

**dispatch #5 from ralph  
calcutta, january 08, 2006  
the fourth and final week in calcutta**

**DAY #24, Sunday, January 08, 2006**

Long planned day for a lecture to the Indian Biophysics Society annual conference at the Saha Institute in Salt Lake. The organizer, Gautam Bosu, had called to confirm all the arrangements. Although my talk was not until 11 am, he insisted the car should pick me up at 9, so I could be present at the 10 am start of the session in which I would be the third speaker.

I was waiting at gate #5 of the white fort at 9 am when I saw a person showing a note to the armed guard. Not knowing what sort of driver or car to expect, I went over to see if the note was for me. Kya naam? i asked in my thirty-year old Hindi. Sure enough, he had a note with Gautam Bosu written all by itself. He was asking around for Bosu, and I knew this had to be for me. I got in the car and he asked in Bengali, where to? I knew something was amiss, as the drivers usually know the destination exactly. Saha Institute, I said, Salt Lake City, and he took off expertly in that direction. After a mere half hour, as it was sunday and traffic was light for a change, we arrived in Salt lake, and immediately had a flat tire, which he quickly changed. The spare had seen better days, and I resolved to glance at tires before roaring around in an unknown car.

But now it appeared he had no idea where to go. He stopped to ask a passerby for directions, showing the same note I had seen at the white fort, gate #5. But now he was showing the other side, which had my name and address on it! Of course I expected he had no English, that is pretty usual among the drivers, but I had not anticipated this consequence: he did not know up from down with our funny script. At this point I popped out my handy (as they are called in Vienna) and called Prof. Bosu's handy, who explained to the driver in Bengali how to find our destination. It still took several enquiries before we found the it, a large complex of shining white modern buildings, the Saha Institute of Nuclear Physics. It was 10 am sharp, and the very anxious person standing by the guard had to be Bosu. And so it was. We went immediately into the session.

The talk was a snap, as I was the third and final speaker, and the others had gone way over their time limits. I earned points from all concerned by stopping on time, after 15 minutes. In this little spot, I plumped for more math in the curriculum of science students, and advertised the new branches of computational math (chaos, fractals, complexity, etc). The two preceding talks concerned protein folding, and seemed very interesting to the audience, within which math was apparently no big deal.

Ashoke Thakur, the VC of WBUT (he calls it duh-beauty), had been the coordinator of my session. We bolted from the rest of the program, and walked (about 15 minutes) along the quiet residential streets of Salt Lake to WBUT, where we both wanted to do our email. Alas, we found that the internet for most of India was down for the count. So, on home by 2:30 pm or so, too late for lunch.

The message of my visitors today was much on my mind: the decline in India of the study of mathematics, the math curriculum in schools, and the quality of teaching. This is a world-wide problem with potentially disastrous consequences.

At the end of the day I found myself thinking: you know, I have had better days. The ride to Salt Lake City was a bummer, the 15-minute lecture was a waste of time, i could not send my

emails for the fifth day in row, I had no lunch, dinner was a ten-fold carbon copy of a forgettable original. What am I doing here? Six more days and counting.

### **DAY #25, Monday, January 09, 2006**

Feeling a bit better this day. My task today was another apparently pointless lecture, this time at Presidency College. Suphankar and Jaya had taken me there last Saturday. Nice old campus, in decay with lots of clean dust and dirt. One of the oldest and best colleges, in a troop of same on College Avenue among a thousand book stalls. Children playing cricket on generous fields of deep dust.

My host person, a physics professor, arrived too early, cutting into my nap. He talked a lot without accepting much direction but as it happened it was all pretty interesting, about the role of student politics at Presidency College over the years, the corruption of the Calcutta city government initiated by the Russians, etc etc. Apparently we were about to drive into a zone of student unrest and political violence, but not to worry, he could personally command any situation imaginable. This emerges while we are in the oldest taxi on the planet, sounding like a parisian taxi on steroids, caught in a motionless traffic jam on reputedly the least congested road in town, breathing black clouds of mixed greenhouse gases.

Ok we arrived, and then I was conducted inside the building housing the math department on the second floor. The portico, entry, and dusty stairway rising at least 200 vertical feet reminded me of the Czech Palace of King Rudolph II of Bohemia and the Holy Roman Empire, haunt of Tycho Brahe, Joe Kepler, Johnny Dee, and the birth of modern science. Watching my back I could see no lynch mobs of angry students demanding grade inflation. During the mandatory stop in the chairperson's office for the sake of ancient British Colonial protocol, something good occurred: DK Sinha arrived. I had met him six years ago during my visit to Visva Bharati University (VBU) in Santiniketan (shanta-nicka-tawn) -- the university created by Rabindranath Tagore after his Nobel prize for Literature -- where DK was the VC at that time. He is a mathematician knowledgeable of catastrophe theory, and had arranged the visit of Rene Thome and Chris Zeeman (the main protagonists of catastrophe theory) some 30 years ago. He had been a math professor at Calcutta University and had recently retired. He was to introduce me to the audience for this talk, and following it, to give a summary.

So then we filed into the lecture hall. This was one of those steep bleacher affairs like a high school gym, filled with 60 or more students looking barely past puberty. The best and the brightest of West Bengal, the hope of the world. My introducer invited me to begin with my own autobiography, and as I had encountered this earlier on I now took it to be a common opening gambit, and an opportunity for me to weave the entire lecture into my personal odyssey. Which I did. This rant was on the worldwide decline of math literacy, the descent of math education, curriculum, teaching, etc etc, to hell in a handbasket, along with the consequent failure of the human species. And the epitome of evil at the root of this disaster: the Big Test. In my Fulbright role as ambassador of American Democracy and World Leadership, I confined by condemnation to the USA, but the audience could not fail to relate, as they had just finished taking the Indian Big Test last week. Oh yes, along the way I presented them a short cut to salvation: Chaos Theory.

After this harangue, of which they could hear only about 50% due the late arrival of the student revolution in the form of a deafening din of amplified folk music just outside the gym window, DK Sinha summarized my talk with surprising brilliance, adding much useful detail of his own knowledge, and taking quite a long time. As he was well known as a math professor and university administrator and diplomat among the faculty and commanded some clout with the

students as well, this had a marvelous amplifying effect on the whole experience. At last we filed out of the gym.

By this time I was greatly afraid that I would be late for my 5 pm appointment back at the ranch with Professor Sen Sharma, my informant for ancient Sanskrit cosmology. This was a rather tight schedule, as "Professor Rinpoche" -- visiting from the Dalai Lama's entourage in Dharamsala -- was to speak at 6 pm. But my talk was followed by one state visit after another. Not only was it out of the question for me to depart without greeting the head of department, the dean, the provost, the ex-provost, and the VC herself, but also DK Sinha, who was going to take me home, had to see quite a few others as well. Eventually I decided to give up, I could not actually control the situation, and eventually of course, I missed the meeting with Sen Sharma, but I did get to hear the Rinpoche speak on Tibetan meditation practice.

In retrospect this was as it should be, as the visit to the VC was quite valuable. She wants to begin a new program of chaos, complexity, modeling and simulation, to integrate the social sciences with math and computer science. Facilitating such developments is after all the official goal of my Fulbright grant. I gave her a capsule history of the graduate program along these lines that I had created at UCSC, and I offered to help in any way I might.

On the way home DK instructed his driver at every turn, and as he had grown up on these streets, I got see charming alleys barely wide enough for a car, and we got home in time for the Rinpoche, despite rush hour traffic. Now the Rinpoche was supposed to speak at the RMK conference on science and technology upcoming in a few days. But in his role in the Tibetan expatriate government he is of course very busy, so he would speak this day instead. But as part of the next weekend program, which features the actual experience of meditation, rather than the theory, science, techniques, and so on, that had been central to the two prior conferences at the RKM. For those of us who would like to believe that all roads lead to Rome, this would be pretty interesting, and we were keenly anticipating the confessions of the lama. We were disappointed however, as he chose to reveal nothing whatever of the twelve centuries of experience from Tibet, and precious little of the techniques either.

## **DAY #26, Tuesday, January 10, 2006**

On the calendar for this day, one lecture and two meetings. At 11 am I was whisked off to the Army Institute of Management (you guessed it, the AIM) for a lecture on "Chaos, Complexity, and Business" which I know from nuttin, as mom used to say. AIM is a graduate school of business giving the Indian equivalent of an MBA degree, and has about 400 students on a large and pleasant campus in South Calcutta belonging to the Indian Army. I gave a simple introduction to system dynamics, with a show of the NetLogo model for wolves and sheep, appropriate for the Army. The visit was dominated by the unique personality of the director, KK Chaudhuri. Coming out of the Ramakrishna Mission school system, he seemed to have the knowledge of an ordained Swami of the Vedanta system, but had chosen management science and university administration for his life of bhakti (service) yoga. The AIM seemed to run on strict discipline and altruism, his hand-picked staff loved him, and the students were the most polite I have come across. Not the same cup of tea as the Presidency College I visited yesterday. KK taught me memorable lessons of Vedanta philosophy and human behavior as well.

A call from Prof. Sen Sharma confirmed that I am on the program of the RMIC conference on science and consciousness for Saturday morning to speak on "Vibrations and forms". Lively discussion on this at dinner. On mention of Plato, Dana pointed to the man next to me and said, let's ask him. He turned out to be Jonathan Shear, professor of philosophy from

Richmond, VA, who knew all the lines by heart. He had just arrived to participate in the conference. I had noted his name when reading the published proceedings of the prior RMIC conference a year ago. I thought I might have met him while he was teaching at the Ross School. Also, his paper a year ago was not too bad. I faulted it for the tacit assumption that consciousness was an individual matter. In any case, he had not taught at the Ross School, but had visited there. How synchronistic is that?

### **DAY #27, Wednesday, January 11, 2006**

More internet frustration at WBUT this morning, but I managed to upload all my email outbox, including Dispatch #4, and downloaded most email from the past four days at last. Spent the afternoon at the Educational Multimedia Research Centre (EMRC) videotaping an hour program on new math, visual math, and math education, for their Edusat network. Besides the 14 lectures, this is the third informal talk. One can only hope that something will come of all this.

### **DAY #28, Thursday, January 12, 2006**

Most days I meet someone new in the dining room. They come and go, although there are half a dozen lifers. On this day there was a good group at breakfast. George is a music professor at MIT. His passions are classical North Indian sarod (studied 17 years with Ali Akbar Khan) and Cape Breton folk fiddle. Roberto is a graduate student in Florence, here for a year to work on his doctoral project, economic history of colonial India. Sri was born in India but brought up in Wellington New Zealand, and is here for some months studying Indology. Roberto had just read in the newspaper that the origin of the aboriginal Indians had been identified by DNA studies: they came from Africa, and were not Aryans. This led to a discussion on synchronicity a la Jung, with cultural transmission via telepathy. Only in India. George had an amazing database in his head of coincidences with musical styles.

Then off to the long awaited music festival, in honor of the 143rd birthday of Vivekananda, India's greatest saint ever, they say around the RKM. I got to hear long time favorites -- such as Swapan Chaudhury (Lucknow style tabla), Shiv Kumar Sharma (original santoor master), and Hari Prasad Chaurasia (flute) -- and a host of others, including a fabulous young south Indian violinist. Sharma was very distracted by coughing in the audience. He actually came to a dead halt in the alap and suggested that the whole audience take Vicks.

Then I saw my first Kathakali classical dance/theater performance. A leading troupe from Kerala created the most outre scene I have ever seen or heard. It was well beyond Ancient Egypt. The costumes were straight out of the magic mushroom parade at the Telluride Mushroom Festival, facial makeup like medieval Japanese masks, dance steps like Tai Chi in time-lapse, performed on the sides of the feet, music like a Yoruba healing ritual. The drumming was out of this world. The story behind the play was from the Puranas, Blood was spilled, but the Good prevailed.

### **DAY #29, Friday, January 13, 2006**

This was the first day of the conference, the only one that would be devoted to experiences. There was one memorable talk. The first speaker, Swami Vidyadhishananda Giri, is described by his devotees (three had flown from Europe to hear his talk) as the rising star of the Himalayan Yogi lineage. To me he seemed a young man, very egoistical and insecure. He lives in a cave at 16,000 feet elevation in the Gharwol Himal six months each year, they said. He had arrived from Santa Barbara, where apparently he had been working hard on his

PowerPoint, with a very slick data projector. He said he had been given special permission to show secret material, and this would be the first time he has been seen outside the inner circle of his line. He has a PhD in neurobiology. Well, the images were really marvelous. The showed the physiology of the subtle bodies superimposed on the physical body.

#### **DAY #30, Saturday, January 14, 2006**

This was my last day in Calcutta. I was so busy with the conference that I did not have time for proper goodbyes with my new friends. My talk was late in the afternoon, and I had made a very short PowerPoint (Keynote actually) with just a title page, an outline, and the only image of my vibration research that I could find on my laptop. I began with a background show of Scott Drave's Electric Sheep, which gives some idea of my animations. The videos I had brought from home were useless, as they are American NTSC format, while the European PAL standard is used here. The talk was to be limited to 30 minutes and I was determined to comply. In the event, I spoke for 35 minutes, and did not really finish my outline. I took too much time describing my experiences with LSD meditations during the period 1967-1972. The actual subject of my talk, Vibrations and Form, was to draw the connecting link from my LSD visions and my research with the analog macroscope (vibration fluid machine) and its digital simulation. The explanation of the macroscope was a bit too short, but I fill fix that up in the written version of the talk, which will be published very promptly in a book by the RKM. Then packing, resting, dinner, and to bed. The talk did not impress the indologists in the conference room, but the audience watching on closed circuit TV in the next room liked it. And with my pals at dinner, when I said (about the talk) that LSD had been very important for me, they all confessed that it had for them also.

#### **DAY #31, Sunday, January 15, 2006**

Tea, final packing, and departure before breakfast.

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