NIAS Newsletter July 2017

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National Institute of Advanced Studies (NIAS) Indian Institute of Science Campus, Bengaluru

The Multi-disciplinary Tea!

The Institute does not have a canteen. The founding fathers of NIAS thought it would be great to get all the scholars meet together and have community tea together—discussing their research and related activi-ties at the Institute. The traditions continues even today!



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NIAS Newsletter, July 2017

Campus Notes



Stories in Stone Musing on Monkeys

NIAS Publications



New Book "Decision Making and Modelling in Cognitive Science" by Sisir Roy

Other Publications

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Regular Columns



Birds & Blooms by MB Rajani

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NIAS News







Note from the Director

Marching On

During the last quarter, the Institute was engaged in PhD admissions. The fact that nearly 300 young scholars applied (most number of PhD applications in the history of NIAS!) for less than ten seats in the four Schools of the Institute would highlight the growing popularity of the NIAS amongst the next generation researchers.

The PhD programme in NIAS is one of its kind; it promotes multi-disiplinarity and provides space for young scholars to interact with the four Schools-Natural and Engineering Sciences, Social Sciences, Humanities and Conflict and Security Studies. From the courses offered at the first year, to the final submission of the thesis, this interaction remains an essential aspect of the PhD proramme.

During the last quarter, the Institute also organized two of its prestigious lectures in memory of Dr CV Sundaram and Dr RL Kapur. Both were legends in their own fields of expertise and associated with the NIAS'; along with few others, they were instrumental in expanding the horizons of the Institute. It is a matter of pride for the Institute to honour these icons through organizing lectures in their names. It also forms a part of Institutional ethos to remember those who built the NIAS. The third CV Sundaram Memorial Lecture titled "How Can Ancient India Help Today's India?" was delivered by Prof Michel Danino, Guest Professor, IIT Gandhinagar. The fifth RL Kapur Oration titled "Drift of Contemporary Ideologies: Social and Psychic Defenses in the Discourses and Practices of Hate" was delivered by Prof Gilles Bibeau, Professor Emeritus, Université de Montréal, Canada.

The Institute marches on, as could be seen from the publications and events mentioned later in this newsletter. Seemingly divergent activities and pursuits have convergence and cohesiveness in being eminently relevant for the country to address challenges and staying ahead as a thought leader.

> Baldev Raj Director, NIAS





Featured Programme

Conflict Resolution Programme

Research, Dialogue, Outreach

"In the midst of multiplying, and noisy, conflicts in India the Conflict Resolution Programme has taken a step back to develop an understanding of several important conflicts ranging from Maoism and extremism in the Northeast, to reservations with and without exclusion."

> - Narendar Pani Head, Conflict Resolution Programme

The Conflict Resolution Programme was set up in 2009 with the aim of developing an inclusive knowledge base that would help effectively address major conflicts that affect India or have the potential to do so. The programme tries to achieve its objectives by being sensitive to the interface between the understanding of individual conflicts and the larger conceptualization of conflict. It studies individual conflicts in depth with the twin purpose of identifying elements that can be used to resolve them, as well as to further develop the overall understanding of conflicts and their resolution. The programme also disseminates knowledge about conflicts in a way that influences both popular perceptions and policies aimed at conflict resolution. The programme thus attempts to both widen and deepen the knowledge base about conflicts in India. The breadth of the knowledge base is built through developing backgrounders on individual conflicts. The depth is provided by research both into individual conflicts and the conceptualisation of social conflict and its resolution. The programme thus seeks to intervene in the knowledge about conflict in three major ways: research, teaching, and interventions in popular discourse.

An underlying aspect of the research in the Conflict Resolution Programme has been its multidisciplinary character. It is quite clear that an effective conceptualisation of conflict requires us to tap into multiple disciplines. While the fact that many conflicts are played out in the political domain sometimes leads to the analysis of conflict being seen as primarily, if not exclusively, a part of political science, this approach can lead to leaving out critical elements of a conflict. Inter-state water conflicts, for instance, are often analysed entirely in political terms though they have important, social, economic and hydraulic dimensions. Care has hence been taken in all the initiatives taken under the programme to ensure that no relevant discipline is left out of the analysis.

Forthcoming Book

A book titled "Reasoning Indian Politics: Philosopher Politicians to Politicians Seeking Philosophy", edited by Prof Narendar Pani and Dr Anshuman Behera, has been accepted for publication by Routledge. The book essentially addresses the transition in Indian politics from a situation dominated by philosopher



politicians, such as Gandhi, Ambedkar and Lohia, to one dominated by political practice with limited importance to philosophy. This transition has its implications for the nature of Indian politics as well as the role of conflict and violence in it. The book has brought together some of the major Indian political theorists, with Lord Bhikhu Parekh writing on the poverty of Indian political theory, Prof Yogendra Yadav exploring Lohia's political philosophy, and several other contributions.

Looking Ahead A Road Map of Conflict Resolution Programme

The Conflict Resolution Programme aims to continue its activities, mainly in three major aspects: being sensitive to the interface between understanding of individual conflicts and the larger conceptualization of conflicts, dissemination of knowledge about conflicts through backgrounders, research articles, class room teachings; and intervention in popular discourses on conflict.

In addition to responding both in public discourse and with original research to specific conflicts as and when they arise the programme plans to two major initiatives.

One initiative is to explore an aspect of conflict that has not been adequately understood in the Indian context: Volunteerism. The initial field survey of this study has been carried out in Uttarakhand



Participants of a Dialogue on Indian Political Philosophy

First Row: Prof. Sasheej Hegde, Lord Bhikhu Parekh, Dr. Gitanjali Surendran; Second Row: Dr. Julia Stephens, Prof. Gurpreet Mahajan; Third Row: Prof. Yogendra Yadav, Prof. Karuna Mantena, Prof. Ashis Nandy, Prof. Vasanthi Srinivasan; Fourth Row: Dr. Rohit Dey, Prof. Raghuramaraju, Prof. Sundar Sarukkai; Fifth Row: Prof. Pratap Bhanu Mehta, Dr. Chandan Gowda, Prof. James Manor, Prof. Narendar Pani.

Conflict Resolution Programme Project on Volunteerism and Vulnerability

The Conflict Resolution Programme is carrying out a project to explore an aspect of conflict that has not been adequately understood in the Indian context: Volunteerism. Volunteers can work both to reduce the pains of conflict as well as to enhance conflict. It is thus necessary to understand what prompts individuals to volunteer.

It is proposed to first study this phenomenon in the case of volunteerism aimed at reducing the pains of conflict. This study has been planned as a part of a larger Indo-German effort financed by the Department of Science and Technology of the Government of India.

As a part of this project includes training personnel of the relevant government departments its impact on the effectiveness of government policies can be very substantial. Its academic impact is also potentially very significant as this is an area that has not received much attention in India.





Field Surveys in Uttarakhand

villages that were affected by the floods of 2013. Once the specific social and economic factors influencing volunteers are identified, further studies will be carried out to explore their role in the enhancement of other specific conflicts. This study has been planned as a part of a larger Indo-German effort financed by the Department of Science and Technology of the Government of India. As a part of this project includes training personnel of the relevant government departments its impact on the

effectiveness of government policies can be very substantial.

The second initiative is to work on an area that has been least covered and studied in the Maoist conflict areas. The Maoist conflict in India has been studied in terms of security, marginalisation of the tribal and the poor, land alienation and other sociopolitical contradictions. In the process of fighting the contradictions the Maoist movement in India has also contributed a number of contradictions in the society. The conflicts within the marginalised sections of the society, especially between the Scheduled Castes (SCs) and the Scheduled Tribes (STs) are one area which has not been adequately understood and studied. This study will offer new dimensions of understanding conflicts among the marginalized communities in particular and the Maoist conflict in general.



Conflict Resolution Programme Series Conflict Backgrounders



This series of backgrounders hopes to provide accessible and authentic over views of specific conflicts that affect India, or have the potential to do so. It is a part of a larger effort by the Conflict Resolution Programme to develop an inclusive knowledge base that would help effectively address major conflicts of interest to the country. In pursuit of this objective it carries out research that could help throw up fresh perspectives on conflict even as it develops mechanisms to increase awareness about the nature of specific crises.

The backgrounders are targeted at the intelligent layperson who requires a quick and yet reliable account of a specific conflict. These introductory overviews are useful to administrators, media personnel and others seeking their first information on a particular conflict.

The major themes of this backgrounder series are: Ethnic conflict in Northeast India, Maoist conflict, Conflict over water resources (Cauvery conflict), Wildlife and human conflict, and Conflict over reservation.

List of Backgrounders

Behera, Anshuman, (2016), 'Maoist Conflict in Odisha', NIAS Backgrounder

M Singh, A., (2012), "The Naga Conflict", NIAS Backgrounder

M Singh, A., (2011), 'Conflict in Jammu and Kashmir', NIAS Backgrounder

Radhakrishna, S. & Sinha, A., (2010), 'Living with elephants: Exploring the nature and cause of human-elephant conflict in India', NIAS Backgrounder

Meenakshisundaram, S.S., Raghavan, P. & M

Singh, A., (2010), 'The Cauvery Conflict', NIAS Backgrounder

M Singh, A., (2010), 'Conflicts in Assam', NIAS Backgrounder

M Singh, A., (2010), 'Conflicts in Tripura', NIAS Backgrounder

M Singh, A., (2010), 'Conflicts in Manipur', NIAS Backgrounder



Books

Pani, Narendar & Behera, Anshuman (eds) Reasoning Indian politics: Philosopher politicians to politicians seeking philosophy, Routledge (Forthcoming)

Research Papers

Pani, Narendar & Iyer, Soundarya, (2015) "Towards a Framework to Determine Backwardness: Caste, Inequality and Reservations in India", Journal of South Asian Development, Vol.10, No.1, pp.48-72

Behera, Anshuman, (2017), "Insurgency, Drugs and Small Arms in Myanmar", Strategic Analysis, Routledge, vol.41, no.1, pp. 34-48.

Behera, Anshuman, (2017), "Development as a Source of Conflict: The Sahukars, Displaced Persons and Maoists in Koraput", Round Table; Common Wealth Journal of Foreign Affairs, (Forthcoming).

Behera, Anshuman, (2015), "India-Nepal Relations: Pursuit of Proactive Partnership", in Mohammed Badrul Alam's India and Her Neighbors: Towards a Proactive Partnership, Gyan Books , New Delhi, pp.255-268

M Singh, A., (2014), "ULFA Insurgency and Counterinsurgency in India: An Assessment", Journal of Peace Research, Volume 21, Issue 1, pp. 68-80

M Singh, A. & Pani, Narendar, (2012), Territories beyond geography: an alternative approach to the demands of the new states in India, Commonwealth and Comparative Politics, 50, pp.121–140.

Pani, Narendar, (2011), "Identity and political choice: The co-existence of singular affiliation politics and pluralism", Contemporary Politics, 17, pp.35–52 Pani, Narendar, (2010), "Reservations, Exclusion, and Conflict: Some Insights from Mandal and Mysore", India Review, Vol. 9, pp.397–424

Pani, Narendar, (2010), "Gandhi's Concept of Action and Identity Politics", Asian Philosophy, vol.20, pp.175–194

Select Media Commentaries

Narendar Pani, What the garment workers are saying, The Hindu Business Line, May 24, 2016

Narendar Pani, The new contours of cultural conflict, The Hindu Business Line, October 4, 2015

Narendar Pani, Monumental efforts to erase history, The Hindu Business Line, March 21, 2017

Narendar Pani, It's governance without compassion, The Hindu Business Line, December 21, 2016

Narendar Pani, Fear and identity politics in urban spaces, The Hindu Business Line, September 21, 2016

Anshuman Behera, A Reality Check, The Deccan Herald, June 28, 2017

Anshuman Behera, Constitutional Bias, The Asian Age, September 23, 2015

Anshuman Behera, Conflict over Statute, The Deccan Herald, September 21, 2015

Anshuman Behera, Sri Lanka Banneki Koshish na Kare Nepal, The Hastakshep, Sahara Times, October 3, 2015

Anshuman Behera, The Big Catch, Geopolitics, September 2014

Anshuman Behera, Modi's Nepal visit shouldn't take the beaten track, The Pioneer, August 2, 2014



Conflict Resolution Programme Faculty and Doctoral Scholars



Prof Narendar Pani is the head of the Conflict Resolution Programme. Prof Pani is an economist by training who takes a multidisciplinary approach to issues of Indian political economy. In this

effort he has relied on a method derived from the writings of MK Gandhi. He has over the last three and a half decades held positions in academia and the media. His books include, 'Inclusive economics: Gandhian method and contemporary policy' (Sage, 2002); 'Redefining Conservatism: An essay on the bias of India's economic reform' (Sage, 1994); and 'Reforms to pre-empt change: Land legislation in Karnataka' (Concept, 1983). He is also one of the editors of 'Bengaluru, Bangalore, Bengaluru: Imaginations and their times' (Sage, 2010).



Dr Anshuman Behera is an Assistant Professor at the Conflict Resolution Programme. A coauthor of the book Militant Groups in South Asia (Pentagon, IDSA 2014), his research interests lie in

understanding socio-political conflicts in India, Nepal and Bangladesh. In addition to extensive work on Maoist conflict in India and Nepal he has also written on political processes in South Asia. Before joining NIAS Dr Behera worked with Institute for Defence Studies and Analyses (IDSA) and Institute for Conflict Management (ICM), both at New Delhi.



Ms Anamika Ajay is a

Doctoral Scholar in the Conflict Resolution Programme. The area of her research is on 'The Impact of Development on Social Conflicts: Case Studies of Intra-family and

Inter-group Strife in Two Villages in Kerala'.



Mr Shyam Hari P is a Doctoral Scholar in the Conflict Resolution Programme. The area of his research is on 'Understanding Political Conflict and Alliance Formation: A Case Study of two

Assembly Elections in Kerala (2006 and 2011)'.



Mr Surya Shankar Sen is a Doctoral Scholar in the Conflict Resolution Programme. The area of his research is on 'Implications of local Conflicts on Bilateral

Relations: A Case Study of India and

Bangladesh Relations'.



Dr Anshuman Behera

A violent political movement waged by the Communist Party of India-Maoist (CPI-Maoist), Maoist in short, was in the early twenty first century officially considered to be the greatest internal security threat to the Indian state. Guided by the political thoughts of Mao Tse-Tung, the history of Maoist movement goes back to the 1960s when an armed movement was launched against local feudal lords in Naxalbari village of the Darjeeling district in West Bengal. Since then the Maoist movement in India has grown in various shades and forms. In the five decades of its existence it has gone through many highs and lows as the state has reacted with a rather heavy hand to deal with the challenge the Maoists posed. Despite the power of the paramilitary forces ranged against it the movement continues to question the legitimacy of the Indian state through an armed movement. The ideology of the Maoist movement continues to attract many more to its fold. The immediacy of the conflict between the Maoists and the state has led to the emergence of two extreme views, each looking at only that part of the picture that suits it. The popular and state-centric view limits the Maoist movement a security and law-and-order issue. At the other extreme the Maoist movement has been glorified by left-leaning intellectuals as the only solution against state atrocities.

While the two extreme positions are mostly dominated by the beliefs an analysis of the evolution of the Maoists on its ideological front would help understand the movement. Starting from its first organised violent attacks at Naxalbari areas in 1967 till date the Maoist movement can be divided into four major phases. Each phase of the movement has been guided by certain ideological orientation. The Annihilation Phase (1967-72) followed the

principle of idea of elimination of class enemy as directed by Charu Majumdar. Though such an ideology invited major criticisms, more from the fellow comrades than outside, the Annihilation phase set the tone of armed revolution in India guided by the Mao's political thought. The armed communist movement in India suffered from factionalism during the period between 1972 and 1980. Challenged with the internal political developments both in India and outside, the armed communists were seen to be divided on ideological lines as to who best follows and represents Marxist-Leninist-Maoist line than the other. The post 1980 period witnessed two major factions of the Maoists in India largely dominating the 'revolution'. The Maoist Communist Centre of India (MCCI) operating from Bihar and the People's War Group (PWG) from undivided Andhra Pradesh brought in the splinter armed communist groups under their fold. The formation of CPI-Maoist, as a merger of PWG and MCCI along with many splinter groups, in 2004 is an important development. It is important because the movement, unlike its previous forms and shades, moved from the 'pre-organisational' phase to a proper Leninist organisation.

A critical aspect of the CPI-Maoist, as revealed in their documents, is a greater emphasis on contradictions as a part of Mao's thought. CPI-Maoist recognises the multiplicity of contradictions in India revolving around issues of caste, tribal identity, women rights, religious minorities, marginalised nationalities, and industrial exploitation.The CPI-Maoist identifies four major contradictions in India:contradiction between imperialism and Indian people; contradiction between feudalism and the broad masses of the people; contradiction between capital and labour; and contradiction among



the ruling classes. The Maoists consider the first two as basic contradictions that would be resolved during the stage of New Democratic Revolution (NDR). The Maoists provide a central role for these two contradictions in designing and carrying out the overall revolution in India. Unlike the previous forms of Maoist movements, the CPI-Maoist considers the contradiction between feudalism and broad masses as the principal contradiction. The Maoists' consideration of feudalism as the principal contradiction signifies that issues relating to peasantry are a major source of revolution in India. It is evident as the Maoists pledged that "once the New Democratic state is established it would redistribute land among peasants and agricultural labourers and ensure equal right of women over land ownership".

Highlighting the contradictions Maoists try to create both ideological bases for themselves and a politico-ideological class for revolution. Such strategies of the Maoists necessarily adopt Mao's theory of revolutionary class. Mao's revolutionary class is not merely based on the economic aspect; rather it is political and ideological. Mao's concept of class further divides people in two categories; for the revolution and against revolution. The theoretical aspects of Maoists ideology have garnered legitimacy even outside of their areas of operation. At the same time it has also evolved as a political force over the years.

Different phases of Maoism have seen the movement grow in various shades and forms. Its spatial growth in different parts of Indiahas seen it evolve from the mere transplantation of Chinese prescriptions to the development of an Indian version of the Marxist-Leninist-Maoist (MLM) ideology. Maoists in India have been successful in identifying specific contradictions blended with local conditions. The contradiction between feudalism and the broad masses of the people, basically a Mao's construction, has been addressed by bringing localised specificities into it. Caste is an aspect of Indian reality that has been factored into the contradiction between feudalism and broad masses of people. The fight for tribal identities and forest rights makes important additions to the traditional Maoist construction of contradictions.

Their interpretation of the flexibility provided by the MLM ideology has allowed the Maoists to function under a highly centralised leadership even as they have identified different issues at different geographical areas. The concept of class both in Marxist-Leninist and Maoist traditions has been reconceptualised in the Indian Maoist context. Borrowing mostly from the Mao's concept of alliance of classes for revolution, the Indian Maoist have forged alliance among the marginalised sections of the society linked them with the 'prorevolutionary' intellectual class, thereby reconceptualising the entire debate over class. The alliance of various mass organisations for the revolutionary cause can also be considered an important contribution to the classical MLM revolutionary philosophies. In a broader sense the Indian Maoist movement has reduced the 'class conflict' to specific and localised circumstances and have been successful in circumstantial conceptualisation of MLM philosophical traditions. However, the entire Maoist movement has been limited to specific geographical areas as it has not been able to conceptualise the larger issues and contradictions beyond localised specificities



Research Programme Updates

Energy and Environment Research Programme



Prof R Srikanth

Significant Events of High Impact

The Ministry of Coal, Government of India appointed Prof R Srikanth as an Expert Member to a Task Force to develop an "Integrated Approach to Mining and Environment for Opencast Coal Mines", the need for which has also been formally recognised by PMO. This Inter-Ministerial Task Force has completed its work and submitted its report to the Government on May 31, 2017.

With effect from May 22, 2017, Tata Steel and NIAS have entered into an agreement to conduct a Benchmarking Study of the Learning and Development and Talent Management Processes and Work Culture at a World-Class Institution. Tata Steel has reposed its faith in NIAS to conduct such a study with the ultimate objective of enhancing the people development processes in Tata Steel and thereby develop the skills and capabilities of its employees. Profs PS Goel and R Srikanth are working to fulfil the deliverables under this agreement, which is a unique sign of faith reposed by Tata Steel on NIAS's ability to contribute to Tata Steel's unflagging drive for excellence in all fields of endeavour.

Research Update

The Ministry of New and Renewable Energy (MNRE), Government of India has advised NIAS to hold a workshop on Enabling 100 GW Solar Power Capacity by 2022, to brain-storm on the multifaceted solutions required to meet the 100 GW target by 2022 and submit key actionable policy recommendations to be considered by the Central Government.



The Board of Research in Nuclear Sciences (BRNS) has sanctioned a project titled Determinants of Nuclear Risk Perception in India: An Integrated Analysis to Dr TS Gopi Rethinaraj.

Work on other funded projects and development of proposals for funding by Government and other Sponsors is ongoing.

PhD Programme



Dr TS Gopi Rethinaraj

The second semester of NIAS academic year ended in April 2017 with the four Schools offering various courses for the NIAS PhD scholars in a range of subdisciplines and specialised areas keeping in view of the specific requirement of the concerned students. The PhD Committee also successfully completed on June 23, 2017 the entrance examination and interviews for selection of PhD students the 2017 batch. The NIAS PhD Programme is a unique interdisciplinary training programme that bridges the gap between the natural and engineering sciences, social sciences, and the humanities and admits bright and committed postgraduate students interested in pursuing independent research cutting across disciplines for the award of doctoral degree by Mysore University or Manipal University.

There was a surge in the number of applications (over 300) this year because of the increased flexibility in admitting candidates with and without financial support. The national level entrance exam and interviews for admission to the NIAS Doctoral Programme was held during June 21 to 23, 2017. Of the 142 shortlisted candidates, 10 candidates were selected for the 2017 August intake after an entrance test and two rounds of intensive personal interviews. Of this six candidates will work under funded projects by TCS and DST. This batch will be the fourteenth batch since the beginning of the NIAS PhD programme. The academic year will begin on August 1, 2017 and NIAS faculty members will be offering courses in a wide range of areas that will be of interest to the new students, continuing students, and students and general public outside of NIAS.

Ms Soundarya Iyer from the School of Social Sciences presented her final colloquium on Dynamics of Rural Transformation in Karnataka: A View from three Villages, on April 14, 2017 to the NIAS community and submitted her thesis to the Manipal University. She has taken up a research position at the Indian Institute of Human Settlements (IIHS) recently.

Mr Sashi Kiran C defended his proposal on Modeling electricity demand in the Indian context for planning, management andintegration of renewable technologies, at Manipal University and Mr.Vijay C S defended his proposal on Electricity system modelling for large scale renewable integration in India, on April 8, 2017 at Manipal. Both of them have registered at Manipal University.

Ms Aditi Kathpalia attended the conference The Science of Consciousness (TSC) in San Diego, California, USA during June 5 to 10, 2017 and gave a paper presentation at the above conference on 'A New Approach to Causality based on Compression-Complexity' on June 7, 2017. She received travel support from the Science and Engineering Research Board (SERB), DST, to attend the conference.

The Director reconstituted the PhD Committee on June 23, 2017 and has appointed Prof Sundar Sarukkai as the Academic Head of the NIAS PhD Programme and Chairman of the PhD Committee. The new Committee will become effective on July 1, 2017 and comprises Prof Sundar Sarukkai, Prof Anindya Sinha, Prof Sangeetha Menon, Prof Anitha Kurup, Prof D Suba Chandran, Dr TS Gopi Rethinaraj, Dr Shalini Dixit, Dr MB Rajani, and a PhD Student Representative.





Special Focus Walking through NIAS

An interaction with Prof Narendar Pani

As a continuation of the initiative, 'Walking through NIAS', brings forth yet another interaction from the campus. It aims to interact with an in-house faculty or a visiting scholar with an objective to look at the institute through their eyes. With a personal touch, this section blends their reminiscence as a scholar, mentor and teacher. Prof Narendar Pani is an economist by training who takes a multidisciplinary approach to issues of concern to India and Indians. In this effort he has relied on a method derived from the writings of MK Gandhi. He has over the last three and a half decades held positions in academia and the media. His books include, 'Inclusive economics: Gandhian method and contemporary policy' (Sage, 2002); 'Redefining Conservatism: An essay on the bias of India's economic reform' (Sage, 1994); and 'Reforms to pre-empt change: Land legislation in Karnataka' (Concept, 1983). He is the co-author of 'Women at the threshold of globalization' (Routledge, 2012) also one of the editors of 'Bengaluru, Bangalore, Bengaluru: Imaginations and their times' (Sage, 2010)

Beginning his career in 1980 at the Indian Institute of Management, Bangalore, he has worked in both media and academic institutions. He did his PhD in Economics from the Institute for Social and Economic Change in Bangalore. He had earlier done his MPhil in Applied Economics at the Centre for Development Studies, Trivandrum; MA in Economics from Jawaharlal Nehru University, New Delhi; and BA (Hons) Economics from Bangalore University.

A small team of NIAS scholars and faculty members (Dr Shalini Dixit, Prof D Suba Chandran, Ms Ankita Rathi, Ms Anamika Ajay, Mr Shaurabh Anand, Ms Aparupa Bhattacherjee and Ms Sourina Bej) interact with Prof Pani.

Following are the excerpts.

Prof Pani, you are an academic, scholar and a teacher now. Earlier you were with media as the Senior Editor of a leading daily. How do you manage the different aspects of your career, from journalism to academics?

I am a product of St Joseph's College, who was completely protected within the four walls of that college. Then you go to JNU, where suddenly you are exposed to a whole lot of issues which opens up your mind. It was the years before the Emergency, a period of high intensity in JNU; everybody wanted to do something. It exposed me to the meaning of poverty and of land reforms.





I came back to Bangalore and started helping a friend doing a survey in rural Karnataka. My Kannada is terrible but nonetheless it was better than hers. So I helped her do the translations. There I met a Dalit who has lost two acres of land in land reforms. That raised a whole lot of questions. I was not going to abandon my Marxism just because of one incident. This could just be an exception! But when I went into official records I found that 60 per cent of those who lost land in some districts were widows or small farmers. So this wasn't really an exception! Then I went into the history of the regions in Karnataka and it developed into my first academic book on land reforms.

After that I started considering that I needed to ask such questions; questions that didn't fit easily into any academic model. At that time journalism was changing and I was very lucky that I could find a place in the emerging journalism. That journalism didn't care what questions you asked as long you delivered plausible answers. I used to write a column called 'Politalk' in Economic Times. I wrote a substantial amount of editorials (around 2,500) on a variety of topics including international affairs iin that crucial period. Like when Saddam Hussain surrendered after the first Gulf War, I got 15 minutes to write an editorial. What happens with that kind of high pressure writing is that you develop your skills.

Journalism gave me that freedom to ask me questions but to do that I needed to retain some kind of contact with academics. There I was very lucky for access to two places. One was IIM-Bangalore. I was working there before joining journalism when used to teach a part of the course on Indian society. I continued giving occasional lectures there. The second place that gave me the freedom was NIAS. From the beginning of 1990s, I thought a session in their courses for senior executives. To cut a long story short, the search for an appropriate method finally took me to Gandhi and the resultant book. In my mind I have not shifted, I have stayed answering the same questions. At some times it has been easier to answer it in academics and other times it has been easier to answer it in journalism. After developing my version of the







Gandhian method, when there was a need to apply it, journalism didn't give me the time. NIAS did. NIAS is built around programmes, and these programmes keep the focus on issues. In addressing these issues one is free to, even encouraged to, tap multiple disciplines. This multidisciplinary approach is perfectly consistent with my understanding of Gandhi's method.

Do you miss that space in journalism?

I still write my column in the Hindu BusinessLine. I joined journalism when it was literature in-a-hurry and when I left it was facts in-a-hurry. I didn't regret leaving journalism. The 90's have completely transformed journalism. For the first time after liberalisation, advertisement revenue became a possibility and soon newspapers became primarily a vehicle for ad revenue

There were also other aspects of journalism I realised I didn't have the stomach for; like functioning in the midst of riots. If there is violence happening around you, a journalist is expected to jump right into it and cover it. I cannot say I did that very well. But newspapers gave me the space for analysis. And I always wanted to return at some point to academics. I think journalism has helped me retain the questions. If I lose touch in journalism, I think at some point, I will stop asking the right questions. It is very easy in academics to sit back and say some theory did this. But the quality of academics improves if we start with perception. And journalism allows me that.

In the programmes, you have a clear idea on what you want to do. But when scholars come to you, they have a clear idea as to what they want to do. How do you manage both?

As a teacher my effort is to get them to follow their own paths to what they believe to be the truth. I don't think I have asked any of my students to take the Gandhian method. If my students find any aspect useful, they are welcomed to use it. I just try to get them to speak and talk them into asking questions.



I push students hard and I'm not very popular for that. I am never satisfied with how well they do. The better they do, the harder I push.

What is that one area you have not explored and would want to in the coming years?

The question keeps changing. In the process of answering one question you come up with different questions. One could study the effects of inequality on growth from a purely economic prospective. Everyone agrees to the existence of inequality but what is the exact process through which it effects growth in the Indian context is yet to be adequately explored.

Since we are taking a walk in the campus why don't you tell us what has changed in NIAS since you joined?

What is now our dining hall was then our lecture hall. There were around 50 people. The dining hall used to be upstairs and encouraged good food and healthy discussions in equal measure 1 think Prof Raja Ramana was very keen on that ambience. There was a great deal of emphasis on genuine multidisciplinary research particularly during the tenure of Prof Roddam Narashimha.

My first exposure to eastern philosophy happened at NIAS and not in JNU. For example the idea that Indian philosophy was closer to Greek philosophy than Chinese. In JNU it was largely Marxist, which was a Western philosophy.

Is it then that you shifted to Gandhian philosophy?

Gandhi helped answer a few questions. Like, how do I help prevent a Dalit from losing his land as a result of a reform which is supposed to help people? When I use the term 'Gandhian', I am using it from an intellectual property sense. The ideas were all taken from there. Whether Gandhi would have agreed with the way I am interpreting his written word is a different issue and is not my primary concern.

Between JNU, Gandhi and Inequality, where did this idea of Bengaluru, Bangalore and Bengaluru come in?

That comes from the local. Once you accept that analysis should be situational then you begin with a

perception of a situation. And most of the situations I have had to respond to have all occurred in this city. I have grown along with this city and lived with its changes.And the fact that although there is change, the 'before' has not disappeared.

Bengaluru has always grown in the periphery; first the Cantonment, then the public sector units like HAL and BEL and finally the IT sector were all in the periphery. When the engines of growth are in the periphery and not in the city, you tend to derecognise the city and neglect it. It functions as if Bengaluru never had a history. Sometimes the intangible elements do not change. If you go to Cantonment, the Tamils will find it difficult to speak Kannada, though much less difficult than before. If you go to the city, you will see some of the top Kannada writers are Tamils. So the basic dynamics and attitude to language is also fundamentally different.

If that is the history of the city, the fallouts of the Cauvery waters conflicts in the city surprised me. I can expect that somewhere else but not in a city that has so much history of living together?

You have the idea of a dominant city and the Cantonment. The Cantonment is an area the British created before the end of the Company. The way they did it separated the city from the cantonment. So there was a cultural segregation. For example I grew up in the Cantonment but I never went to the city until my late college days. Similarly my wife was born in the city and she never came to the Cantonment. That kind of deference meant that the City-Cantonment mutual distrust had led to a Tamil-Kannada conflict.





In order to keep the elite (Cantonment) separate, British had got the Tamil population from the North Arcot. These Tamils did not speak Kannada neither were they encouraged to. So in the '80s when the integration happened, this became a point of conflict which coincided with the Cauvery conflict. The water issue and the identity issue have been clearly merged.

When did theatre become important?

After JNU there was the period of emergency and during that period, the idea of doing theatre in small groups as street theatre quickly emerged. Along with it, we tried to involve people from slums into theatre. So you have people doing plays before that have actually seen a play. I was trained by Badal Sarkar and even wrote a small monograph on that.

How do you manage multiple projects during the same time and still ensure quality outcomes?

I essentially break the project into multiple modules. Secondly, there are two ways of looking at it. One way is while delegating, trusting the person and judging the capacity of the person. The other route is breaking the project into the multiple thinks that can be done and judging who can do what. If you take the second point of view then everyone becomes a stakeholder in the project. And in the end of it, you will be surprised by the amount of contribution that can come from them. If it goes wrong, then I should take responsibility of it. This means that my monitoring at the end has to be very strong.

Amongst such a busy schedule, how do you find time to teach?

Teaching is a part of my research. When I teach, I tend to lead discussions rather than instruct. As I do that my clarity increases. This helps you conceptualize and look for logical errors. Over the years I have been trying to convert a logical statement into mathematical equations. Once you have done that you will know all the assumptions that you have made, even when they are implicit and not explicit.

Excerpted by Aparupa Bhattacherjee and Sourina Bej







Campus Notes Stories in Stone

Srikumar M Menon

Heritage Science and Society Programme, NIAS

The hand that grips the chisel is calloused, and hard. A couple of fingernails are cracked and chipped, mementoes of misdirected blows in the past. As the heavy hammer arcs and descends, finding the head of the chisel with each blow, the tip of the chisel is deftly flicked to scoop out the stone debris that has been dislodged. Forty one of us are intently watching the stonemason, as he expertly scoops out a line of small rectangular holes in the stone. Forty architects-in-the-making, and me, their teacher at the Faculty of Architecture, Manipal University, where I was teaching at that time; watching an activity that is so integral to our profession, but something that none of us would ever do in person. The mason now places steel wedges in each of the wedge holes that he has scoped out and then strikes each of them in turn with the hammer till the stone splits neatly along the line of wedges. The students exclaim in delight and the worker blushes, not used to any sort of adulation for a chore he performs daily, far removed from any glare of publicity.

We are at a granite quarry at Karkala in southwestern Karnataka, studying the quarrying of stone as part of the curriculum for first year architecture students. The finest quality of granite is available here; in fact, the very name "Karkala" derives from "black stone". Several modern granite carving workshops exist here, but the history of stoneworking is quite ancient in the region – showcased by the several Jaina basadis built in stone in the region and the colossus of Gommateshwara literally a stone's throw away.

Another time, another quarry. Baking under the harsh sun of the north Karnataka plateau, we pick our way among the debris left by the stone workers. But at this quarry, no chisel blows ring out, the only sound is that of a stiff wind violently lashing the branches of the trees around us. For this quarry was worked by artisans long gone, more than 1200 years ago. We are at one of the quarries which supplied sandstone for the famous Early Chalukyan monuments at Pattadakallu, today enjoying the status of UNESCO World Heritage Site. This is a research trip and I have only Mr. Somashekhara Kudachi for company. A local tourist guide from Pattadakallu, he knows these quarry sites intimately. In fact, he was one of the people who discovered this important site.



The impressive door guardian figure sculpted by Baladeva at the Virupaksha Temple, Pattadakallu

Tucked away in the sandstone cliffs some five kilometres north of the group of monuments as the crow flies, the quarry abounds with signs left by those early artisans. Blocks of stone prised out and left to be transported away to the building site, inscriptions in 8th century Kannada script, line drawings of deities, animals, series of short lines inscribed on the rock surfaces which have been interpreted as the attendance marks of the workers. I am blown away by a line sketch, inscribed on a rock face, of Mahishasuramardini Durga, which is an exact study for a well-known sculpture in the mantapa of the Papanatha Temple at Pattadakallu. This is where the master builders of the Chalukyan Empire sourced fine quality sandstone for their creations, and where they conceived the grand structures and beautiful sculptures, giving form to gods and epic heroes, and animals - both real and mythical, to decorate temple friezes. This rocky plateau on a windswept hill was one of the workshops where guilds of artisans learned and plied their trade, seeing exquisite forms

in formless sandstone and bringing alive magnificent pieces of art that we still admire more than a millennium later.

There are names inscribed on the rocks. Artisans who worked here, in all probability. Names from the distant past; of master craftsmen, sculptors, builders, stonecutters. Papaka. Anjuva. Bhribhrigu. Sri Nidhi Puru(shan). Ovajarasa. Sri Carucan. Sri Guna(priya) n. Sri Matiragan. Sri Vira Vidyadharan. The last name rings a bell. Down at the group of temples at Pattadakallu, among the several names inscribed on various temples, one name stands out. Baladeva. The sculptor who carved the impressive dwarapala figure guarding the southern porch of the Virupaksha Temple. He seems to have specialised in carving door guardians; the dwarapala featured in the porch of the Papanatha Temple is also credited to him. Mentioned at least three more times ascribing various sculptures to the authorship of Baladeva, son of one Duggi Achari, this artisan is referred to as a "Vidyadhara" in one of the inscriptions.

Did the sculptor-genius Baladeva roam this bleak cliff-top quarry a thousand two hundred years ago, transforming blocks of stone into life-like sculptures? It thrills me to merely think along these lines.

And then there are the wedge holes. It struck me when I observed the numerous wedge holes on the rock surfaces in the quarry and the edges of split stone blocks strewn around, that the wedge

(L) Sculptor's sketch at the quarry, and (R) sculpture of Mahishasuramardini Durga at Papanatha Temple, Pattadakallu







Chisel marks at the Virupaksha Temple, Pattadakallu

holes of the Chalukyan artisan are distinct from the rectangular holes that were cut out by the Karkala stonemason. The wedge holes of the Chalukyans are lenticular – lens-shaped or oval, distinctly different from the squarish or rectangular wedge holes used by artisans from later periods like the Vijayanagara period and in modern times.

Scouting around the quarry site gives a very good feel of how the Chalukyan stonecutter went about his work. First, the line along which the stone is to be cut is marked on the rock surface, following which the points where wedge holes are to be carved are marked out. The wedge holes are then scooped out, ready to receive the wedges, which are then hammered till the stone splits along the line.

This little observation lodged itself somewhere in my head, alerting me to signs of Chalukyan stone-working activity at the various sites in the Malaprabha Valley, like Badami, Mahakoota, Aihole and Pattadakallu, apart from relatively lesser-known sites like Huligyemmanna Kolla, Siddhana Kolla etc. Thus I could distinguish between the blocks of stone used in the fort walls at Badami which were quarried by Chalukyan stonecutters of the 6th to 8th centuries CE from those extracted by the masons of the Vijayanagara Empire who made modifications during the 14th to 16th centuries CE, based on the chisel marks alone!

I have always been fascinated by the way humans have worked with stone from the earliest times. My doctoral work had involved megaliths – those monuments from the prehistoric past, most of which also involved creating structures of varying form from stone. Megaliths can vary from the simple erect stone called a menhir and circles of boulders used to mark burials in underground stone cists, to fairly complex arrangements of stone slabs like dolmens. All the megaliths I have seen use undressed stones or, if they use stone slabs, the slabs seem to have been extracted using fire-setting and subsequently hammer dressed. In this technique, firewood is heaped on a rocky surface and set ablaze till the stone expands ad cracks into irregular slabs.



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Thus I was quite surprised when I encountered one curious looking dolmen at the Galaganatha group of temples at Aihole. This strange structure consists of a horizontal, roughly hewn sandstone slab supported on six "legs" or uprights. I noticed that the legs had chisel marks of the Chalukyan type on their edges, while the horizontal capstone did not. Measurements and analysis showed that the dolmen was most probably a prehistoric structure, which the Chalukyan temple builders had modified by raising it on the uprights.

This, and the fact that the temples seemed to be built on a pre-existing megalithic graveyard, led me to wonder whether the temples themselves could be commemorating dead people, like the megaliths before them. Memorial temples are known in the region, like the memorial to an Early Chalukyan King at Huligyemmanna Kolla. This strand of inquiry has led me to investigate the origins of temple architecture, and the architecture of monuments in general. The clues are everywhere. At the World Heritage Site of Pattadakallu, nestled in between the grand temples are scores of tiny shrines which are not too different from dolmens and even resemble them in construction. Near Krishnagiri, at the megalithic site of Mallasandram, there is a monument that is halfway between a dolmen and a stupa! At several locations in the country, there are groups of small, sometimes tiny temples that look suspiciously like memorial complexes.



An elaborate dolmen at the megalithic site of Mallasandram, near Krishnagiri

So, did temples derive their forms from megaliths? It would be presumptuous to make sweeping generalisations, but it does seem highly likely that, in the Malaprabha Valley at least, the large number of temples seem to be continuing the tradition of commemoration which existed from prehistoric times.

The quest continues. It is an exciting quest, to be able to grapple with questions that deal with the origins of temple architecture in our country. The answers lie in the details. Like the trimmed edges of stone blocks. Nuances in the techniques of joinery. Unfinished parts of monuments. The clues scattered around in ancient quarries and workshops. Every



time I am in the field following some interesting lead or another, I silently thank the stoneworker of Karkala. For it is people like him, millions of hard-working stonecutters and sculptors and architects who gave this rich heritage of monumental architecture for us to delight in.

A dolmen (in the foreground) near the Galaganatha Temple at Aihole





Campus Notes Musing on Monkeys

Shaurabh Anand

Animal Behaviour and Cognition Programme, NIAS

- The builders of bridges, will inevitably be left behind. The armies will cross over. The Ravanas will die in battle. The Ramas be acclaimed as victors. The builders will go down in history as monkeys.
- "Sachchidananda Hirananda Vatsyayan "Agyeya""

What do you think when you see a monkey – A figurine of God, a cultural and religious symbol, a wild animal or a creature associated with nuisance? Perhaps, a more practical question to ask would be – what do you do when you encounter a monkey – bow your head in devotion, offer food, chase it away, or walk away ignoring it? Monkeys assume a multitude of representations in different cultures. At a finer level, our behaviour towards them is influenced by context and prevailing circumstances. It is the varying representation and its ever-shifting positions in our views that make a study of monkeys (non-human primates, to be precise) an interesting exercise.

My earliest memories of monkeys are from my childhood when I used to observe the

'performance dance' of juvenile monkeys (rhesus monkey) in our village in North-West Bihar. Visits of the 'monkey man' was one of the few sources of entertainment in our sleepy, nondescript village and we, as a bunch of ever-excited kids, used to eagerly wait for the return of the 'monkey man.'

At that time, I had no idea about the species and its history, but what amazed me the most was the way the person handling the monkey would treat it like a true companion and the monkey would respond to all his commands.

However, this tradition of using monkeys as a form of entertainment died out very soon and the visit of the monkey man to our village stopped. My second encounter with monkeys happened around seven



years later when a group of monkeys (this time they were Hanuman langurs) visited our village again. This time they came without any human companion and they came not to entertain us, but to raid our kitchens and take vegetables from our kitchen gardens. The commotion that their arrival caused amused the children for sure, but left the adults perplexed. Little did we know that this was only the beginning of something that would become a regular encounter.

Troops of monkeys became regular raiders of our homes and agricultural fields. Children enjoyed chasing away the langurs but were instructed strictly against causing any physical harm to them. These interactions have continued till date with only one change. Chasing way monkeys is no longer a children's pastime but a serious responsibility for adults.

I found the interactions between humans and monkey and its changing nature extremely intriguing. I decided to explore answers to these questions with the help of individuals who have spent much of their careers trying to understand the behavior and ecology of non-human primates. This brought me to the Animal Behaviour and Cognition program and Prof. Sindhu Radhakrishna at NIAS. The doctoral program in NIAS allowed me to engage with my interests in understanding the behaviour of monkeys in human-dominated landscapes. The rich history of human-monkey interactions in Himachal Pradesh (HP) lent itself as one of the most appropriate places to understand human-monkey interactions and I began my formal investigations into the ecology and behavior of rhesus macaques and their interactions with humans in HP's Solan district.

The dynamics of interactions that I observed this time was completely different from the previous two occasions. This time it was neither a source of entertainment nor a cause of occasional commotions, but a tale of daily drudgery that people, especially farmers, are subject to.

I observed that the issue of crop-raiding has escalated to such an extent that it poses a direct threat to the livelihood of farmers. This sudden change of narrative was a bit unsettling for me. My research into human-primate conflict in Himachal Pradesh started with an exploration into the human dimensions of conflict, wherein I interviewed farmers to know about their side of the story. While farmers' experiences attested the pervasive nature and impacts of this problem, I also perceived a crippling sense of frustration among them due to the ineffectiveness of traditional crop-guarding techniques and their reluctance to use methods that cause physical harm to the monkeys.

A comprehensive understanding of the problem demands that one also view crop-raiding from the monkey's perspective. With this aim in mind, I started my observations on the crop-raiding behaviour of rhesus monkeys. My aim was to collect



Regular visitor to home





A raid on wheat-mustard field in progress

as many instances of raiding as possible so that I would have a respectable amount of data for my study. In order to spend the maximum amount of time with my selected rhesus troops, I chose to stay within the home range of troops. My intention was to become familiar with the place and the people so that I could carry out my scheduled field work without any hindrance.

Thanks to the open and cooperative nature of villagers, a hallmark qualities of hill communities, I quickly became a part of the community. Formal introductions and greetings very soon transformed into long, informal discussions over tea and meals. Once villagers came to know that I had traveled such a long distance to 'observe' and 'know' about monkeys, they narrated their experience of living with monkeys.

Soon, it became obvious to me that the presence of monkeys in the landscape not only causes direct economic damage but also influences the lifestyles of people. I vividly remember that most

of our conversations used to end reiterating the fact that all our activities must be planned around monkeys. Be it a visit to the market or attending a wedding, the logistics of who would go and when all depended on who is available to guard the fields. My relations with the farmers, and my observations of the acute impacts of monkey crop-raiding drove me to question the ethics of data collection methods.

As a researcher with the aim to understand cropraiding, I needed to observe and record details of cropraiding. I found myself struggling with many questions when I started doing this. Crop-raiding inevitably results in damage and being just a mute spectator of the destruction of months of farmers' hard labor induced a great degree of discomfort in me. Should I chase away the monkeys from the field to stop the raid? Should I inform the owner of the field?

Or, should I just let it go on the way it had before I came into this scene? These were not easy questions to answer and led to a great deal of deliberation.



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On one hand, I had to collect field data in order to answer my research question, and on other hand, I was troubled by the ethical dilemma associated with my work.

I discussed these questions with my supervisor which provided me another perspective on the whole issue. It emerged from our discussion that I needed to maintain a balance between being an objective observer and being a part of the community I was living with. While the recording of crop-raiding was a requirement of my work, I also needed to make sure that my presence did not cause any impression of escalation of conflict. Now I am back in my institute after completing my scheduled field work. As I collate my field data for analysis, I keep going back to the same questions. Investigation of an issue as complex and sensitive like crop-raiding requires a very strong determination about one's ethical position.

A scientific approach demands that one be an objective observer, maintain the position of an outsider, and minimize our impacts on the field. However, these are easier said than done. I still don't have any answers to what may be the best approach to pick, but I am glad my stint in the field forced me to think about these questions.



Talking to villagers about crop-raiding by rhesus monkeys

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Books, Essays and Commentaries



NIAS Newsletter, July 2017

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The greatest challenge to privacy is from the private sector. It also stems from an indifference to our own privacy

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NIAS Events

CONFERENCES, WORKSHOPS & MEETINGS

One day workshop titled Science Comm'17 in collaboration with Swissnex India and Foundation Science et Cité Switzerland (June 30, 2017) Coordinator: Dr VV Binoy

Talent Search Workshop of the NIAS – Maiya Prodigy Fellowship Programme (May 19 and 20, 2017) Coordinator: Prof Anitha Kurup

National Consultation on Social Technological Solutions for Major Water Challenges Facing India (May 12, 2017) Coordinator: Prof N Shantha Mohan

The Education Programme organised a Discussion on the Writings and Thought of Dr BR Ambedkar (April 11, 2017)

Inclusive Manufacturing Forum – 2017 (April 6 to 8, 2017) Coordinator: Prof V Bhujanga Rao

BRICS Science and Technology Innovation Entrepreneurship Partnership (STIEP) Meeting (April 9, 2017)

ANNUAL MEMORIAL LECTURES

THIRD CV SUNDARAM MEMORIAL LECTURE



Prof Michel Danino Guest Professor, IIT Gandhinagar How Can Ancient India Help Today's India? June 28, 2017

NIAS Events



FIFTH RL KAPUR ORATION



Prof Gilles Bibeau

Professor Emeritus, Université de Montréal, Canada Drift of Contemporary Ideologies: Social and Psychic Defenses in the Discourses and Practices of Hate June 16, 2017

PUBLIC PROGRAMMES



Dr Arun Shourie

Former Minister for Communication and Information Technology

Two Saints: Speculations Around and About Ramakrishna Paramahamsa and Ramana Maharshi – Book Launch June 5, 2017

(In Association with HarperCollins Publishers India)



Prof Ramesh Chand Member, NITI Aayog First Dadabhai Naoroji Lecture on Inequality Agricultural and Rural Sectors in Indian Economy: Issues Related to Growth and Inequality June 6, 2017 **Prof Sisir Roy's "Decision Making and Modelling in Cognitive Science" Book Release and Discussion** Panel Discussion By: Prof Narendar Pani, NIAS; Prof Anindya Sinha, NIAS and Prof R Srikanth, Poornaprajna Institute of Scientific Research, Bengaluru May 30, 2017

Lt Gen Prakash Menon (Retd)

Adjunct Professor, NIAS L'Affaire Human Shield – What Does It Signify? May 30, 2017

Prof Sundar Sarukkai

Professor, NIAS Seventh FIRST Lecture on Natural/Social April 28, 2017

Prof BV Sreekantan

Hony Visiting Professor, NIAS Multi-Billion Dollar Projects to Find Answers to Some Fundamental Questions in Physics and Astronomy April 19, 2017

Prof Sriram Ramaswamy

Bengaluru Mass Movements – A Physicist Looks at Living Matter In memory of H Y Sharada Prasad (April 15, 1924 – September 2, 2008) April 15, 2017

WEDNESDAY DISCUSSION MEETINGS

Prof Janaki Balakrishnan

Professor, NIAS Complex Dynamics of the 'Simple' Nonlinear Pendulum June 28, 2017

Prof Narendar Pani

Professor, NIAS India in a Changing World: Standing Firm or Fearing Change? June 14, 2017

Dr Shalini Dixit

Assistant Professor, NIAS Living Others' Histories with Our Memories: Identity, Social Conflict and Education June 7, 2017





Prof Malavika Kapur Visiting Professor, NIAS Whose Right To Education (RTE) Is It Any Way? May 31, 2017

Dr Shoibal Chakravarty

Assistant Professor, NIAS India's Demographic Transition May 24, 2017

Mr Posina Venkata Rayudu

Research Fellow, NIAS Neuronal Adaptations to Environmental Change May 17, 2017

Dr VV Binoy

Assistant Professor, NIAS Forbidden Knowledge: Understanding Martial Arts May 3, 2017

Prof Anindya Sinha

NIAS Reaching Out: Intentional and Referential Multimodal Communication between Wild Bonnet Macaques and Humans April 26, 2017

Dr Jayasree Vaidyanathan

Principal Investigator, Water Programme, NIAS Drought Severity Assessment and Its Mapping in the Drier Regions of Karnataka April 19, 2017

Dr Smriti Haricharan

Assistant Professor, NIAS Ancient Monument or Concrete Temple: One Site Many Visions April 12, 2017









Ptyas mucosa (Linnaeus, 1758)

The Indian rat snake (also known as Oriental Rat Snake, Dhaman in Hindi and KereHavu in Kannada) is the most common snake species found in Bengaluru. One can see them regularly in and around the NIAS campus. They are harmless to humans and play an important role in the food chain by feeding on rats, mice, rodents and frogs, keeping their numbers in check. They are diurnal, semi-arboreal, excitable and move swiftly to chase their prey and hide from danger. Devoid of venom, rat snakessubdue their prey by sitting on it using body weight to weaken it before swallowing.

They vary in colours across species, from almost jet black to shades of pale brown, wheatish, yellow or golden with scales forming a distinctive criss-cross pattern, closely resembling cobra, which overlaps this species in range. They also make growling sound and inflate their necks when threatened. These similarities often lead to this harmless animal mistaken for a venomous snake and being killed.

An adult rat snake can easily grow up to 7 feet long, which is much longer than what a cobra can ever be.They mate in late spring and early summer, though it could happen year round in tropical areas. Males establish territorial boundaries through a ritualised test of strength in which the rivals intertwine their bodies, a behaviour that is often misread by observers as a 'mating dance' between individuals of opposite-sex.Females produce 6-15 eggs several weeks after mating.



The Snake and the Frog: A NIAS Panchatantra Story

In the rainy early-morning hours of 7th June 2017, a frog in the NIAS campus was happily hopping about on his webbed feet, listening to the soft pitterpatter of raindrops on leaves. Splashing in puddles was particularly thrilling, and he leapt further and



Column

Birds and Blooms

MB Rajani Assistant Professor, NIAS







higher with each jump, completely oblivious to anything beyond the joy of the moment. Suddenly, he heard a distinct hiss. Instantly, he froze, his eyes became alert and frantically looked left and right, up and down... nothing! He cautiously hopped around, and then... he saw BIG bewitching eyes accompanied once more by a menacing

hiss... "Look into my eyesss...!" In terror, the little frog flung himself around and leapt as far and as fast as he could. Desperately, he hunted for a hiding place – any place would do – and so dived into a safelooking small, dark hole. It turned out to be the mouth of a discarded tin of MTR Badam Milk, and there was no way out. Had the snake seen him enter? Would he be out of reach? He laid as still as he could.

After a few moments, he heard the dreaded rustling of the snake, and a slimy tongue flickered around the mouth of the tin. The frog pushed himself inside as far as he could, as the snake poked his head inside, grinning and hissing "Trussst in me, jussst in me... Ssshut your eyesss... Ssslowly and sssurely your sssensesss will ssceassse to resssissst!" The snake's jaws opened wide, and held his prey in triumph. The frog croaked, "My days are done... I surrrenderrr".

Suddenly, he heard the snake give a curious groan "hhrrggrrr... argh...". Trapped between the bulging jaws, the frog saw that the snake was unable to retract his bloated head from the tin! "What??", moaned the frog. "Arrre we both stuck in herrre now??" The snake loosened his grip ever so slightly and hissed: "Not me – you are ssstuck. If I can ssslither in, I can sssurely ssslither out – it isss a matter of time". But try to wriggle and squirm as he might, he could not extract himself with the frog in his mouth.

"Oww... my neck hurtsss," the snake said after a while. "Anyway, my little friend, we are in NIASss campusss... there are animal loversss and behaviorologissst all over this place, and I am sssure I can attract their attention. They will come to my ressscue!" The frog asked, "These animal loverrrrs... do they love yourrr kind or mine?" The snake, despite his discomfort, permitted himself a smile. "They are people of deeper consssciousssness, they know how to deal with conflictsss, inequalitiesss and they philosssophissse everything. However, in thisss cassse, they have no data about you, ssso they don't know you exissst and are ssstuck in here. But me – I am visssible, obssservable, ssso it isss me they will sssave! However, there are still a few hoursss to go before they arrive, so we might asss well ressst." "Rrrest?!" mumbled the frog. "I must be the only frrrog everrr to have the opporrrtunity of 'rrresting' in the jaws of a hungrrry snake... croak... croak. I might as well invite death. Oh lorrrd, I can't bearrr this prrrolonged torrrture... please help this snake kill me and eat me." Even the almighty, however, could not stir NIAS to life prior to tea-time.

The status quo persisted for hours, and the snake started to get fidgety with hunger. "It mussst be after tea time by now – what'sss wrong with NIASssites today? Why hasss no one seen me yet? I often sssee them with their camerasss and sssmartphonesss and other remote sssensssing equipment as sssoon asss they ssspy me, thessse paparazzssi!"

"You forrrget it is Wednesday – they arrre all at the discussion meeting, unconscious of our struggle," croaked the frog resignedly. "Ah, of courssse!" the snake replied. "In that case, I mussst attract attention to mysself. Let me wiggle my tail." So saying, he began to violently shake his body and the tin. The response was almost immediate ... a sharp series of Kaaw... Kaaw sounds (muffled by the tin), followed by an even sharper series of stabs to his body. "Oh my







god," wailed the snake, "I have attracted the crowsss – they are tearing me to piecesss with their evil beaks! Help... Help... NIASssitesss... I don't want to become a link in the food chain!"

The commotion attracted the attention of Gaja who was passing by, and he rushed to the spot, shooing the crows away. "Kaaw... Kaaw," protested the crows. "There goes our delicious breakfast... these humans poke their noses into everything... kaaw... kaaw." Gaja saw the wiggling tail and quickly called Ajay, who was parking his vehicle. "Wow – it's a snake!" exclaimed Ajay. He leaned closer and said, "I think it's a Rat Snake. It's clearly injured – it's neck is bruised and bleeding. We should do something, otherwise it will die." Ajay did not know the number of Binoy, the resident snake expert known for his encounters with dangerous animals, so he called Sonia in the neighbouring office to alert Binoy.

Meanwhile, inside the tin, the snake began to taunt his victim: "He he he... now I'll be out in no time! Sssay your prayers my delicious prey, your penance will come to a sssilent end. For all the ssstruggle and pain I have endured, I sssurely dessserve thisss sssucculant feassst."

Sonia rushed to Binoy's office and relayed Ajay's description of the snake in distress. Binoy leapt up in excitement. "Hey... wow!!" he shouted, but then immediately frowned and said,

"Oh wait... eh... I have promised my wife that I shall not touch a snake again." Then, seeing Sonia's dismay he continued, "But I can surely stand at a distance and guide someone else." They rushed to the scene, and Binoy confirmed: "It's a Rat Snake and not a Cobra, so we can attempt the rescue ourselves." Carefully, he began to guide the operation.

Ajay held the tin, while Gaja and Rohan were instructed to stretch the snake and hold it tight to prevent it from wiggling. From inside the tin, the snake hissed in fury: "Binoy, thisss isss not a yoga sssession – I don't need to be ssstretched like a rope!" The rescue, however, continued. The tin was pierced to let the snake breathe more easily, and further incisions were made to cut the tin open.

MTR's high tin put up a strong defence – one that any NIAS PhD student would instantly admire – bravely resisting a series of saws, screwdrivers, cuttingpliers and scissors for 20 exhausting minutes. Just as the tin was nearly open, the snake gave a ferocious wiggle and freed itself from his rescuer's grip. The serrated edges of the tin now bit into its flesh, driving it into an unimaginable frenzy. In that instant, the frog slipped out of the snake's grip, and with the snake's jaw suddenly shrunk, the tin went flying off the snake's head.

The snake, squinting in the bright sunshine and surrounded by a large mass of humans with sharp tools, panicked and squirmed swiftly towards the bushes. "You sssilly fellowsss," he hissed in ungrateful disgust, "I lossst my meal."

One member of the crowd, ready to disperse after watching the snake's rapid exit, suddenly spotted a little head emerge cautiously from the hole in the tin. "Look... Look at the tin!!" came an excited shout. The dizzy frog, shocked to discover he was alive and conscious, with his tormentor nowhere in sight, gave a little leap of excitement and hopped along on his way to freedom. "Hurrray ... hurrray...! I am trrruly a gifted frrrog," he thought happily.

Animal lovers at NIAS were thrilled that they had rescued not just one life but two! Philosophers at NIAS were quick to point out the moral question arising from interrupting this natural drama: What about the crows? Historians at NIAS will no doubt confirm one day that this story, like most stories, cannot have just one moral.

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Column

Nature Nurture

Such is the Beauty of NIAS

Ekta Gupta Doctoral Scholar, NIAS



Everyday when the sun rises, it's the same.

But, here I find something new some fallen leaves, blossom buds and glittering dew... The fragrance of flowers, buzzing of bee I heard, exuberant and pleasing colours, palliative chirping of birds, enrich my soul, give me a meditating experience...

Everyday I find something new a different sky, different hue, a different angle of sunlight and a different view.











NIAS News

Awards, Honours and Achievements

Awards & Honours



Prof Baldev Raj, Director, NIAS

Gujar Mal Modi Award for Innovative Science and Technology 2017 by Gujar Mal Modi Science Foundation, New Delhi.

Chairman, Committee for Reviewing the outcome of the Centre for Knowledge Management of Nanoscience and Technology (CKMNT) Phase–I, International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad, June 21, 2017.

Chairman, Council of Scientific and Industrial Research CSIR- Recruitment and Assessment Board (RAB) Advisory Group, New Delhi (2017-2019), June 7, 2017.

Member, Committee of Life Time Achievement Award and Outstanding Achievement Award of ISRO Awards Scheme, ISRO, June 2, 2017.

Member of Confederation of Indian Industry (CII) National Committee on Higher Education (2017-18).

Member, Board of Governors, TransDisciplinary University, Bengaluru, May 2017.

Chairman, Committee to Evaluate a Project on Gamma Radiation Plant for Medical Device Reprocessing in Hospitals, Department of Science and Technology, Government of India, May 2017.

Chairman, Committee for Technical/Financial recommendations on Hub proposals under Biomedical Device and Technology Development (BDTD) Programme, Technology Development

Dr KM Suresh, formerly Professor

and Director (Museum), Kannada

University, Hampi joined NIAS

for a period of three months as

Visiting Professor under the IDH-Hampi Knowledge Bank Project

conducted by Prof S Settar with

effect from June 7, 2017.



and Transfer Division, Department of Science and Technology, Government of India, May 2017.

Chairman, Selection Committee for Selection of Indian Team for participation in 2nd BRICS Young Scientists Conclave to be hosted by China, Ministry of Science and Technology, Delhi.

Member of Indian Ministerial Delegation of the 7th BRICS STI Senior Official Meetings and 5th BRICS STI Ministerial Meeting at Hangzhou China, Department of Science and Technology, India, May 2017.

Member and Permanent Invitee of the Over Arching Committee for the R&D project on the development of the Advanced Ultra Supercritical technology (AUSC) for thermal power plant, Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, Government of India, April 11, 2017.



New Faces

Mr Srikumar Pullat, formerly Director of Aeronautical Development Establishment, Defence Research and Development Organisation joined NIAS as **Visiting Professor** under the International Strategic and Security Studies Programme on May 24, 2017.



Prof Carol Upadhya's interview was featured in Frontline.

http://www.frontline.in/cover-story/it-collapsewould-shut-paths-to-social-mobility/article9721076. ece?homepage=true

Review of her book 'Bangalore and Its IT Industry: A Changing Landscape of Work and Life in Urban India' appeared in Economic and Political Weekly.

http://www.epw.in/journal/2017/24/book-reviews/ bangalore-and-its-it-industry.html



Mr PM Soundar Rajan, formerly Director, Defence Avionics Research Establishment, Defence Research and Development Organisation joined NIAS as Visiting Professor under the International Strategic and Security Studies Programme on May 17, 2017.



Ms Pratheeba Vimalnath joined NIAS as **Research Associate** under the NIAS-UNDP Policy Research Initiative on Inequality and Human Development Programme in the School of Social Sciences on June 5, 2017.

Congratulations



Prof D Suba Chandran was appointed as **Dean, School of Conflict and Security Studies** on May 27, 2017.



Mr Gajanana S Naik, Support Staff married Ms Vaishali on May 10, 2017.



Dr Kshitija A Joshi was appointed as **Assistant Professor** in the RBI Programme with effect from April 17, 2017.



Prof VS Ramamurthy completed 75 years on April 2, 2017. Get-together was organised on April 3, 2017.

NIAS' Triumphal Arches

The Institute is well known for its distinctive hallways with majestic arches. We would like to think it reflects the soaring spirit of research at NIAS

The Multi-purpose Atrium

The well lit courtyard at the Institute hosts informal addresses, tea discussions, poster sessions etc. In the evenings it gets transformed into a mini auditorium of indoor games activities from badminton to table tennis.