR's impact on India's missile program, its most lasting effect has been to spur greater self-sufficiency, with signs of eventual success. As with its nuclear capability, India has exercised restraint in missile deployment. In many ways it exemplifies India's tendency to have technology "demonstrators" as part of its strategic posture for sending strong signals of its capability without necessarily ratcheting up the arms race.

A SEARCH FOR AUTONOMY:

The various strands of U.S. policy toward India seem rooted in the implicit attitude that India is somehow a revisionist power bent on restructuring the international system at the expense of America's global interests. This negative view of India arises from a misreading of the meaning of India's drive for self-reliance and national sovereignty. It is also tied to the

paradoxical streak of universalism in America's philosophy of liberal individualism, which implies that "those who are not with us are against us".

As an ancient civilization subjected to prolonged British colonial rule, India is vigilant about both territorial and political autonomy. Even at the height of Cold War bipolarity, India opted for non-alignment, seeking accommodation to and compromise with both worlds, unlike the revolutionary approaches of the Soviet Union and China, which envisioned fundamental transformations in the world system. It is important for the United States to recognize that India's independent stance has been much more defensive than offensive. Indian aspirations for autonomy should be seen as the product of specific historical circumstances, and not as a function of some unique Indian ambition.

(Deepa Ollapally is Assistant Professor of Political Science at Swarthmore College. This is an extract from Prof. Deepa Ollapally and Dr. Raja Ramanna's article published in "FOREIGN AFFAIRS" January/February 1995.)

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COUNCIL OF MANAGEMENT AND ANNUAL GENERAL MEETINGS

The Thirteenth Meeting of the Council of Management and Fifth Annual General Meeting of the Society of NIAS were held on March 24, 1995 at NIAS.

Mr. J.J. Bhabha, Chairman, Dr. Raja Ramanna, Prof. R.L. Kapur, Prof. G. Padmanabhan, Mrs. Shamim Banu, Mr. J.P. Sharma, and Mr. T.R. Satish Chandran attended the meetings. Prof. M.N. Srinivas attended the Council meeting by invitation and the Annual General meeting as a member of the Society. Professors C.V. Sundaram and B.V. Sreekantan, our Visiting Professors also attended the meetings by invitation.

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VISITS AND TRAINING PROGRAMMES

Dr. H.K. Anasuya Devi has participated in a five week intensive course on NLP - 95: Natural Language Processing from February 21 to March 26, 1995 at Indian Institute of Technology, Kanpur, sponsored by Department of Electronics, Government of India.

During this period she has undergone training on various programs: Computational Paninian Grammar (PG) for Indian Languages, Machine Translation, Anusaaraka Philosophy: a case study of Kannada - Hindi anusaaraka, Aspects of Semantics of Natural languages, Knowledge Representation: Conceptual graphs, PERL Programming language for hyper text, parsing etc.

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THOSE WHO JOINED US

Ms. B.K. Anitha joined NIAS as Research Associate on January 2, 1995.

Prof. A.N. Mitra, Ex-Einstein Professor joined NIAS as Visiting Professor on February 5, 1995.

Prof. K. Srinivasan, Renowned Demographer, joined NIAS as Visiting Professor on March 7, 1995.

Ms. Anju Sharma joined NIAS as Research Associate on June 1, 1995.

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INFRASTRUCTURAL BUILD-UP

The construction work of the Auditorium forming part of the "JRD Tata Memorial Centre" is progressing satisfactorily.

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COMPUTER CENTRE OF NIAS

NIAS Computer Centre has been linked to the Super Computer Education and Research Centre of Indian Institute of Science, Bangalore.

The faculty can avail the facilities of IBM-RS6000 clusters and Hamsadvani. On IBM:C, C++, X-Windows, FORTRAN 90 etc., are available. The internet machine Hamsadvani can be used for ftp, e-mail, telnet and other internet facilities.

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ON LOOKING BACK AT THE NINTH COURSE

(with apologies to John Keats)

DHIRENDRA SINGH

There was a curious executive
And a curious executive was he
And he went away to NIAS
The Faculty there to see
And there he found
That the Raja
Was as sound
As his three score years and ten had ground
He ran the show with great elan
For he was the man of Pokharan
And that the Controller
Was as dapper
As an old retired sapper
He was a worthy who took pain
For he marched his men to Kavalur
And marched them back again
And that the young Dr. Kapoor
Taking advantage of his brain
Carried a bevy of beauties
In his train
That Sreekantan the venerable astronomer
Waxed eloquent on the galaxies
But try as he did
Using all his wits
Vedanta and quantum physics
Couldn't explain the mysteries of the synapses
Soft spoken Professor Sundaram
After long years at Kalpakkam
Elaborated on the properties of Kevlar
But kept harping back to the Dilli pillar
And then there was Sundar Sarukkai
What he said made us all cry
For was it not with Hindu Steel
That the Saracen brought us all to heel
Men gave up fortunes for Srinivas's interjections
Jealous Kodavas and infanticide
Violent emotions seeking release
All in the land of man of peace

And then came the visitors
Calling themselves lecturers
Kasturi Rangan - Seshadri
Om Prakash - Mark Tully
Madhava Menon - Gopinathan
Durganand - Subramanyam
Blah Blah Blah
Yak Yak Yak
Glowing worms and litigation
Gassifiers and hallucinations
Shiva Sena and literacy
Leadership and democracy
Book reviews and criticisms
Symposia on Gandhism
The deluge came in waves and tides
We took them all in our strides
Bolstered by Omkar and the Mudra
Thanks to mornings spent in Yoga
The Fellows from DRDO and Managers
from Birlas
The men from the forces and the chaps
from Tatas
From Dilli to Kanyakumari
From Andheri to Anini
We have all benefitted
Lubricated and retrofitted
And when the vote had been taken
All participants with one voice spoken
Given a chance, we'll all come back
Provided in the next programme
The venue was shifted to Nrityagram
And so I stood in my shoes and wondered
I stood in my shoes and wondered.

(Mr Dhirendra Singh is a Senior IAS Officer, who is presently Chairman-cum-Managing Director of M/s VIKRANT TYRES, Mysore and took part in the Ninth NIAS Course)

FACULTY LECTURE PROGRAMME

Lectures delivered by various faculty members during this period are as under:-

Date	Subject	Name
Feb 15, 1995	Rules & Paradigms in Science	Prof. A.N. Mitra
Feb 17, 1995	Promotion of Scientific Research in India : A Survey	Dr. V. Suchitra Mouly
Mar 30, 1995	Sanskritization and Westernization - some tentative thoughts	Prof. M.N. Srinivas
Apr 21, 1995	Reductionism	Dr. Raja Ramanna
May 19, 1995	Language and Epigraphy	Dr. H.K. Anasuya Devi
Jun 30, 1995	Perceptions on Nuclear Energy	Prof. C.V. Sundaram

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Participants of the International Workshop on "Qualitative Methods in Mental Health Research" with the Faculty