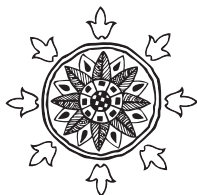


# SCIENCE AND TECHNOLOGY STUDIES IN SOUTH ASIA

May 13-15 2010



**South Asia Institute**



THE UNIVERSITY OF TEXAS AT AUSTIN

## **ABOUT THE CONFERENCE**

It has been a number of years since the last gathering of STS-South Asia-related scholars took place at MIT, organized by Banu Subramaniam and Abha Sur. There has been a substantial increase in the number of scholars working on these topics since that time; especially exciting has been the rise in the number of graduate students doing PhDs on STS-South Asia-related issues.

The goals of this conference are simple: to offer a venue for scholars to present their work to an informed audience, to create a forum for discussion of issues of common interest, to inform participants about the state of the field, and to help build a community of STS-South Asia scholars. The conference is organized as a sequential series of panels over two days, and includes at least one plenary lecture by a senior scholar in the field.

## **ORGANIZING COMMITTEE**

- Itty Abraham, Government and Asian Studies, University of Texas at Austin, [itty@atx.utexas.edu](mailto:itty@atx.utexas.edu)
- Kavita Philip, Women's Studies, University of California at Irvine, [kphilip@uci.edu](mailto:kphilip@uci.edu)
- Amit Prasad, Sociology, University of Missouri, Columbia, [prasada@missouri.edu](mailto:prasada@missouri.edu)
- Banu Subramaniam, Women's Studies, University of Mass, Amherst, [banu@wost.umass.edu](mailto:banu@wost.umass.edu)

# **THURSDAY MAY 13 MEYERSON ROOM W. C. HOGG 4.118**

## **2-4:30 PM Workshop for Graduate Students**

Deepanwita Dasgupta, “Towards a Middle View of Peripheral Science: S. N. Bose and Bose-Einstein Statistics” (Abha Sur, discussant)

Ashok Maharaj, “Integrating Nehruvian Scientific Ethos, Rowstowian Modernization and Gandhian Bucolic Sensibilities: A Satellite for Indian Rural Development” (Itty Abraham, discussant)

Anshuman Pandey, “Computing Standards and the Politics of Language and Script in India” (Kavita Philip, discussant)

Logan Williams, “Cosmopolitan Appropriation of Technology: Is Phaco-emulsification a viable technique for white cataracts?” (Deboleena Roy, discussant)

## **5-6:30 PM Welcome and Introductory Remarks**

Richard Flores, Senior Associate Dean, Liberal Arts; Professor of Anthropology and Mexican-American Studies

Introduction of Speaker: Itty Abraham

Keynote Address: David Arnold, History, University of Warwick

“Situating Technology: Reflections on the Rise of Techno-Modernity in 19th and 20th century South Asia”

## **730-1000 PM Dinner for Conference Participants**

Clay Pit restaurant, 1601 Guadalupe Street

# **FRIDAY MAY 14. EASTWOOD ROOM, TEXAS UNION**

**9-11 AM Colonial and Postcolonial Histories of Technology and Medicine.** Chair: David Arnold

Robert S. Anderson “Negotiating Rare Earths in India: post-colonial expectations around thorium, beryl, and uranium 1947-55”

Savithri Preetha Nair, “From Economic Biology to Ethnobiology: E. K. Janaki Ammal and the re-ordering of the South Asian Environment, 1897-1984”

Jessica Ratcliff, “Global Science and Colonial Science in a Princely State: The Travancore Magnetic Observatory”

**11-1 PM Cities and Landscapes.** Chair: Elizabeth Mueller, Community and Regional Planning, School of Architecture, UT

Simanti Dasgupta, “The ‘Happy’ City: Techniques of security and the emergence of gated residential communities in Bangalore”

Govind Gopakumar, “Investigating Infrastructure Congestion in India: Shahri Navikaran, Infrastructure Policy, and Politics”

Leon Morenas, “Delhi’s Postcolonial Development Machine”

Arafaat Valiani, “Technologies of Consumption: Commercial Architecture in 20th and 21st century western India”

## **LUNCH 1-2 PM**

**2-4 PM Beyond IT.** Chair: Robert Oppenheim, Asian Studies, UT

Sareeta Amrute, “Migrant Programming”

Aneesh Aneesh, “The Globalization of Nocturnal Labor”

Jyojeet Pal, “Computers and Geeks as Icons in South Indian Cinema”

Winifred Poster, “Emotion Detectors, Answering Machines, and e-Unions: Multi-Surveillance in the Indian Call Center Industry”

**4-5:30 PM ROUNDTABLE. STS Talk: Hegemony, Resistance, Tweaks, Workaround**

Initial Comments: Amit Prasad, Kavita Philip, Paul Greenough, Banu Subramaniam

# **SATURDAY MAY 15. EASTWOOD ROOM, TEXAS UNION**

**10-12 AM Biopolitics, Gender, and Environment.** Chair: Barbara Harlow, Louann and Larry Temple Centennial Professor of English Literatures

Itty Abraham, “Biological Citizens: Risk and Radiation in Southwest India”

Paul Greenough, “India’s House Crow: The environmental history of a diasporic species”

Banu Subramaniam and Deboleena Roy, “New Materialism and the Practices of Colonialism: Technologies of surrogacy in India”

Abha Sur, “Illusions and Erasures in Science Studies”

## **LUNCH 12-1 PM**

**1-3 PM Science and the (Neo-liberal) State.** Chair: Kavita Philip, University of California, Irvine

Jamie Cross, “Into the Light: Markets, Technology and the Social Good in India”

Dolly Daftary, “Crafting capital in India’s margins: Watershed development and state formation in an era of economic reform”

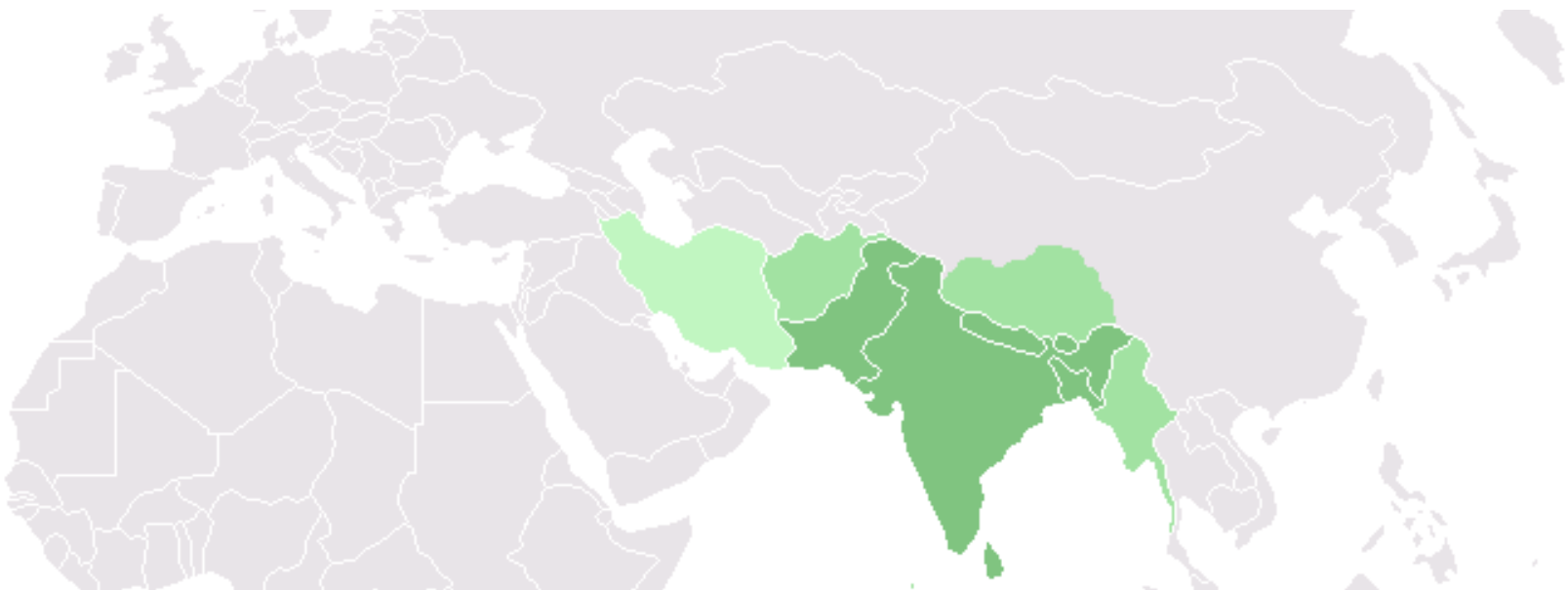
Ron Herring, “India’s New Gene Wars: Cotton to Eggplant”

Aman Luthra, “An Urban Political Ecology of the Green Building Industry in India”

## **ROUNDTABLE 3-4:30 PM**

**5 PM onwards. Dinner for Conference Participants**

Woodburn House. (See Map)





# ABSTRACTS

Thursday May 13 Meyerson Room, W.C. Hogg 4.118

Deepanwita Dasgupta

Towards a Middle View of Peripheral Science: Satyendranath Bose and Bose-Einstein Statistics

The term 'peripheral science' refers mostly to science practiced outside of Europe and North America. Why study such science and what philosophical mileage can be gained out of such activity? As our philosophical discourse on science currently stand, peripheral science is mostly viewed as details of history, i.e., events that are included in the annals of science but which carry little or no philosophical import in understanding the nature of scientific activity. In most traditional accounts of scientific knowledge and of scientific progress therefore peripheral scientists are viewed as either followers or imitators- thereby reducing the importance of their contributions in science. In contrast, the mainstream Western centers of science are viewed as the important centers of scientific creativity. Since all creativity in science-according to this account- takes place in those metropolitan centers, this is where science should be examined at its first hand. Accordingly, philosophers of science devote all their energy in studying science exclusively at its Euro-American locations.

In this presentation, my goal is to argue for a conclusion of a different sort. I stress the importance of peripheral science, i.e., science that occurs outside of the Euro-American contexts in forming an account of scientific knowledge. Based on my case study of the formulation of Bose-Einstein statistics in 1924 by a young Indian physicist named S.N. Bose, I claim that peripheral scientists (such as Bose) often display very high levels of creativity in science. Working in an atmosphere characterized by a profound kind of cognitive asymmetry, peripheral scientists like Bose contributes in two sorts of ways in science. Firstly, as pioneers in science (in their own cultural contexts), they are able to create a track record where no track record did exist before. This allows the formation of new scientific communities that thereafter follow them as exemplars. Secondly, they contribute new ideas and novel solutions to the metropolitan centers of science, which surprisingly, often are very advanced in nature. Thus, not only in the peripheral episodes of science do we see evidence of scientific creativity, we also see from those episodes how scientific knowledge can be made under asymmetric and inegalitarian conditions. This finding leads us to a middle view about peripheral science which considers such science neither as a straightforward path to progress nor surrender to a hegemony but as a natural cognitive response to a new body of knowledge and the putting together of a new kind of epistemic resource for a society. From this vantage-point, I conclude that studying such science- and paying particular attention to the creativity of peripheral scientists - is a worthwhile task for philosophers of science.

Ashok Maharaj

Integrating Nehruvian Scientific Ethos, Rostowian Modernization and Gandhian Bucolic Sensibilities: A Satellite for Indian Rural Development

This paper contextualizes the origin, development and completion of the Satellite Instructional Television Experiment (SITE) in India (1975-76). What appears to be a technological collaboration in satellite mass communication between two agencies - NASA and the Indian Space Research Organization (ISRO), was in fact layered with politics since the idea of direct broadcast was first planned for India. I see SITE to be a thick technology that encapsulated polyvalent meanings and also a boundary object because it invoked different set of meanings to different 'social groups.' Viewing the story from the American side, one can see it as a prestigious project offered by U.S. State Department and NASA officials to regain Indian prestige after the Chinese nuclear test of 1964; secondly, as an expression of U.S. policy that proved the benefit of U.S. space technology directly available to 'other' people and finally, how India became a laboratory to test the effectiveness of advanced satellites for rural education and modernization. From the Indian side, SITE provided the instrumental rationality that a high-technology could be used for socio-economic development and thereby providing the justification for building a space program in a poor country-- the question became 'not whether India could afford a space program but can it afford not to have one'?

'Modernization' through science and technology is not new to the Indian subcontinent. During British occupation India witnessed a huge incursion of technologies - railways, telegraph, telephone, radio, plastics, printing presses, etc., for 'improvement/development' and extraction. The geosynchronous satellite in post-colonial India can be seen as an extension of those terrestrial technologies, only in this case the Americans have replaced the erstwhile empire to bring order, control and 'modernization' in the newly decolonized states through digital images using satellite technologies that is far removed from the territorial sovereignty of nation-states.

Anshuman Pandey

Computing Standards and the Politics of Language and Script in India

Since the 1950s, the primary site for contesting linguistic identity in India has been the Eighth Schedule of the Constitution, which contains a list of languages officially recognized by the central government. Inclusion of a language in the Schedule is viewed by a linguistic community as certification of ethnic identity, regardless of the actual benefits that may accrue from inclusion. Exclusion from the schedule is correlated with repression of ethno-linguistic identity. While the Eighth Schedule is still perceived as a measure of official endorsement of linguistic identity, the expansion of information technology in India has changed the politics of language in the republic. Such change is evidenced foremost through the emergence of computing standards for lan-

guages and writing systems, such as the Universal Character Set, known commonly as Unicode.

The intersection of ethnic politics, governance, and information technology in India is a nascent site for scholarly investigation. In this paper, I hope to contribute to the field by demonstrating how computing standards have changed the politics of language by extracting it from the domain of the state and relocating it within non-governmental and international venues. Although such standards are apolitical, culturally agnostic technical entities, protagonists of language movements view the inclusion of a script or support for a language in computing standards as validation of linguistic heritage, especially when the Government of India has ignored claims for recognition. However, computing standards are also leveraged by the state for the development of languages. In November 2009, India declared Unicode as the standard for representation of text in the National e-Governance Plan (NeGP). India's position on digital standards reveals a change in the predominant national language policy of the state. Thus, I argue that international computing standards offer new sites for contesting linguistic tensions in India and also for attaining practical resolutions.

Logan D. A. Williams

Cosmopolitan appropriation of technology: Is phacoemulsification a viable technique for white cataracts?

Cataract surgery is one of the most frequently performed surgeries in the world. There is a fairly recent discussion in ophthalmology - what is the appropriate surgical technology-practice in the case of advanced stage 'white' cataracts? This paper offers an example of how NGOs are both creating incremental innovations in order to adapt cataract surgery to its local context and making changes within the local context to adjust to the surgical technique. It will use pre-dissertation fieldwork at the not-for-profit Tilganga Institute of Ophthalmology in Kathmandu, Nepal and interviews of US ophthalmologists to contextualize an examination of secondary literature on manual small incision cataract surgery and phacoemulsification. This literature represents esteemed ophthalmologists at various eye hospitals and clinics from many continents, but primarily from southern Asia.

In investigating both of these surgical techniques that are used to correct 'white' cataracts, it will have the opportunity to build on theories of appropriation (Kline and Pinch 1996; Eglash et al 2004) where there is both a critique of developmentalism and an emphasis on how marginalized users are active in refashioning technology. By looking at the peer-reviewed ophthalmology literature, a narrative is created that describes the "cosmopolitan appropriation" of cataract surgery (using Appiah's definition of "cosmopolitan" 2006) and builds on the theory of "constitutive appropriation" (Odumosu 2009) which describes the appropriation of technological systems as a co-production of system and society. This paper will examine re-purposing and adaptation as a response to the modern marginalization of the "Other[s]" by

analyzing the ways in which "cosmopolitan appropriation" differs from appropriation of technology by single users or single societies.

David Arnold

Situating Technology: Reflections on the Rise of Techno-Modernity in 19th and 20th century South Asia

Given the recent growth of scholarly studies on the history of technology in South Asia, the question arises as to how we should - or might - situate this developing knowledge relative to other (in some respects more dominant) fields of enquiry such as the history of science, medicine and environment, the history of colonialism, nationalism and subalternity, or in relation to questions of gender, identity, modernity and the state. Drawing upon the author's current research into "everyday technology" in India, c. 1880-1960, this paper explores some of the many possibilities, with particular attention given to the evolution and significance of the concept of "improvement," the ethnographic representation of technology, the rise of swadeshi ideals and the moral discourse of technology in late colonial India. It considers, more broadly, the value (and limitations) of moving from elite to subaltern technohistories, of situating technology corporeally and spatially as well as socially, and of replacing essentially Eurocentric approaches (based on concepts of technology transfer and diffusionism) with more locally-oriented studies of the social deployment and cultural understanding of such new and increasingly "everyday" technologies and technological goods as sewing machines, typewriters, bicycles and rice-mills. Although the focus of the discussion is on historical approaches, the paper aims to address as well the rich interdisciplinary possibilities of studying technology in the context of modern South Asia.

## Friday May 14 Eastwood Room, Texas Union

### Robert S. Anderson

Negotiating Rare Earths in India: post-colonial expectations around thorium, beryl, and uranium 1947-55

The colonial arrangements surrounding valuable Indian minerals strictly limited their market opportunities. During the 1939-45 war the Allied powers defined these minerals (thorium, beryl and uranium) as 'their' exclusive strategic commodities. Soon, however, these very minerals were part of a great power effort in the late 1940s to build a global semi-commercial cartel around all rare earths and fissile materials. But this collided with the moment when India decided to flex its newly-independent right to use this material exclusively for the post-colonial state.

Trade with the 'great powers' in these minerals was not just for cash but also for other strategic materials like uranium metal and heavy water. It became important in the pursuit of expertise about and designs for nuclear reactors. To achieve this, Indian officials like Shanti Bhatnagar and Homi Bhabha, who did not have much to bargain with, began in 1950 to ship thorium secretly to China and probably on to the USSR by rail. Experiencing frustrating delays with the British nuclear agency, and blessed with Nehru's support, they also began negotiations with France to refine Kerala's monazite beach sands into industrial thorium. When their shipments through China were 'discovered' in 1953, the same Indian officials opened a profitable supply contract with the US Atomic Energy Commission, brokered with no less a person than US Secretary of State John Dulles. How was this achieved when the old colonial expectations about India remained in place, when each one thought all the others were duplicitous? Who were the key new actors and what were their motives? What lessons was each one hoping to teach the others? Why did each one keep negotiating in spite of so many unfulfilled expectations? And finally, how did these motives and expectations foreshadow the 'grand opening' of nuclear cooperation with India in the amazing long year of 1955?

### Savithri Preetha Nair

From Economic Biology to Ethnobiology: E. K. Janaki Ammal and the re-ordering of the South Asian Environment (1897-1984)

Environmental history is necessarily global, comparative and multi-disciplinary. The need for food creates a relationship of fundamental importance between people and the environment. Agriculture, of cereal crops in particular, plays a major role in determining the shape of human culture and the security of nations. Soviet biology under the Stalinist regime had far-reaching impact on agronomists in India, dividing them at least into two camps, the Lysenkoists (after Trofim Lysenko) and the Vavilovians (after N. I. Vavilov) but this significant historical episode has hardly attracted the attention of historians of science, agriculture, politics or the changing environment in India. Indian cytogeneticist E.

K. Janaki Ammal (1897-1984), the Vavilovian fought her way through what she considered Lysenkoish or "pseudo-scientific" tendencies among Indian agronomists and Congress politicians of Independent India obsessed with national security at the cost of "real science", a science that was not over-determined by economics or national security.

She often felt marginalised in what was an aggressive world of science in India, despite her very close relationship with Prime Minister Jawaharlal Nehru, who had invited her in 1948 to become a director of agriculture. The first Indian woman to receive a doctorate in science, Janaki co-authored with C.D. Darlington (the British geneticist who invented the term "chromosome"), *The Chromosome Atlas of Cultivated Plants* (1945). It is of great significance that the book was dedicated to Vavilov, the Russian geneticist, plant breeder and biogeographer who had died tragically in the Gulag. Spread over six decades and across three different continents - Asia, America and Europe, Janaki's work with its emphasis on plant exploration, breeding, chromosomal studies and concerns about the origins of cultivated plants, biodiversity and ecology proved to be too unorthodox for the Indian state and its agronomists under the grips of Lysenkoism. Locating the role of Janaki and her contemporaries within the debate on the role of science in the emergence of the Indian nation, this paper examines the far-reaching impact of Soviet genetics and planning on Indian agricultural science. Janaki was also the only woman invitee to the landmark international symposium on environmental history, "Man's Role in Changing the Face of the Earth" organized by the Wenner Gren Foundation for Anthropological Research at Princeton in 1955 (and one of only two Indians, the other being Radhakamal Mukherjee). It is also to her Vavilovian plant geography approach that the triumph of the protest against the Silent Valley hydroelectric project proposed by Kerala's Marxist government in the 1980s might be traced.

### Jessica Ratcliff

Global Science and Colonial Science in a Princely State: The Travancore Magnetic Observatory c. 1850-80

In the 1840s, Swathi Tirunal, the maharajah of the princely state of Travancore in south India, began an ambitious program of institution building. In what is now Thiruvananthapuram, the capital of Kerala, the maharajah and his successors Uthram and Ayilyam laid the foundations for a natural history museum, a zoological gardens, a hospital, a public university and library, a center for oriental scholarship and an observatory. At the observatory, the Scottish natural philosopher John Allan Broun was hired to conduct a massive project of astronomical, magnetic, and meteorological data collection, which would eventually generate, among other results, new ideas about global patterns of terrestrial magnetism. In this talk I will introduce my recent research on this subject and then discuss two related issues. First is the question of how science within a princely state such as Travancore should be considered in relation to science conducted at the centers of colonial government at Calcutta and Madras. Is the maharajah's science still



colonial science? Does the answer depend, for example, only on the degree of political independence we grant to nineteenth-century Travancore? Second is a historiographic question about how this particular case of the Travancore Observatory fits into a larger project on the history of data in the nineteenth century. In this larger project, I am interested in charting the connections between the conditions of imperialism and the data-intensive character of nineteenth-century science. I suggest, for example, that the new global sciences of the nineteenth century, of which Broun's magnetic work at Travancore is a prime example, marked an important phase in the historical development of the ideology of universal science. The question is, in shifting to such topics as data and universalism, does the project then necessarily become a story from the viewpoint of the imperial metropole?

#### Simanti Dasgupta

##### The "Happy" City: Techniques of Security and the Emergence of Gated Residential Communities in Bangalore

This paper analyses the urban form and material practices as a metonymic space of globalization as a question of technique. I focus on the recent rise of gated communities and emerging consumption lifestyle in Bangalore otherwise known as the affluent "Silicon Valley of India". The current global circuit has linked cities like Bangalore to New York and Shanghai in an unprecedented network of capitalist production that begins with capitalism but seamlessly cascades to recast the social. Specifically cities in the developing world in their anxiety to achieve "world class" status become crucial nodal points in the experimentation, production and dissemination of both new forms of urbanism and social inequalities. Drawing on ethnographic work conducted in Bangalore I examine concepts such as liberalization, freedom, market, middle class politics and consumption in gated residential communities in the city.

These gated urban spaces are premised on techniques of managing fear-billboard advertisements, identity cards and background checks for manual labor, checkpoints, self-contained etc. The residential complexes are promoted as 'safe' spaces, which parade the image of the good life. The gated spaces in this sense are seen as the vessel and animator of "happiness" that continually attaches itself to techniques of isolation and to a scientific delineation of what can and should offer security. Ethnographically however, I show how these spaces fray at the edges since the "outside" is indispensable for its survival, mainly in the form of manual services provided by the lower classes as domestic help, chauffeurs, security guards et al. I will chart the various ethnographic ways through which this supposed "happiness" is negotiated as it intersects and collides with the urban realities of class, the sanctity of global materiality, technologies of surveillance and claims to citizenship in these communities.

#### Govind Gopakumar

##### Infrastructure Congestion in India: Shahari Navikaran, infrastructure policy and politics

That India is rapidly urbanizing is evident from the congestion in its urban fabric - streets are clogged with traffic, its drains are choked with refuse, and water barely trickles through its pipes. But it is not materially alone that congestion manifests in urban infrastructure in India. Congestion is evident in the "thickness of politics" surrounding its infrastructures - the numerous entrenched interests, political struggles and contests that rival for attention. Studying congestion in urban infrastructures becomes particularly relevant in the context of state efforts that seek to systematically eliminate infrastructure congestion in a large scale. Case in point is the Jawaharlal Nehru Rashtriya Shahari Navikaran Mishan (or the Jawaharlal Nehru National Urban Reform Mission (JNNURM)). Inaugurated in 2005 and being implemented in 39 cities in the country, shahari navikaran seeks to reform both technological and governance structures in order to decongest infrastructure development in the country. Proposing how to begin studying decongestion processes as they seep through to urban infrastructures in Indian cities is the primary objective of this paper. It will be my central argument that in a country with India's variedness in society and politics, infrastructure decongestion proceeds quite unevenly. This paper will identify the material and political dimensions that reinforce the unevenness of the spread of decongestion. Recent STS studies of urban infrastructure provide a fertile substrate of concepts, frameworks and case studies that aid in studying these processes of change in contemporary India's urban infrastructures.

#### Leon A. Morenas

##### Delhi's Post-Colonial Development Machine

Post-independence, India's capital Delhi was deliberately planned as a "prototype" of the global model of industrialization-led urbanization. The Delhi Master Plan (DMP) was prepared in 1962, at Nehru's behest under Ford Foundation auspices, with American regional planner Albert Mayer at its helm. It is a classic testament of regional planning ideology, its techniques, and its limitations. Contemporary criticisms of the DMP focus on the "failures" of its conception and implementation. I contend that the ultimate failure of India's "National Capital Region" lies in the DMP's success. Drawing upon science and technology studies (STS), my paper explores the technological rationale behind the DMP, drawing out the relationship between politics and technology in planning and urban development.

Embedded in the framework of regional planning, and the planning orthodoxy more generally, is the notion that the city and the region are simply variations in scale. Yet, my ethnographic and historiographic study of Delhi's planning reveals that city and regional planning are in reality at odds with one another. Rather than creating spaces conducive to democratic civic life and self-regulation for Delhi as a city, the DMP as a regional plan instituted

an authoritarian custodian, the Delhi Development Authority (DDA), which has repeatedly ignored the needs of Delhi's poor majority in each iteration of the plan (for 2001 and 2021). Regionally-scaled technological systems for Delhi's 'modern' citizens perpetuate authoritarian power. For example, "according to the Plan" of Delhi as decentralized and polynodal, the DDA undertook "slum" demolitions, recasting the pre-existing cultural practices of Delhi's citizenry as illegal, in turn legitimizing the forceful resettlement of these populations to Delhi's periphery.

Having examined how regional planning uses technology to create institutions and structures of authoritarian power, this paper concludes with the proposition that by prioritizing civic life and human needs, STS may inform more democratic and equitable planning and design decision-making.

### Arafaat Valiani

Technologies of Consumption: Commercial Architecture and Urban Design' in 20th and 21st Century Western India

Studies of urban space in South Asia have productively charted out the manner in which town planning impulses of the colonial and postcolonial state, nationalist movements, and literary debates (among other forces) have shaped understandings of the city and urban space. Within this seminal literature, the study of the aesthetics of commercial architecture and its relationship to notions of consumers-subjects has received little attention (or it has been subsumed within investigations of the restructuring of entire cities). What remains relatively unexplored in the study of bazaars, 'commercial complexes', and malls in 20th and 21st century South Asia is the manner in which the building of new sites of public consumption has enabled interrogations and re-workings of the secular, liberal (and neo-liberal) subjects which commercial spatial design has aimed to nurture. In this paper, I will survey public and commercial architecture in 20th century Ahmedabad as a technology that seeks to cultivate new consumptive subjects and practices, in order to foreground how notions of caste and religion, class and gender, profit and desire(s) have intersected with commercial design projects that were built in the 1940-1960 period and shaped novel and unexpected habitations of consumption. Based on my interpretation of architecture and planning journals, architectural proposals and reports, ethnographic observations of a select number of commercial sites and interviews with its various 'users' and designers, I will discuss how commercial arenas have simultaneously enabled resistance to and adoption and modification of consumptive orientations and efficacies that commercial design has sought to attain through the building of new commercial space. This paper which is part of a larger project on commercial architecture and consumption in 20th and 21st century western India brings together and contributes to scholarly literatures on consumption and neo-liberalism in South Asia, the historical study of South Asian cities, and postcolonial studies.

### Sareeta Amrute

Race and the Imagination of Work in 'Indian' IT

This paper explores how human-non-human divides meet color lines. Through a discussion of Indian IT workers in Germany, it asks, how is race stitched together with code? How do regimes governing migration help produce migrant programmers as specific types of workers set in relief by a global economy? It argues that transnational programming posits race as a difference both instrumentally useful and as an obstacle for migrant programmers to overcome.

### Aneesh Aneesh

Nocturnal Labor and the Diurnal Body: A Global Rendezvous

Based on a yearlong ethnographic study of call centers located in Gurgaon, India in 2004-05, this article explores the contemporary globalization of nightwork and the gradual lifting of legal barriers against the nocturnal shift. With special reference to questions of gender, the study also pursues a larger theoretical inquiry into the increasing neutrality of the global techno-economy to diurnal-nocturnal differences as well as felt differences of social, cultural, and bodily rhythms. Separating the notion of neutrality from its frequent association with freedom (e.g., from discrimination), the article seeks to add to the strong critique of neutrality available in studies of science by extending it to the putative neutrality of the new techno-economy.

### Joyojeet Pal

Computers and Geeks as Icons in South Indian Cinema

Since the early 2000s, Information and Communications Technology for Development (ICTD) has rapidly gained attention in engineering and development studies circles alike. Scholarly research in this space has ranged from contemporary discourses of technology to design evaluations of technical implementations aimed at creating economic development or efficiencies. Academic concerns over ICTD issues are reflected in widespread expectations through several parts of the world, including some of the poorest, that technology does indeed offer the answers to issues of economic underdevelopment. In this talk, we build on the optimistic visions of technology in rural south India through the lens of media depiction on computers. Investigating popular cinema, especially in Tamil and Telugu languages, we find a highly aspirational discourse of technology both in the representation of technology users and the artifacts themselves, such as laptops or the internet, a trend particularly evident on comparison with western cinema. To discuss the issue of intentionality in this trend, we interview leading filmmakers in India and find on one hand an unconscious absorption of social aspiration into the scripting, but on another, a significant attempt to use computers as audience-accepted symbols of modernity. The artifacts we examine range from the more tangible ones such as laptops and multimedia, accessories such as lanyards, to the more abstract architectural

edifices and body language of computer users. In conclusion, we discuss the construction and acceptance of knowledge about technology at an important time in India's economic history, and specifically discuss the regional issues inherent in the near absence of the said themes in North Indian cinema.

#### Winifred Poster

##### Emotion Detectors, Answering Machines, and e-Unions: Multi-Surveillances in the Indian Call Center Industry

The global interactive service industry is the testing ground for new ICTs (information and communication technologies). Global call centers, such as those in India receiving back office from the U.S., do transnational customer service by phone. They are especially subject to new technologies because the core work of communication is interwoven with that of information. Through satellites and fiber optic cables, employees use telephones, computers, and the internet.

A curious trend is how the various participants in the Indian call center industry are using ICTs to spy on one another. Why are Silicon Valley entrepreneurs producing software to monitor digitally the emotions of Indian call center workers? How are American consumers using their answering machines and phones to monitor and deflect telemarketers in India? Why are Indian managers turning off the recording devices on their employees that were installed by U.S. clients? And most importantly, why have Indian workers rejected traditional labor organizing in favor of the entirely virtual platform of e-unions?

While the "electronic sweatshop" has been the prevailing model for understanding the implications of these ICTs, I will argue that a framework of multi-surveillances provides a more compelling account of global call centers. Rather than a single actor model of technological agency, this framework widens the lens from just managers, to uncover an entire web of actors directly involved in the day to day operations of Indian call centers - technology vendors, outsourcing clients, American consumers, Indian shopfloor supervisors, and Indian employees.

I will show each of these actors participate in their own independent surveillance of all the others through ICTs. Using a case study analysis of the Indian call center industry and its wider participants, I chart the proliferation of the technologies themselves and show how devices - like emotion detectors, answering machines, and online unions - are symbolic of new relations in global interactive service. These technologies are indicators of the new range of actors, their unique motives and strategies and their cross-cutting alliances.

#### **Saturday May 15. Eastwood Room, Texas Union**

#### Itty Abraham

##### Biological Citizens: Risk and Radiation in Southwest India

This paper is based on qualitative interviews with 75 people living on or near the coast between Nagercoil (Tamil Nadu) and Chavara (Kerala) between January and June 2009. This is an area of high background radiation due to the proportion of naturally occurring radioactive thorium present in the beach sands. Respondents were between the ages of 25 and 70 and included men and women. Given the hazards of living in an area of high background radiation, interviews sought to determine local understandings of their environment, and, in particular, why they continued to live in this area despite the risks to them and their children's health.

We usually think of risk as a measure of anticipation of insecurity over the reproduction and maintenance of body, property, and institutional wellbeing. Risk in other words, prefigures the uncertainties of what is yet to come. This paper will propose that what we call risk is only one among a number of conditions interpellating marginal communities facing already-existing vulnerabilities. Drawing on a case study of a coastal community in southwest India exposed to high levels of natural background radiation for over a century, this paper argues that the future temporalities of risk -- biopolitical anticipations of danger, threat, and radical uncertainty -- are relatively minor in relation to the modern politics of recognition: a subjectivity that is premised on memory, location, and spatial immobility.

#### Paul Greenough

##### India's House Crow - The Environmental History of a Diasporic Species

This essay will unpack the significance of a singular species, *Corvus splendens*, the Indian house crow, an utterly familiar native of South Asia that was carried to East Africa c. 1900, and later to the Middle East and Southeast Asia, under colonial and post-colonial auspices. While the house crow is well-tolerated in its home territory and even has been incorporated into Hindu death rituals as a messenger between living humans and the dead, the house crow takes on very different meanings abroad, where its massed presence is thought to mirror the diasporic expansion of Indians and Indian commerce. Indeed, East Africans closely observe its aggression against local birds and say the Indian crow's predatory food-seeking and reproductive behaviors exemplify the sharp commercial practices and racial exclusiveness of Indians abroad. In short, the house crow is revered in India but loathed abroad. New developments in urban sanitation, and the appearance of cellular communication towers, have begun to limit the house crows' hegemony, while large-scale extermination campaigns are depleting their numbers. As an unstable object of description in different cultural settings, the house crow challenges



and disrupts the biological and social sciences, which are historically premised on humans and animals staying within fixed and essentialized terrains.

### Banu Subramaniam and Deboleena Roy

#### New Materialism and the Practices of Colonialism: Technologies of Surrogacy in India

Two sets of theoretical debates/fields in recent years have brought the question of the “body” and “matter” back as central questions in feminist science studies. First, feminist theories of embodiment and materiality have contributed much in guiding our encounters with new and emerging technologies, particularly in areas of reproduction and genetics. More recently, feminist science studies scholars have critiqued the post structuralist, linguist and post feminist turn and called for a return to the scientific knowledges obtained by biological and physical sciences through approaches of “new materialism.” Second, another set of critiques that can be broadly called “intersectional” approaches critique the narrow definitions of what constitutes the category “woman” and call for locating the “universal” woman within hierarchies of race, class, nation, sexuality etc. Yet others argue that intersectional approaches have further reified “women of color” at the margins and the “white woman” as the center of feminist work.

How then do we theorize the practices of embodiment of particularly located, socially stratified, differently historicized bodies? In this paper, we wish to suggest that feminist studies and postcolonial studies have much to offer each other in theorizing the body and matter. Using the case study of surrogacy in India, we wish to understand the roots of contemporary reproductive technologies as they may be situated within the “projects and practices of colonialism.”

Drawing upon recent work in postcolonial and feminist science studies, we will examine issues of embodiment and materiality in the context of the legacies of colonial practices of disciplining bodies in India. While the reproductive technology industry is rapidly growing in India to include IVF and surrogacy services for the benefit of medical tourism, the Indian government is also under much pressure to create regulatory legislation, particularly in regards to surrogacy.

### Abha Sur

#### Illusions and Erasures in Science Studies

Caste hierarchies rest on constructing rigid and immutable differences in character, abilities, and temperaments between castes that signify as well as justify relationships of power. In the sciences, the construction of essential, intrinsic difference between castes is evident in scientific biographies—the staple of science studies. Almost all biographies and autobiographies of Brahmin scientists dwell at length on caste identities and extol the virtues of caste achievements. The construction of illustrious genealogies is central to maintaining caste privilege, as the caste system obtains

its endurance by laying claim to both heredity and socialization. It is therefore obligatory that both genetic and cultural commonality with successful relatives, howsoever distant, be established.

Whereas the biographies and autobiographies of “upper-caste” scientists span the whole gamut—from an unabashed praise of caste identities to the subtle enunciation of caste ascription and privileges—biographies of the so called “lower castes,” by and large, ignore the implications of caste. Caste is something these scientists overcome in their formative years, and it melts into thin air as soon as the scientists gain respectability and eminence in their fields of research.

Biographical works normalize perceived caste difference on the one hand, and on the other, erase caste altogether from the personal histories of Indian scientists. This erasure of caste is often carried out at the behest of the subaltern scientist. Drawing upon Leigh Gilmore’s understanding of autobiography as a “self study in surveillance,” I will argue that hegemonies of caste, gender, and science work concertedly in hagiographies and autobiographies of scientists, especially physicists.<sup>1</sup> Physics reigns supreme in the hierarchy of sciences, and its characterization as a highbrow, objective, and abstract knowledge demands that its practitioners erase subjective experience, ideological biases, and social difference from their consideration. The casting of physics as pure and sublime is not unlike the self-representation of the Brahmins. Indeed, hierarchies of gender and caste, on the one hand, and, on the other, of science, ensure the compliance of women and “low caste” scientists in keeping the domain of physics unsullied, unencumbered by the inventories of discrimination.

### Jamie Cross

#### Into the Light: Markets, Technology and the Social Good in India

The argument that very poor people in the global south be understood primarily as consumers whose unmet needs are untapped opportunities for business has been immensely powerful for international development organisations, national governments and private entrepreneurs. Across South Asia and Africa the marketing of consumer goods as solutions to poverty has become an important site of value creation. Such phenomena, however, continue to be overlooked by social scientific accounts of capitalist economy, society and technology. This paper seeks to readdress the balance by exploring a specific object: a cheap, portable solar powered LED lamp, designed by a California based social enterprise and marketed to poor consumers in rural India.

India is witnessing a surge in the commercial application of solar technology for poor people, driven by ideas about the profitability of intervening in ‘development’. As entrepreneurs build and sell solar lights they raise questions for social scientists about how this market is being made, the new kinds of knowledge that are being produced and the new relationships between consumers, entrepreneurs and shareholders that are being created. Building on debates in science and technology studies, economic sociology and anthropology, this paper asks how is a solar light produced



as a particular kind of object that can successfully generate both social value and business value? How are these different kinds of values produced and how are they attached to the object?

### Dolly Daftary

Crafting capital in India's margins: Watershed development and state formation in an era of economic reform

My paper will trace institutional change in India through an analysis of agrarian change in the drylands- frontiers of statemaking in the 21st century. I will investigate the policy and practice of watershed development on the basis of fieldwork in eastern Gujarat. Couched as the 'second green revolution', watershed development channels commercial seeds for cash crop production, builds dams, deepens credit through 'self help' groups to enable households to purchase capital, and links rural producers to external markets through contract farming.

My paper will unpack the meaning-making undertaken by the state in deploying 'watershed development' as a project of improvement, map its upward distribution of wealth, and trace what the political economy of capital intensification signifies for citizenship in subsistence communities. On the basis of analysis of erasures, gaps and foreclosures in policy discourse; and contestation over local practice; I will trace the embedment of development in questions of power and legitimacy.

### Ronald Herring

India's New Gene Wars: Cotton to Eggplant

Transgenic eggplant [baingan, brinjal] contains essentially the same Cry1Ac transgene as the early and dominant Bt cotton hybrids in Indian agriculture. Its advocates claim similar advantages in pest protection, pesticide reduction and farmer income. But the fate of the brinjal in politics diverged fundamentally from cotton. Bt hybrids -- first illegal, then official -- spread rapidly and widely from 2002 to the present and now dominate cotton farming. Brinjal entered the same regulatory system, with parallel forces of advocacy and resistance, but is currently under moratorium despite approval by the apex body for bio-safety assessment: the Genetic Engineering Approval Committee [GEAC]. What explains this divergence? In evaluating transgenic cotton, official science was more cautious than farmers, but was continuously attacked by a broad coalition of forces opposed to genetic engineering. Civil society mobilized around threats, risks, and epistemic weapons of the weak: reports of farmer suicides, livestock deaths and human illnesses. State science, located in the GEAC, and embedded in international epistemic communities, weighed and rejected these claims. In 2009, GEAC approval of Bt brinjal evoked so much opposition that the Minister of Environment in February 2010 over-rode and officially downgraded the epistemic and institutional status of the GEAC, imposed a moratorium and promised new regulatory authority for all rDNA crops. Scientists, now on the defensive, mobilized collective action to rescue science from

"populist distortions" masquerading as democracy, deploying tools from their national and international networks. As before, politics revolved around who represents the public in public interest, whose science is settled, what risk thresholds are appropriate. Brinjal politics diverged from cotton most obviously because it is a food crop, but that story is quite incomplete. Critically, the eggplant is embedded in a different political ecology, with a different class of farmers, and different State, state, and international interests.

### Aman Luthra

An urban political ecology of the green building industry in India

Commenting optimistically at the conclusion of the very first national executive meeting of the Indian Green Building Council (IGBC), Chandrasekhar Hariharan, the CEO of Biodiversity Conservation India Limited, a Bangalore-based pioneer green building firm, says, "Beginning January 2010 commercial buildings in India will never be the same again." Standards for 'green' buildings have seen a worldwide proliferation in recent years with the adoption of US Green Building Council's (USGBC) LEED standards by more than 40 countries across the world. The IGBC is such an offshoot of the USGBC. At its very first national executive meeting in January 2010, many Indian construction industry giants were in attendance. The IGBC boasts 762 members and 68 currently certified buildings. Government buildings, universities, special economic zones (SEZs), commercial and residential buildings are already opening their doors to this 'greening' wave, some voluntarily and others by coercion through government mandates, indicating an impending boom for the Indian 'green' building industry. Massive capital flows into this industry raises questions about the kinds of urban eco-utopian visions that are being produced, by whom and in what interests. An examination of the discursive practices of the corporate subjects involved in this industry, suggests that the explicit articulation of economic motives on both the production and consumption side, might correspond to what some scholars have called a 'sustainability' fix rather than a shared environmental concern among these corporate subjects. This paper explores the ways in which 'green' building standards and practices are part of larger projects of neoliberal environmentality in urban spaces in India. Following David Harvey, this paper suggests the need to examine the 'green' building industry boom as a spatial fix, that is, a particular articulation of surplus capital with newly created spaces of 'greening' the built environment in urban India.

# Biographical Abstracts

## Itty Abraham

Itty Abraham is Marlene and Morton Meyerson Centennial Chair, Director of the South Asia Institute, and, Associate Professor of Government and Asian Studies at the University of Texas at Austin. He is the author of The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State, editor of the South Asian Cultures of the Bomb: Atomic Publics and the State in India and Pakistan, and, co-editor of Illicit Flows and Criminal Things: States, Borders and the other side of Globalization and the forthcoming Political Violence in South and Southeast Asia. His interests include international relations, science and technology studies, and postcolonial theory.

## Sareeta Amrute

### Migrant Programming

Sareeta B. Amrute  
Assistant Professor of Anthropology  
University of Washington

Sareeta Amrute is Assistant Professor at the University of Washington in Seattle. Her work brings together an exploration of migration and new forms of capitalism with the history of the computer as technological and ideological object. She is currently working on a book called *Migrant Programming*, which is an ethnography of Indian IT workers in Germany.

## Aneesh Aneesh

### The Globalization of Nocturnal Labor

A. Aneesh  
Assistant Professor of Sociology and Global Studies  
University of Wisconsin-Milwaukee

A. Aneesh is Assistant Professor of Sociology and Global Studies at the University of Wisconsin, Milwaukee. Author of *Virtual Migration: the programming of Globalization* (Duke 2006), his scholarship intersects a plurality of research realms: science & technology, globalization, and labor. With a wide background in the social and cultural landscape of India and the United States, Aneesh has spent a decade researching and writing about the world of programmers, executives, and information technologies. Previously, Aneesh taught in the Science and Technology Program at Stanford University (2001-04). Over the years his scholarship has included awards and grants from the McArthur Foundation, Social Science Research Council, Population Council, and the School for Advanced Research in Santa Fe.

## Jamie Cross

### Into the Light: Markets, Technology and the Social Good in India

Jamie Cross  
Department of Anthropology, Goldsmiths College.  
University of London, UK

Jamie Cross has a PhD in anthropology (Sussex 2008). In broad terms his ethnographic research engages with the politics and anthropological problems emerging out of relationships between business (enterprise, industry, capital flows) and development in South Asia. He is currently involved in two projects focused on infrastructure and technology. The first explores the speculative investments, social aspirations and dystopian imaginaries being created by special economic zones. The second explores emergent relationships between corporations, social entrepreneurs and poor consumers.

### Dolly Daftary

Technologies of agrarian change and state making in India: Crafting ‘productivity’ and citizenship in an era of market-based reforms

Dolly Daftary

Doctoral Student

George Warren Brown School of Social Work

Washington University in St. Louis

Dolly Daftary is a Doctoral Candidate in Social Work and Fellow at the Center for New Institutional Social Sciences at Washington University in Social Work. Her research interests include social and economic change, economic development, commodities and consumption, labor, capital and democracy. Her dissertation explores the construction of consuming, laboring and entrepreneurial subjects in western India, the impact of techno-scientific interventions on distributional outcomes, and contestation of governance by the community, state and capital in tribal and semi-arid regions at the frontier of neoliberal state formation.

### Deepanwita Dasgupta

Towards a Middle View of Peripheral Science: Satyendranath Bose and Bose-Einstein Statistics

A PhD candidate at the University of Minnesota, Deepanwita Dasgupta’s research interests are knowledge-networks in science, science in the non-West, and divisions of cognitive labor in science. Her teaching interests are philosophy of science, science and culture and metaphysics and epistemology. Before moving to the United States, Deepanwita was employed as a senior lecturer in a college in India and recently she has taught Environmental Ethics and Asian Philosophy at St. Olaf College, Northfield, MN. She has presented in the History of Science Society Meeting both in 2006 and 2008 on the topic of science in early 20<sup>th</sup> century India.

### Simanti Dasgupta

The “Happy” City: Techniques of Security and the Emergence of Gated Residential Communities in Bangalore

Simanti Dasgupta

University of Dayton

Simanti Dasgupta completed her doctoral work in Anthropology at the New School for Social Research and is currently a faculty member at the University of Dayton. Her work focuses on the connection between science and technology and issues of citizenship and governance. She has worked extensively with the Information Technology industry in Bangalore to both understand and problematize the “success” of the industry. She is particularly interested in understanding Bangalore as a neoliberal urban space where the new ideology of the market is reinforcing new class hierarchies while introducing new forms of disenfranchisement.

### Govind Gopakumar

Investigating Infrastructure Congestion in India: Shahari Navikaran, infrastructure policy and politics.

Govind Gopakumar

Assistant Professor, Faculty of Engineering & Computer Science

Concordia University

Montreal, Canada

Govind Gopakumar’s major research interest is to study the techno-political dynamics of environmental infrastructures such water supply, sewers, roads, and energy in cities. He is particularly interested in investigating urban infrastructures as sociotechnical vehicles that transmit both agendas of change and resistance to change. He finds Indian cities enormously interesting locations for such studies. Govind received his doctoral degree in Science and Technology Studies from Rensselaer Polytechnic Institute, New York and currently is an Assistant Professor in the Faculty of Engineering and Computer Science at Concordia University, Montreal.

## Paul Greenough

India's House Crow — The Environmental History of a Diasporic Species

Paul Greenough  
Professor of History and of Community & Behavioral Health  
University of Iowa  
Iowa City, IA 52242.

Paul Greenough is a professor of Indian history and of community and behavioral health at the University of Iowa. After studying at Visva Bharati University in West Bengal, he graduated in history from Columbia University in New York and then completed his PhD at the University of Chicago in 1977. He is the author of several dozen articles on historical and contemporary issues of famine, immunization, and environmental conservation in India and has published three books, of which the most recent is *Against Stigma: Global Studies in Caste and Race Since Durban* (edited with M. Natrajan, Orient Blackswan 2009).

## Ronald Herring

India's New Gene Wars: Cotton to Eggplant

Ronald J. Herring  
Cornell University

Ronald Herring has taught at Cornell University since 1991, where he's served as Director of the Mario Einaudi Center for International Studies and John S. Knight Chair of International Relations, Director of the South Asia Program, and Chair of the Department of Government. Recent work has explored connections between economic development and ethnicity -- e.g. *Carrots, Sticks and Ethnic Conflict: Rethinking Development Assistance* (University of Michigan Press, edited with Milton Esman); on class theory -- e.g. *Whatever Happened to Class?* [Routledge, UK; Lexington, US; Daanish, Delhi] edited with Rina Agarwala; and on genetically engineered organisms [as editor of a special issue of *Journal of Development Studies* Vol 43 (1), 2007 which won the Dudley Seers Memorial Prize in 2008].

The book form was published as *Transgenics and the Poor* (Routledge Oxon 2007; paperback 2008). With Ken Roberts he led Cornell's Institute for the Social Sciences theme project on *Contentious Knowledge: Science, Social Science and Social Movements*, 2006-2009: [http://www.socialsciences.cornell.edu/theme\\_projects.html](http://www.socialsciences.cornell.edu/theme_projects.html).

He is currently editing a new *Handbook of Food, Agriculture and Politics* for Oxford University Press and finishing a book on GMOs tentatively entitled *Promethean Science, Pandora's Jug*. His origins if not his heart lie in Texas.

## Aman Luthra

An urban political ecology of the green building industry in India

Aman Luthra  
Graduate Student  
Environmental Engineering & Sciences  
The Johns Hopkins University

Aman Luthra is a first-year PhD student in the Department of Geography and Environmental Engineering at Johns Hopkins University. Prior to this, he completed an MA in Geography, Masters in Public Administration (MPA) from Syracuse University in 2004 and a BS in Environmental Studies from the University of Maine at Machias. Broadly, Aman's current interests revolve around issues of nature-society-state-market relations within a framework of political ecology from a historical materialist perspective, specifically how the state and market/capital mediate nature-society relations. Aman's master's research focused on the discursive construction of the Bhutanese natural and cultural landscape as Shangri-la, and located the material implications of these discourses in the crisis of Bhutanese refugees.



## Ashok Maharaj

Integrating Nehruvian Scientific Ethos, Rostowian Modernization and Gandhian Bucolic Sensibilities: A Satellite for Indian Rural Development

Ashok Maharaj  
Georgia Institute of Technology

Ashok Maharaj is Ph.D. candidate in the School of History Technology and Society at Georgia Institute of Technology.

## Leon Morenas

Delhi's Post-Colonial Development Machine

Leon Morenas  
Graduate Student  
Architectural Sciences  
Rensselaer Polytechnic Institute

Leon Morenas is a doctoral candidate at the Rensselaer Polytechnic Institute (RPI), Troy, New York. He is from India, where he has worked and trained as an urban designer and architect. His dissertation, entitled, "Planning the City of Djinn: Exorcizing the Ghosts in Delhi's Post-Colonial Development Machine," is a systematic study of the Master Plan of India's capital, Delhi.

Leon's research on design practice and theory draws from the nexus between political systems and technology. He is critical of the typical focus urban planning and design places on the efficient functioning of technological systems, rather than their political instrumentalities. By engaging with spatial politics and the politics of design, Leon investigates how architecture and urban planning can contribute to enhancing the quality of social and political life in the city. How can design engage with instrumental systems in order to promote ideals of social justice and civic participation?

Leon has taught graduate and undergraduate architectural design studios, theory courses, and thesis seminars at the Urban Design and Urban Planning Departments at the School of Planning and Architecture, New Delhi and the Sushant School of Art and Architecture, Gurgaon. At RPI, he has taught undergraduate architectural studios as well as political and cultural theory.

## Savithri Preetha Nair

From Economic Biology to Ethnobiology: E. K. Janaki Ammal and the Re-ordering of the South Asian Environment (1897-1984)

Savithri Preetha Nair  
Independent Scholar based in UK

After an initial training in economics, Savithri Preetha Nair studied and taught art history at the Faculty of Fine Arts, MS University, Baroda. She subsequently studied history of science and completed a doctorate on the museum and the shaping of the sciences in colonial India at the School of Oriental and African Studies, University of London. Amongst her most recent publications is the co-authored *Science and the Changing Environment in India: a Guide to Sources in the India Office Records 1780-1920*, the outcome of a post-doctoral project funded by the Arts and Humanities Research Council at the Department of History, SOAS. Based in London, Nair's research interests include science and enlightenment in colonial India at the turn of the 19th c, the public museum, modernity and shaping of the sciences, sociology of knowledge, collecting for science, environmental history, history of natural history, and women and science. As New India Foundation Fellow, she is working on a history of plant genetics in India, with specific reference to the life and science of Indian woman cytobotanist EK Janaki Ammal, 1897-1984 to be published by Routledge in 2011.

## Joyojeet Pal

### Computers and Geeks as icons in South Indian Cinema

Joyojeet Pal is a visiting assistant professor at the Polytechnic Institute of New York University. His research is on technology and development, in this space he has worked on computer sharing behavior among children and on technology and disability in the developing world. He got his doctorate in City and Regional Planning at the University of California at Berkeley.

## Anshuman Pandey

### Computing Standards and the Politics of Language and Script in India

Anshuman Pandey is a Ph.D. candidate in the Department of History at the University of Michigan in Ann Arbor, Michigan. His current research focuses on the political and technological aspects of writing systems and linguistic identities in minority ethnic communities in South Asia.

## Winifred Poster

### Emotion Detectors, Answering Machines, and e-Unions: Multi-Surveillances in the Indian Call Center Industry

Dr. Winifred R. Poster  
Women, Gender & Sexuality Studies  
Washington University  
St. Louis, MO 63130

I am a faculty member in Women, Gender, & Sexuality Studies at Washington University in Saint Louis. My interests are in global inequalities; gender, race, sexuality, and class; and information and communication technology. I am curious how the emerging global information technology workforce will impact women, ethnic minorities, and low-income communities around the world. Sponsored by grants from the National Science Foundation, I have conducted some of the first in depth ethnographies of outsourcing by U.S. firms to India, both in earlier waves of computer engineering and manufacturing, and current waves of customer service call centers. Will these jobs be the solution to global unemployment, suggested by many World Bank and United Nations development programs, or else the new electronic sweatshop? I'm presently working on a book manuscript titled "Global Circuits of Gender" for the University of Chicago Press, and I have published articles in journals such as the Journal of Developing Societies, International Journal of Politics, Culture and Society, Industrial Relations, Research in the Sociology of Work, American Sociological Review, Gender & Society, and Social Politics.

## Jessica Ratcliff

### Global Science and Colonial Science in a Princely State: The Travancore Magnetic Observatory c. 1850-80

Jessica Ratcliff | Postdoctoral Research Associate  
University of Illinois Urbana-Champaign

Jessica Ratcliff is a postdoctoral fellow in the Information in Society Program at the Graduate School of Library and Information Science, University of Illinois Urbana-Champaign. She received a PhD in the history of science from the University of Oxford in 2006, and recently published a monograph about Victorian "big science": The Transit of Venus Enterprise in Victorian Britain (Pickering and Chatto, 2008). Her new project is about "data" in the physical sciences of the nineteenth century, especially in connection with imperialism, universalism and globalization.

## Deboleena Roy

New Materialism and the Practices of Colonialism: Technologies of Surrogacy in India

Deboleena Roy

Associate Professor of Women's Studies and Neuroscience and Behavioral Biology

Emory University

Atlanta, GA 30322

Deboleena Roy is Associate Professor of Women's Studies and Neuroscience and Behavioral Biology. She received her Ph.D. in molecular neuroendocrinology in 2001 from the Institute of Medical Science at the University of Toronto. In her doctoral work, she examined the effects of estrogen and melatonin on the gene expression and cell signaling mechanisms in gonadotropin-releasing hormone (GnRH) neurons of the hypothalamus.

The focus of her current research and scholarship in feminist science studies is in the area of feminist theory in science. Her goal is to bridge feminist critiques of science with transformations in the processes of scientific knowledge production. She is interested in using feminist epistemologies and research methodologies in order to develop feminist practices in the natural sciences. Her teaching focuses on integrating biology and women's studies and addressing issues of gender, race and class in science education. She has published her work in journals such as *Hypatia: A Journal of Feminist Philosophy*; *Australian Feminist Studies*; *Rhizomes: Cultural Studies of Emerging Knowledge*; *Endocrinology*; *Neuroendocrinology*; and the *Journal of Biological Chemistry*.

Professor Roy was a faculty research fellow at the Clayman Institute for Gender Research at Stanford University from September 2008 – June 2009. While at the institute, she developed a project in feminist neuroethics and is currently working on a manuscript entitled "Mapping Gender, Hormones, and Neurons: Feminist Configurations in the Neurosciences."

## Banu Subramaniam

New Materialism and the Practices of Colonialism: Technologies of Surrogacy in India

Banu Subramaniam

Women, Gender, Sexuality Studies

University of Massachusetts

Banu Subramaniam is associate professor of women's studies at the University of Massachusetts, Amherst. She is coeditor of *Feminist Science Studies: A New Generation* (Routledge, 2001) and *Making Threats: Biofears and Environmental Anxieties* (Rowman and Littlefield, 2005). Trained as a plant evolutionary biologist, her research is located at the intersections of biology, women's studies, ethnic studies and postcolonial studies. Her current work focuses on the role of eugenics in the development of evolutionary biology, the prevalent xenophobia and nativism that accompany frameworks on invasive plant species, and the relationship of science and religious nationalism in India.

## Abha Sur

Illusions and Erasures in Science Studies

Abha Sur

Program in Women's & Gender Studies, MIT

Abha Sur is a Physical Chemist turned Historian of Science. She works on twentieth century history of physics in India. She is the author of *Recasting Science: Gender, Caste, and Physics in India*, Navayana Publishers, New Delhi (forthcoming, 2010).

Arafaat Valiani

Technologies of Consumption: Commercial Architecture in 20th and 21st Century Western India

Arafaat A. Valiani, Ph.D., Assistant Professor  
Department of Anthropology and Sociology,  
Williams College  
Williamstown, MA 01267

Arafaat Valiani is Assistant Professor in the Department of Anthropology and Sociology at Williams College. He is bringing a monograph to publication entitled: *Militant Publics: Physical Training, Efficacious Protest, and Creative Violence in Gujarat, India*, and he has authored articles and essays on political violence, the public sphere. In 2009-2010 he was a Kluge Fellow at the Library of Congress.

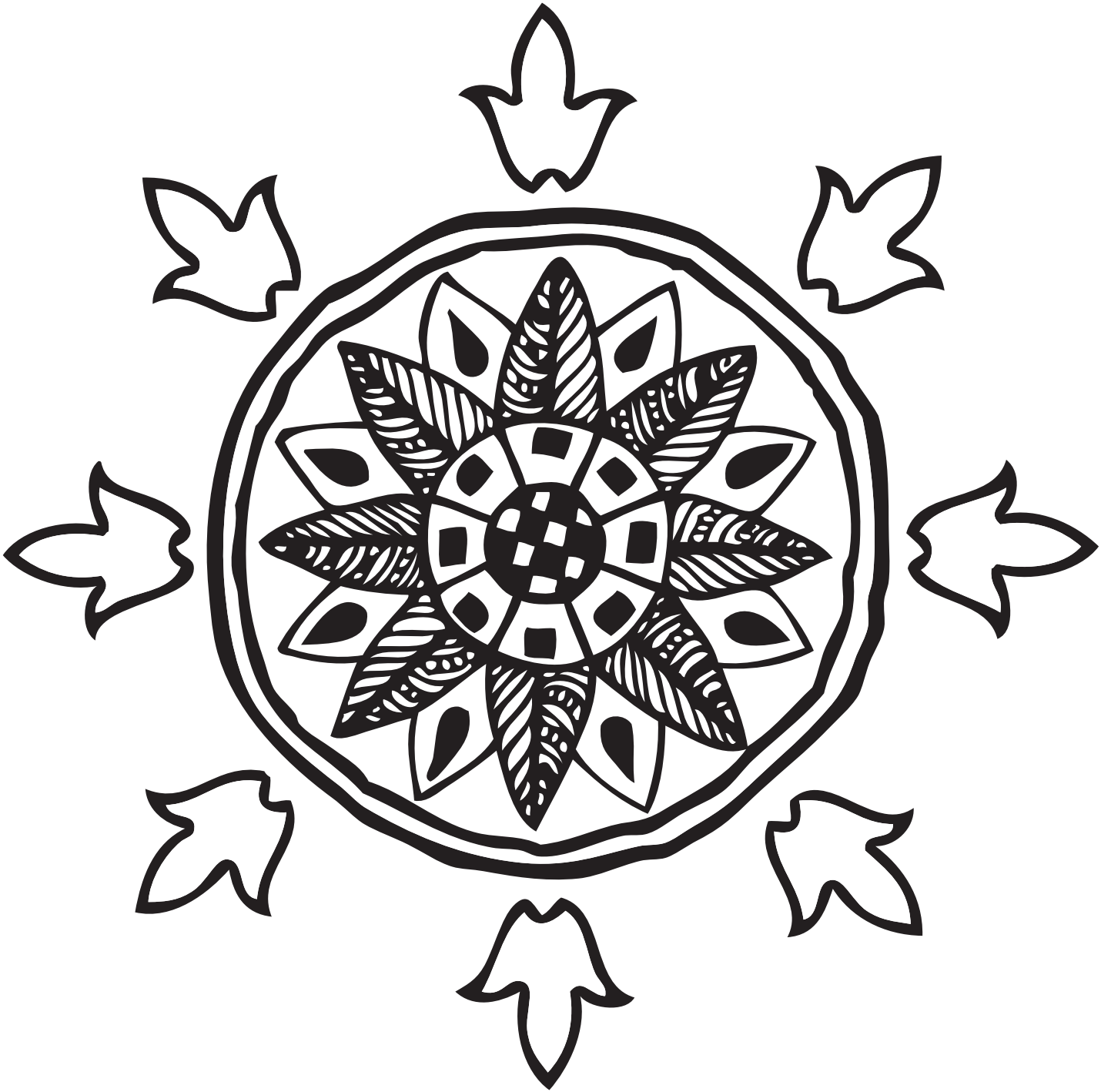
Logan Williams

Cosmopolitan appropriation of technology: is phacoemulsification a viable technique for white cataracts?

Logan D. A. Williams is a graduate student in the Science and Technology Studies Department at Rensselaer Polytechnic Institute in Troy, NY. As an STS scholar with engineering training, she is interested in innovation, appropriate technology, and the political economy of sustainable world development. She is just beginning dissertation work on the effects of the World Health Organization's Vision 2020 program on both reducing avoidable blindness and technology circulation between South Asia and the United States.







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